

XMPie Tutorial

uDirect Studio - Happy birthday campaign

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A CareAR Company

one to one in one™



Notices

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U.S. Patent 6948115, 7406194, 7548338, 7757169 and pending patents. JP Patent 4406364B and pending patents.

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Contents

About this tutorial	5
Target audience	5
Prerequisites	5
Tutorial materials	6
Important notice about usage rights	6
Additional resources	6
uDirect or uCreate Print? - Disambiguation	6
Module 1:	
Project briefing	7
Duration	7
Objectives	7
Information	7
Campaign brief	7
Project data	7
Business rules for variability in the design	8
Campaign materials specification	9
Assets	11
Module 2:	
Creating a dynamic document	12
Duration	12
Objectives	12
Preparation	12
Getting started	13
Open the static tutorial document	13
Update fonts and links if prompted	13
Save the file under a different name	13
Set InDesign display properties	13
The Dynamic Content menu	14
The Dynamic Content panel	15
Open the Dynamic Content panel	15
Set the Assets folder	16
Displaying data values in the panel	16
Place a Text Content Object into the design	17
Check the design for different recipients/records	18
Duplicating Content Objects	18
Edit a Content Object Rule to convert text to lower case	19
Add more Text Content Objects to the design	20
Create a ulmage Graphic Content Object or Content Object	21
Modify the back (page 2)	24
Place more Text Content Objects into the design	24
Suppress Trailing Spaces on Empty Content	25
Edit rules to convert text to upper case	25
Create a Table Content Object	26
Create a Dynamic Chart	27
Define uChart Properties	27
Creating Graphic Content Objects	29
Tag a static graphic with a Graphic Content Object	30
Handling image fitting dynamically	31

Using logic to select a graphic.....	31
Changing Text and InDesign Styles dynamically.....	33
Handling text copy fitting dynamically	34
Formatting a date.....	35
Using logic or rules to create a promotional text message.....	36
Create and Use a Visibility Content Object	37
Save the document	38
Module 3:	
Printing a dynamic document	39
Duration.....	39
Objectives	39
Procedure	39
Appendix A:	
Viewing the Completed Tutorial	41
Preparation	41
Importing a Campaign Package	41
Appendix B:	
uCreate Print quick reference.....	43
Quick Reference to the Dynamic Content panel	43
Quick Reference to the Content Object rule editor.....	44
Launching the Content Object rule editor	45
Using the Content Object rule editor's building blocks	45
Value rules	46
Condition rules	46
Functions.....	46
Appendix C:	
XMPie Terminology	47
Appendix D:	
Database Terminology	50

About this tutorial

Thank you for choosing XMPie uDirect Studio version 12.1 and Adobe InDesign CC2023 to create and produce your variable data print (VDP) Campaigns.

This tutorial will help you get started with uDirect Studio, by showing you how to create a simple VDP Campaign using a personalized image and chart from concept to production.

For the purposes of this tutorial, your client is a fictional company named StarCom - a cellular provider selling both phones and call plans. StarCom wants you to create a "Happy Birthday" campaign, wishing its customers a happy birthday and offering them free or discounted text messages sent on their birthday.

It is recommended that you allocate little more than an hour to this tutorial.

By the end of the process, you will know how to produce the two-sided dynamic postcard shown below using a wide range of variable design elements.



Target audience

This tutorial is designed to provide basic information, step-by-step instructions, and sample materials for self-learning. Should you require more assistance, please refer to the uCreate Print e-Learning course on XMPie Campus: <https://campus.xmpie.com/s/uCreatePrint>.

The content is designed for customers who have purchased or are evaluating XMPie uDirect or PersonalEffect and wish to learn how to use XMPie's uCreate Print product to create document templates for VDP production.

It is expected that the reader will already have a basic working knowledge of Adobe InDesign. If not, it is recommended to first complete some basic InDesign training, for example, courses with Adobe: <https://helpx.adobe.com/indesign/tutorials.html> or a 3rd party organization such as LinkedIn.com: <https://www.linkedin.com/learning/search?keywords=indesign>

Prerequisites

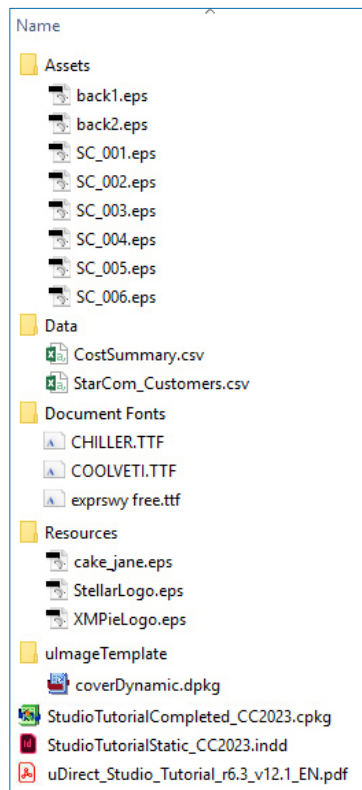
This tutorial assumes that you:

- Are familiar with Adobe InDesign and Photoshop,
- have a basic understanding of Excel or text-based data,
- have a basic understanding of the aims of Variable Data Print (VDP), and
- have Adobe InDesign CC2023 installed (trial version is acceptable).

Tutorial materials

If you don't already have XMPie uCreate Print installed, you can download the trial version from:

<https://www.xmpie.com/trial-software-and-tutorials/>



The sample InDesign files and resource images to complete this tutorial are also available from the above URL, or from [XMPie Campus](#), Tutorials section. (Look for the uDirect Studio Tutorial (Happy Birthday).)

When you unzip the tutorial materials, you should find these files.

Important notice about usage rights

The materials supplied for this tutorial are intended for training use ONLY. The sample postcard contains images that cannot be re-used for commercial use.

In the event you wish to use the ulmage "cake" template for your own projects, we refer you to: www.shutterstock.com, where you can purchase the rights to legally use the images and obtain the high resolution version:

Front page – Cake: ID 5431351

Back page – Raspberries: ID 6006028

Additional resources

- uCreate Print User Guide (Access via the help menu on the Dynamic Content panel).
- uCreate Print Tutorial videos (Access at <https://campus.xmpie.com/s/uCreatePrint>)

uDirect or uCreate Print? - Disambiguation

uDirect Studio is a package of three applications from XMPie called uCreate Print, ulmage and uChart. This tutorial demonstrates the use of these applications.

Module 1:

Project briefing

The first step to creating any successful campaign is to plan out a campaign brief, covering all aspects of your campaign: goals, strategies, target audience, materials specification etc. When planning a variable data campaign, this brief should also include the business rules and requirements for variability in the design.

Duration

About 15 minutes

Objectives

After completing this module, you will be able to:

- Understand the customer requirements for the Happy Birthday campaign,
- Examine the provided data and sample files, and
- Plan or review the Content Object (Content Objects) needed to achieve the campaign brief.

Information

Campaign brief

As stated earlier, the general goal of our “Happy Birthday” campaign is to send StarCom’s customers a personalized postcard, wishing them a happy birthday, and offering them free or discounted text messages sent on their birthday. (Your future projects should have much more detail, but for a tutorial, we are keeping things short and to the point.)

Project data

One of the most important aspects of Variable Data Print, is the data. Understanding the information you have and ensuring that you have the information necessary to meet the campaign goals is critical.

For example in this Happy Birthday campaign, having the customer's date of birth (DOB) and address is critical. Not just that we have the fields in the data, but that there are values for each recipient and that the information is accurate.

StarCom has provided two CSV data files for the project.

The main recipient information is in the StarCom_Customers.csv file. The data looks like this:

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	RID	First Name	Last Name	Club Level	DOB	Phone Model	Activation	Gender	Address1	Address2	City	State	Zip	e-mail
2	1	Jane	Jones	Stellar	3/04/1950	SC_001	internet	f	9 Mayflower Dr		Plymouth	MA	21340	jane@n
3	2	Jerry	Jones	Stellar	4/05/1949	SC_002	e-mail	m	9 Mayflower Dr		Plymouth	MA	21340	jerry@n
4	3	Jennifer	Jones		3/06/1978	SC_003	none	f	9 Mayflower Dr		Plymouth	MA	21340	jennife
5	4	Jimmy	Jones		8/08/1990	SC_004	internet	m	9 Mayflower Dr		Plymouth	MA	21340	jimmy@
6	5	Sandra	Smith	Stellar	2/11/1970	SC_002	e-mail	f	29 Pine Ridge Rd	Apt 9C	Bridgeport	CT	11743	sandra@
7	6	Sam	Smith		7/03/1970	SC_006	none	m	29 Pine Ridge Rd	Apt 9C	Bridgeport	CT	11743	sam@n
8	7	Mary	McAndrews		5/12/1975	SC_001	internet	f	8 Avon St		Jacksonville	FL	94210	mary@r

	A	B	C
1	CustID	Purpose	Cost
2	1	Calls (In)	40
3	1	Calls (Out)	80
4	1	Text	50
5	1	Internet	30
6	2	Calls (In)	109.83
7	2	Calls (Out)	14.6
8	2	Text	13.05
9	2	Internet	25.49
10	3	Calls (In)	123.56
11	3	Calls (Out)	0.57
12	3	Text	41.86
13	3	Internet	37.03
14	4	Calls (In)	177.39
15	4	Calls (Out)	19.19

There is also a secondary database called CostSummary.csv which contains information about the customer's billing and charges for their cell phone service including calls, text and internet. Note that each customer has multiple rows of billing data that we can use to display a table or the case of this tutorial, we will create a chart.

Review the project objectives and check that we have the necessary information in the database to achieve the required outcomes. For example:

- Do we have date of birth (DOB) values for each recipient?
- Do we have the first name for each recipient? (For example, not a first initial.)
- Is there a valid address for each recipient?
- Do we have the phone model for each recipient in order to display the corresponding graphic?
- Is the club level provided and are the provided values consistent?

Business rules for variability in the design

To achieve this goal, StarCom compiled a detailed list of business rules and requirements, determining which elements in the design should be variable.

Variability requirements are implemented using different types of Content Objects: Text, Graphic, etc. For example, you will implement the requirement for a personalized birthday wish using a Text Content Object, and the requirement to display the recipient's phone model – using a Graphic Content Object.

The following table specifies StarCom's Happy Birthday campaign requirements, including the type of Content Object, its location on the postcard (front or back), and whether the information is provided in the data or whether a business rule needs to be created.

	Content Objects automatically created from data source fields
	Content Objects to create manually

Content Object Name	Type	Location in Design	Notes
RID	Text		
First Name	Text	Birthday wish on front; address block on back	
Last Name	Text	Address block on back	Convert to uppercase
Club Level	Text		
DOB	Text	Birthday wish on back	Format date to month and day
Phone Model	Graphic	Back	
Activation	Text		
Gender	Text		
Address1	Text	Address block on back	Format to uppercase
Address2	Text	Address block on back	Format to uppercase; suppress empty line if no value
City	Text	Address block on back	Format to uppercase
State	Text	Address block on back	
ZIP	Text	Address block on back	

Content Object Name	Type	Location in Design	Notes
e-mail	Text		
URL First	Text	URL on front and back	Format first name to lower case
URL Last	Text	URL on front and back	Format last name to lower case
Cake	Graphic	Front	Personalized cake image
Cost Summary	Table	Used to create pie chart on back	Select usage data from CostSummary. CSV based on customer RID
Back Background	Graphic	Back	Graphic needs to change based on each customer's phone model
Back Name	Text with Style	Birthday wish on back	Color needs to change based on background image
Offer	Text	Offer text on back	"50% discount!" for regular customers; "free of charge!" for Stellar customers
Stellar	Visibility	Back	Show the Stellar logo only if customer is in the Stellar Club Level

Campaign materials specification

The Campaign materials specification is a complete list of all files required to create and produce your tutorial campaign. The following table defines the different types of materials used in a variable data Campaign (Data, Design, Assets etc.), and describes the specific example files used in this tutorial.

Folder	Description	Tutorial sample
Data	The data sources containing the recipient information.	<p>The files in the Data folder:</p> <ul style="list-style-type: none"> ● StarCom_Customers.csv—a 1000 record CSV (Comma Separated Values) file. This type of file is a flat database table that many contact or address book programs can generate. Note that the first twenty records are repeated throughout the data source. ● CostSummary.csv - a 4000 record CSV (Comma Separated Values) file. This type of file is a flat database table that billing software would typically generate. This table contains 4 records for each recipient in the StarCom_Customers.csv. Each record contains cost information for one of the bill components; incoming calls, outgoing calls, text messages and internet. <p>To examine this data source, open it with Microsoft Excel, Windows Notepad or Macintosh TextEdit. Warning: if you open the CSV file in Excel, do not re-save it. Excel can change data unexpectedly.</p>

Folder	Description	Tutorial sample
Root folder	The design documents to be edited with InDesign and uDirect Studio.	<p>The files in the root folder:</p> <ul style="list-style-type: none"> ● StudioTutorialStatic_CC2023.indd —this is the InDesign document created by the graphic designer with static values that need to be made dynamic. ● StudioTutorialCompleted_CC2023.cpkg - this is an exported campaign package of the above Static Document, after it has been transformed into a Dynamic Document using uDirect Studio. <p>Note: The required document size is 5.6" x 4.25" with a built-in 0.125" (9pt) bleed (Approximately 142 x 108mm with 3mm bleed.)</p>
Resources	Static graphic files that remain the same for all recipients.	<p>The graphics in the Resources folder:</p> <ul style="list-style-type: none"> ● StellarLogo.eps—the "Platinum Club" logo ● XMPieLogo.eps—the XMPie logo ● cake_jane.eps —this is a temporary file and will be replaced by the personalized image created for each recipient by ulmage.
Assets	Variable graphic files that can change per recipient based on rules.	<p>The files in the Assets folder:</p> <ul style="list-style-type: none"> ● back1.eps — the original background image for the postcard's back page ● back2.eps — an alternative background image for the postcard's back page ● SC_001.eps through SC_006.eps—phone images: The StarCom_Customers.csv database contains a "Phone Model" column, where each field names the image file to be used for each recipient.
Fonts	Fonts used in the document design.	<p>The files in the Fonts folder:</p> <ul style="list-style-type: none"> ● Expressway Free (True Type) – used in the InDesign document ● Coolvetica (True Type) – used in the InDesign document ● Chiller (True Type) – used in the Photoshop template
ulmage Template	The document package of the ulmage template	<p>Files in the ulmageTemplate folder:</p> <ul style="list-style-type: none"> ● coverDynamic.dpkg – this is a package file created by ulmage. It contains a Photoshop template, Photoshop action and font used to create the cake image for the background image of the front page. For more information about creating ulmage document packages, please refer to XMPie Campus. <p>Note that after completing the tutorial, the package will be unzipped and you will see a folder containing the template, action, font and output images created by ulmage.</p>

Assets

It is also worth double-checking that you have all the necessary assets. In this tutorial, we will display an image of the customer's phone model. In addition to checking the database, we should also check that we have all the necessary phone model images. This involves checking the data to compile a list of each phone model, and checking the assets folder includes an image with this name.

Module 2:

Creating a dynamic document

Now that we understand the basic aims of the project, the available resource materials and have planned out the Content Objects required, we can start work to create the dynamic document.

Duration

About 45 minutes.

Objectives

After completing this module, you will be able to:

- Link a static InDesign document to a data source,
- Place database values into the document design,
- Create Text, Text with Style, Graphic Table and Visibility Content Objects,
- Create simple rules or logic to change text (or graphics) in the document based on a data source value,
- Manage dynamic text and graphic copy fitting.

Preparation

- If Adobe InDesign and Photoshop are not already installed, use the Adobe Creative Cloud application to install InDesign and Photoshop CC2023.
- If uCreate Print is not already installed, browse to <https://www.xmpie.com/trial-software-and-tutorials/>
- If you purchased uDirect, after installing you should activate your license:
Open InDesign, select **Dynamic Content** -> **Help** -> **Activate license...**
(If you do not have a license, you can still create the template and see how uCreate Print works, but you will not be able to create the final print output.)
- Download and unzip the tutorials files.

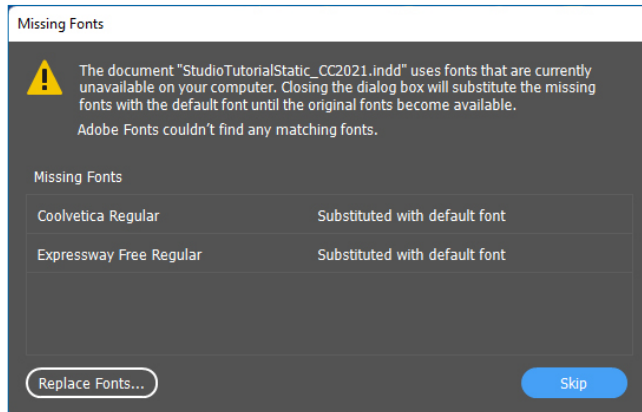
Getting started

Open the static tutorial document

Start Adobe InDesign, and open the **StudioTutorialStatic_CC2023.indd** file.

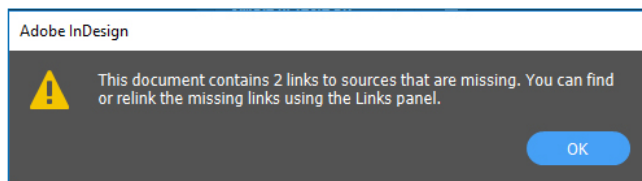
Update fonts and links if prompted

If InDesign does not automatically find the document fonts, you may encounter this warning dialog:

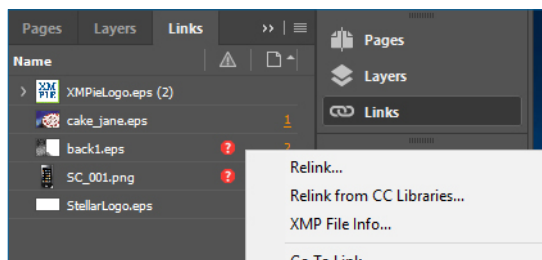


If InDesign prompts you to find missing fonts, you can either install the fonts provided in tutorial **Document Fonts** folder, or replace the missing fonts with fonts of your choice.

In some cases, InDesign may also prompt you to find missing links:



If InDesign prompts you to find missing links, click: **OK**, then open the **Links** panel (Ctrl-Shift-D)



Right-click on each missing image (indicted by the red question mark) and select Relink. Browse to locate the relevant image in either the **Assets** or **Resources** folders provided with the tutorial.

Save the file under a different name.

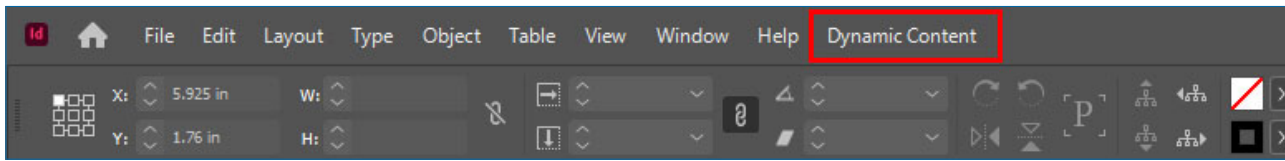
In order to keep the original static document (so you can repeat the tutorial again later) you may want to select **File -> Save As...**, and enter a new name for your working document.

Set InDesign display properties

To preview the images properly on screen, select **View -> Display Performance** and select **High Quality Display**.

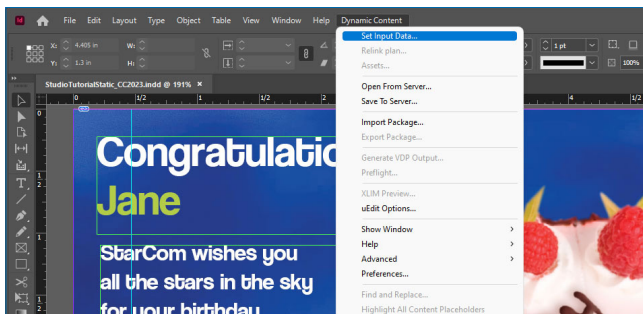
The Dynamic Content menu

If uCreate Print has been installed, InDesign will display a new menu group called Dynamic Content. This menu provides the tools for you to change the static InDesign document into a dynamic template.



Link to the recipient data source

The first step to creating a dynamic template is to link the InDesign document with a datasource.

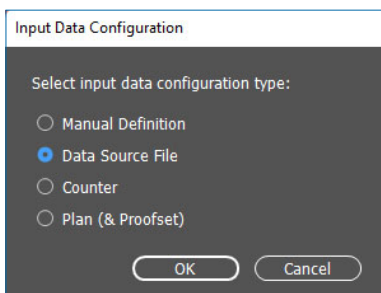


From the Dynamic Content menu, select **Set input data...**



Additional information and notes

The **Set input data** option will only be available if there is an open InDesign document. If the menu option is grayed out, open the **StudioTutorialStatic_CC2023.indd** document or your working InDesign file.

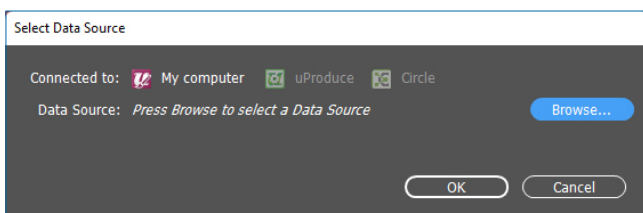


Select **Data Source File** and click **OK**.

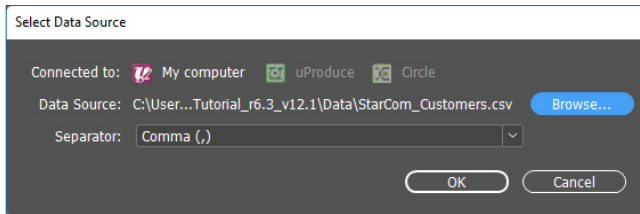


Additional information and notes

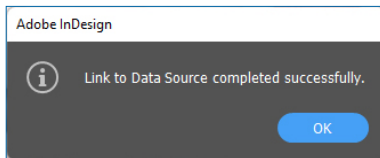
There are also other types of data including Counters and Plan files which you can explore in future, but are not covered in this tutorial.



Click **Browse**, and select the **StarCom_Customers.csv** file in the tutorial **Data** folder.



The field **Separator** in the tutorial data source is a **Comma**. Click **OK**.



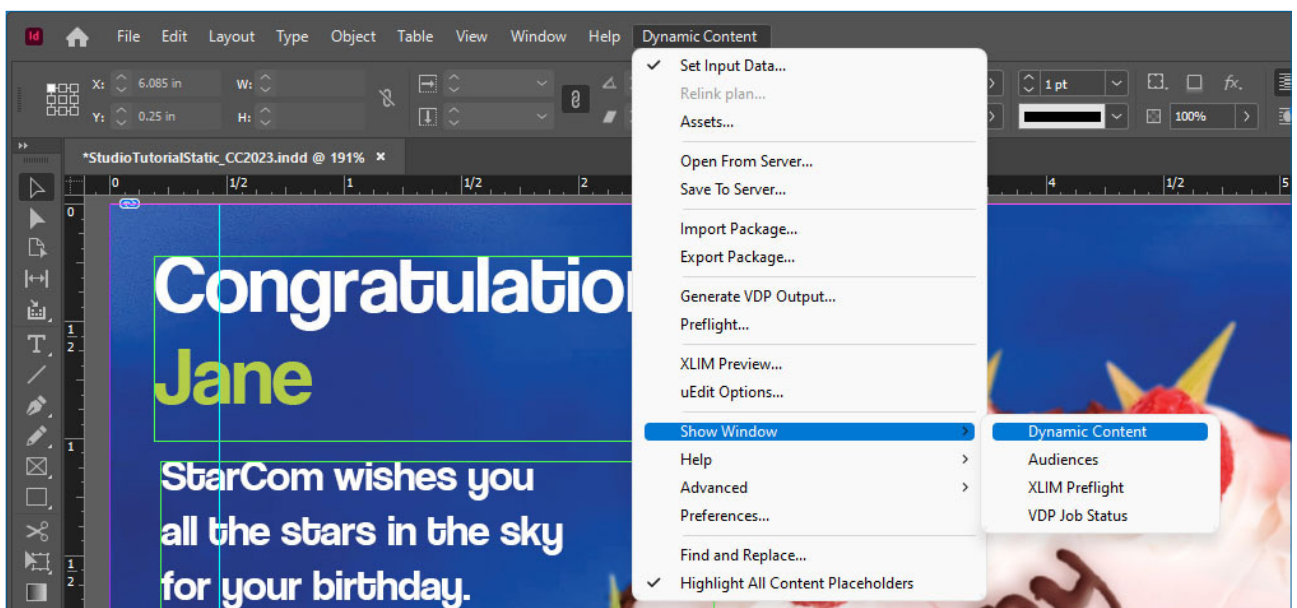
You will see confirmation that the data source has been linked. Click **OK**.

The Dynamic Content panel

Open the Dynamic Content panel

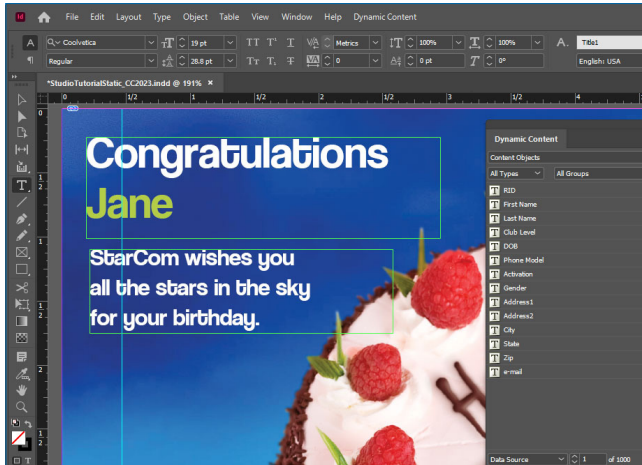
To place Content Objects into the document design, open the **Dynamic Content** panel.

From the **Dynamic Content** menu, select **Show Window -> Dynamic Content**.



Additional information and notes

The Dynamic Content panel can also be toggled on/off with the **Window -> XMPie -> Dynamic Content** menu.

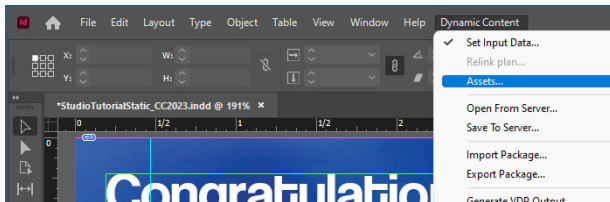


The Dynamic Content panel now shows all the field names from the data source.

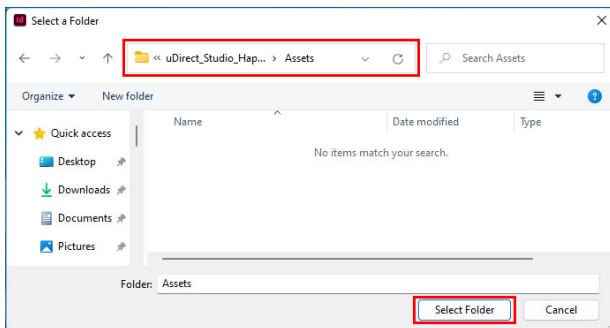
These are **Content Objects** which can be placed into the document to display dynamic content.

Set the Assets folder

You need to set the assets folder to specify the location of any graphic or text file assets. For example, the phone model images in this tutorial.



From the Dynamic Content menu, select **Assets...**

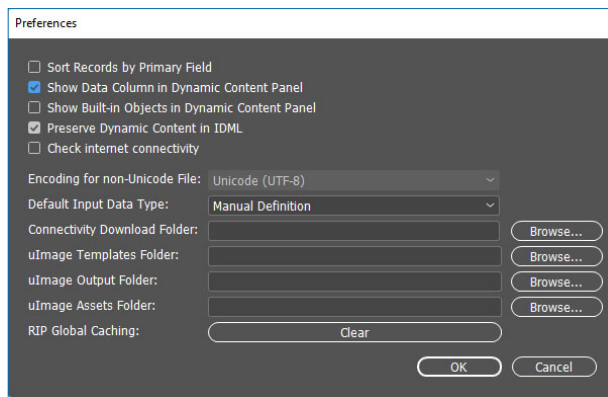


Browse to the **Tutorial** folder, select the folder named **Assets**, and click **Select Folder**.

Displaying data values in the panel

Sometimes, it is helpful to see the data values in the Dynamic Content panel.

From the **Dynamic Content** menu, select **Preferences...**



Check the box next to **Show Data Column in Dynamic Content Panel**.

Click **OK**.



The data values of the first record are now visible next to the Content Object names.



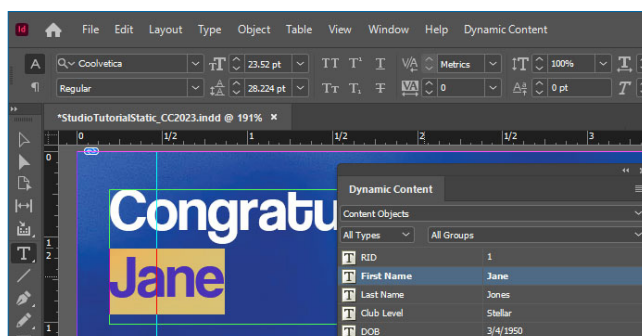
Additional information and notes

At the bottom of the Dynamic Content panel, you can see the name of the data source that you are connected to, and there is a text box and up/down arrow icons showing the current record number, and allowing you to move to preview different records from the data source.

Modify the front (page 1)

Place a Text Content Object into the design

Move to the first page of the document if it is not already displayed.



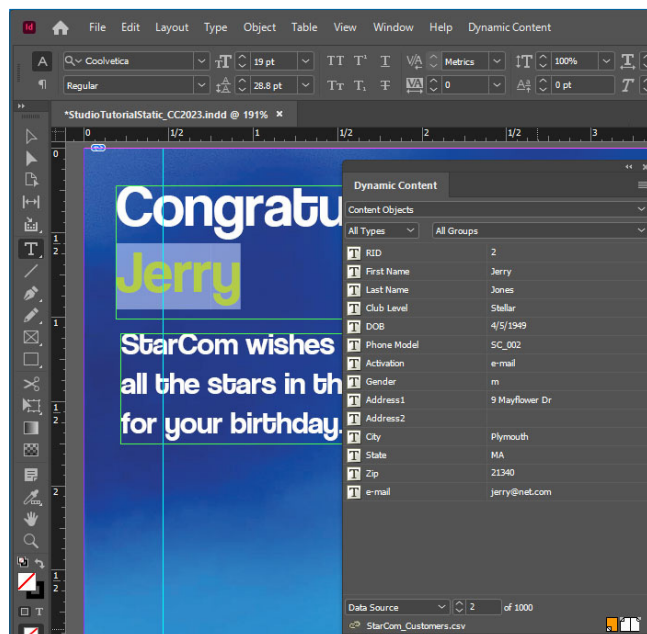
In the InDesign Tools panel, select the **Type** tool.

Highlight or select the text **Jane** (make sure you select the entire name).

In the Dynamic Content panel, double-click the **First Name** Content Object.

Jane is the first customer (record 1 of 1000) in the StarCom_Customers.csv data source that your design is currently linked to, so at first it may look like nothing has changed.

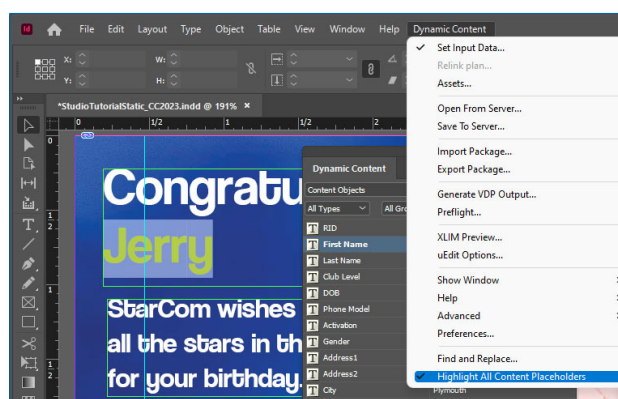
Check the design for different recipients/records



In the lower part of the Dynamic Content panel, click the up arrow to go to the recipient #2 (Jerry).

Note that the text now shows **Congratulations Jerry**.

Notice that uCreate Print is highlighting the dynamic objects in the design.



If the highlighting distracts you from the design, from the **Dynamic Content** menu, you can turn off **Highlight All Content Placeholders**.



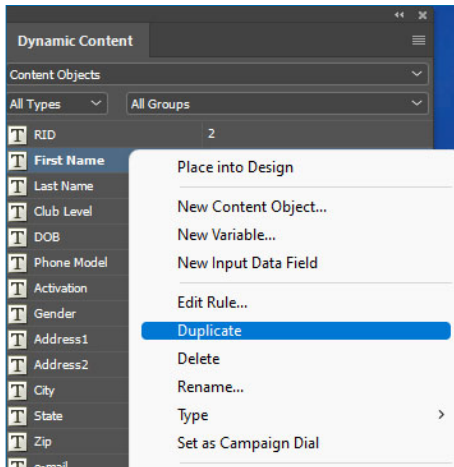
Additional information and notes

Highlighting of dynamic objects will not be shown if you are using InDesign's **Preview** mode. From the InDesign menu, select **View -> Screen Mode** and select **Normal** to show the highlighting, together with the **Highlight Content Placeholders** setting.

Duplicating Content Objects

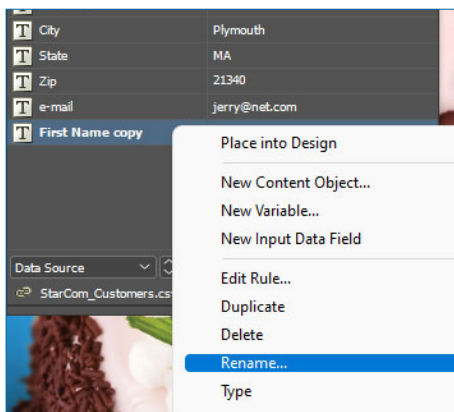
The next 2 steps demonstrate how to duplicate a Content Object in order to retain the programming logic of the original Content Object and at the same time make changes to the formatting of the new one.

In this example, we want to modify the formatting of the First Name and Last Name Content Objects so the personalized URL will be all lower case, regardless of character case in the database.

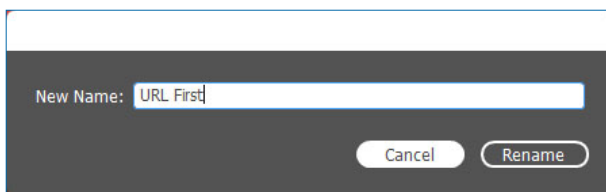


Right-click the **First Name** Content Object and choose **Duplicate** from the context menu.

A **First Name copy** Content Object is added at the bottom of the Content Objects list.



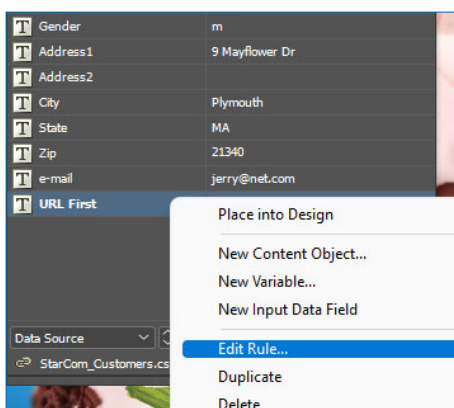
Right-click the new **First Name copy** Content Object and choose **Rename...** from the context menu.



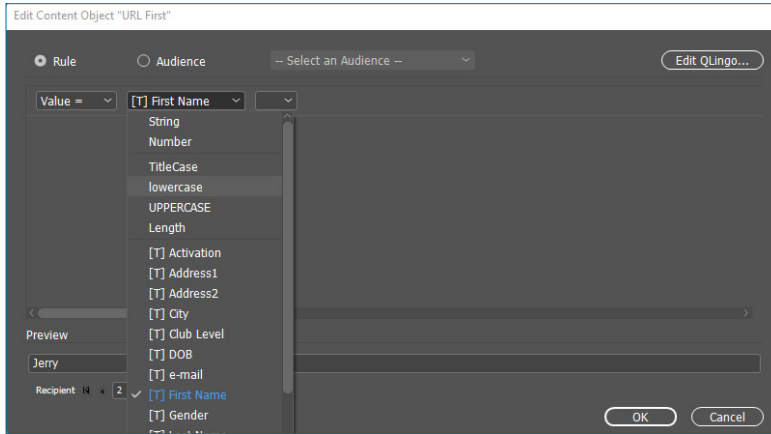
In the **New Name** text box, type **URL First** and click **Rename**.

The Content Object list now shows the updated name.

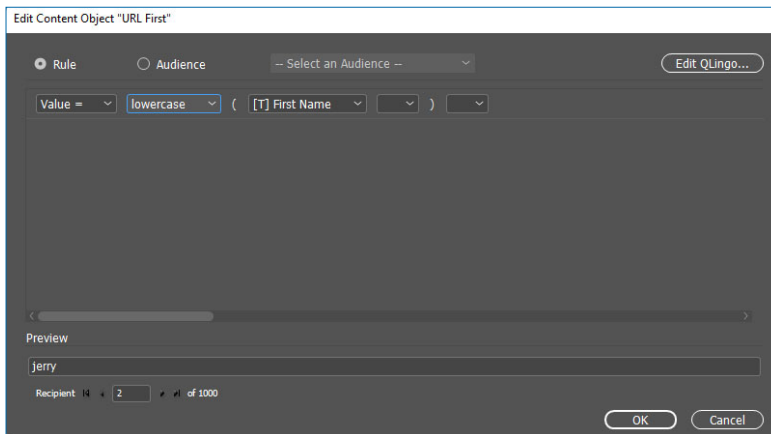
Edit a Content Object Rule to convert text to lower case



Right-click the **URL First** Content Object, and choose **Edit Rule...** from the context menu.



From the second drop-down list, scroll up and choose **lowercase**.



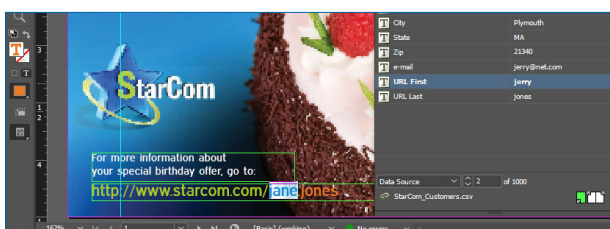
The value **[T] First Name** moves over into the parameters list. (Parameters are the pieces of information required to perform a function. Parameters are located within the parentheses.)

Note at the bottom of the dialog is a preview area that shows the result of the expression.

Click **OK** to close the Rule Editor.

Repeat the above steps to duplicate the **Last Name** Content Object, rename it to **URL Last** and edit the **URL Last** Content Object adding the function to **lowercase** the last name.

Add more Text Content Objects to the design



In the InDesign Tools panel, select the **Type** tool.

Select the first name (jane) in the URL line at the bottom of the card and then double click the **URL First** Content Object.

Repeat the process to replace the static last name in the URL with the **URL Last** Content Object.

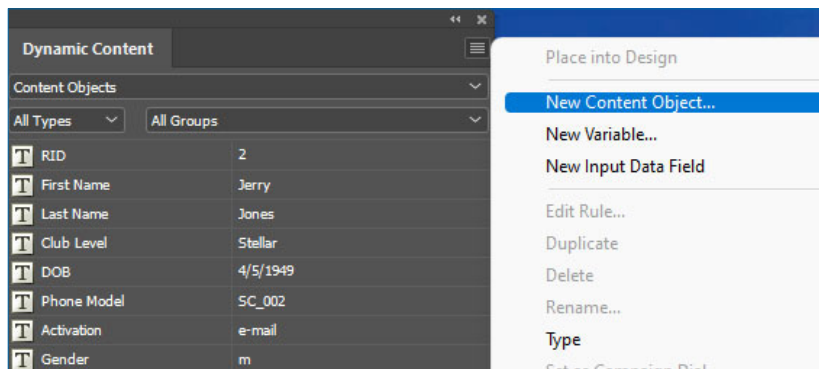


Additional information and notes

In this example, the personalized URL is managed by StarCom manually. When using XMPie PersonalEffect TransMedia to create personalized websites, the URL is managed automatically. For more information, refer to the Cross Media training guides on XMPie Campus.

Create a ulmage Graphic Content Object or Content Object

In this task you will create a new Graphic Content Object, and use ulmage settings in the Rule Editor to select and configure a ulmage Photoshop package.

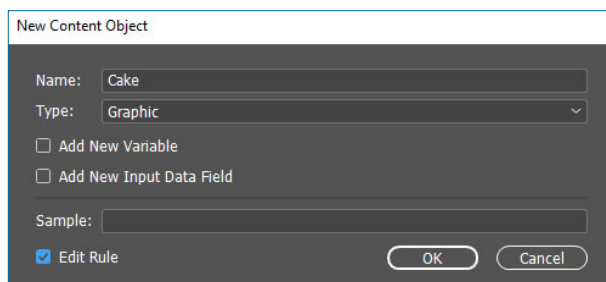


From the Dynamic Content panel menu, select **New Content Object...**



Additional information and notes

You can also right-click on any Content Object to select **New Content Object...** from the context menu.

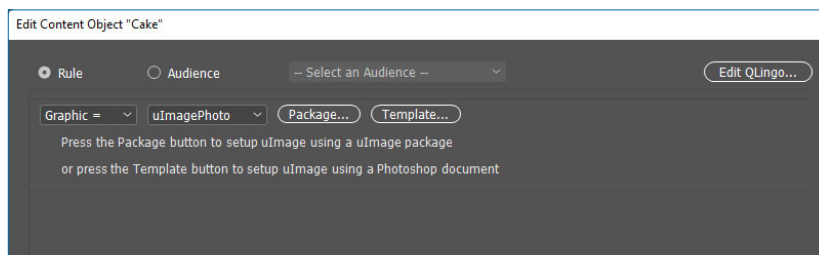


In the **Name** field, type **Cake**.

From **Type** drop-down list, select **Graphic**.

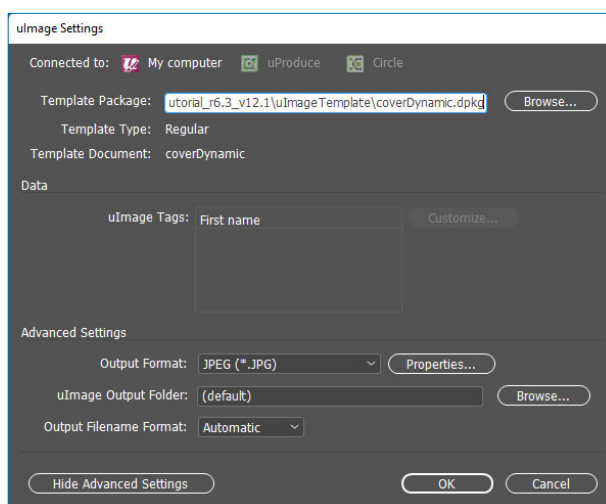
Check the box to **Edit Rule**.

Click **OK**.



Select **ulmagePhoto** from the second drop-down in the expression line.

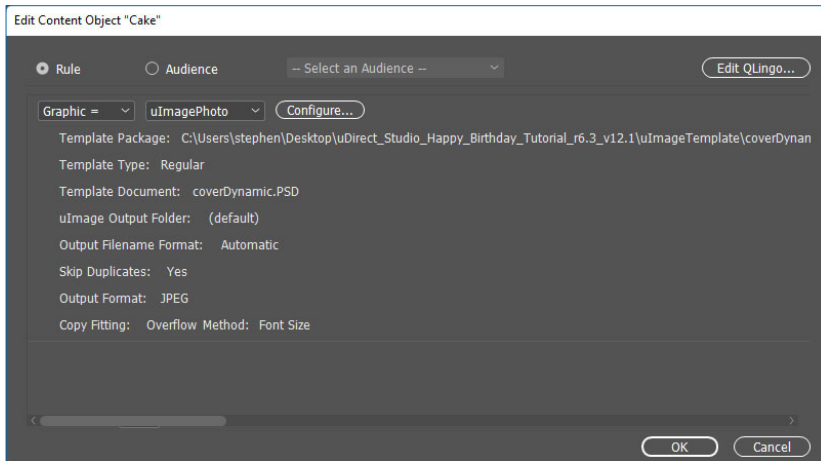
Click the **Package** button.



Click **Browse** next to the **Template Package** field, navigate to your tutorial folder and from the **ulmageTemplate** folder, select **coverDynamic.dpkg**, and click **Open**.

All other ulmage settings can be left as default for this tutorial.

Click **OK** to close the ulmage settings.



Click **OK** to close the Rule Editor.



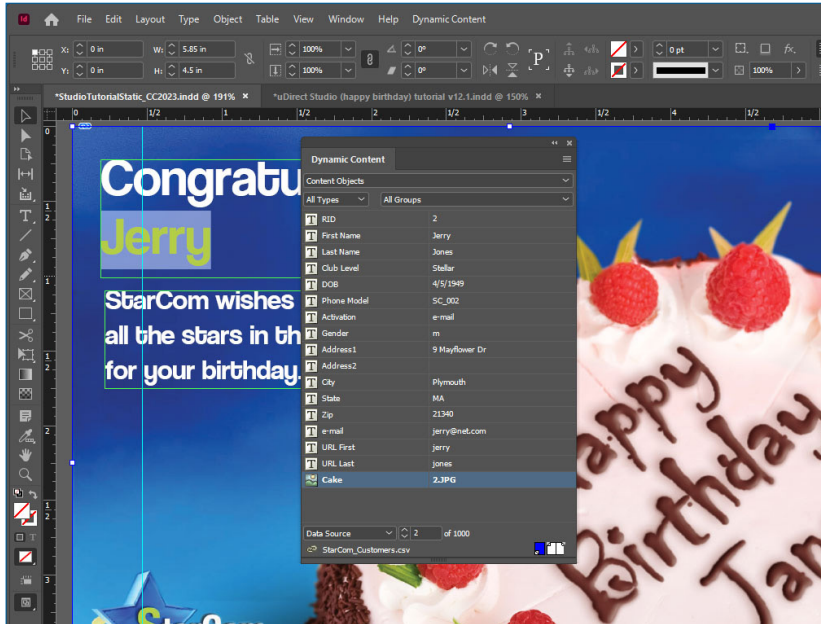
Additional information and notes

For more information on the other ulmage settings, please refer to the ulmage Help. From the Dynamic Content menu, select **Help -> ulmage Help**.

After closing the Rule Editor, you may notice that Photoshop will start up and automatically create the personalized image for the current record being previewed by uCreate Print.

Be patient and wait for a moment while the image is created.

If Photoshop launched in front of InDesign, swap back to InDesign.



In the InDesign Tools panel, choose the **Selection** tool.

Click to select the static **background image**, and in the Dynamic Content panel, double-click the **Cake** Content Object.



If you are still viewing record #1 (Jane) it may appear that nothing has changed because the original static file also had Jane's name.

Click the record selector up arrow to move onto record #2 (Jerry) to confirm the next personalized image is created correctly.



Additional information and notes

You will notice that as you scroll to new records, there will be a slight delay as Photoshop creates the next image required to preview in InDesign. This occurs only once for each first name. Once the image is created for a recipient, Photoshop is not used again for other records with the same name.



Additional information and notes



If you do not have a license for ulmage, you will notice a "watermark" appears over the personalized images.

This is normal, and can be removed by activating a ulmage license. (**Dynamic Content** menu -> **Help** -> **Add License**.) After adding a license you should restart both Photoshop and InDesign.



Additional information and notes



The name of the Graphic Content object will also appear if **Highlight All Content Placeholders** is selected in the Dynamic Content menu.

Modify the back (page 2)

Move to the second page of the document. If the graphics look pixelated, switch InDesign to high quality display: **View -> Display Performance -> High Quality Display**.

Place more Text Content Objects into the design

In the InDesign Tools panel, select the **Type** tool.

In the URL line, select the text **jane** and double-click the **URL First** Content Object.

Repeat the process to replace **jones** with the **URL Last** Content Object.

Move to the address block. Repeat the process of selecting the text and double-clicking the relevant Content Object to place **First Name**, **Last Name**, **Address1**, **Address2**, **City**, **State** and **Zip** Content Objects into the design.

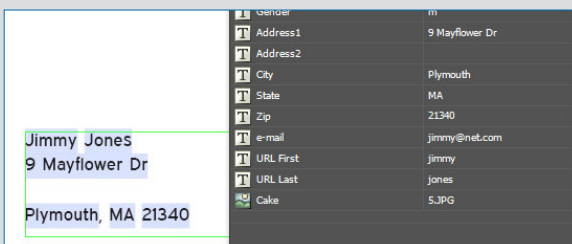


Additional information and notes

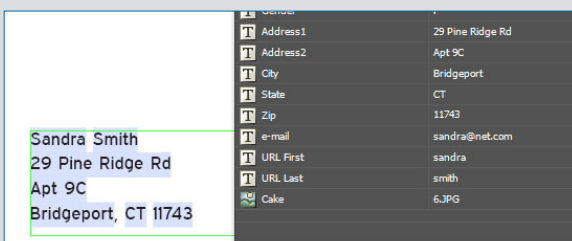
Note that the design does not include a second address line. You will need to position the cursor, create a new line and double-click to add the Address2 Content Object.



Additional information and notes



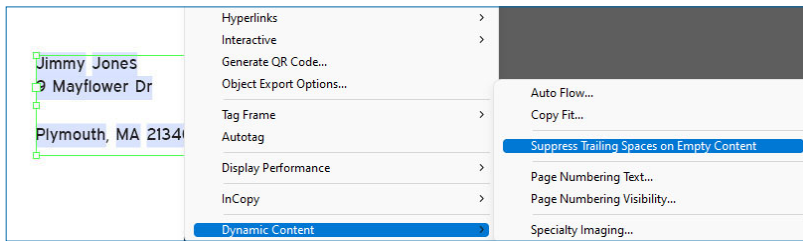
Note that some database records do not have any information in the Address2 field, so when you double-click to place Address2 it may appear that nothing has happened.



Move onto record #5 (Sandra) who has a second address line to confirm the Content Object was added correctly.

Suppress Trailing Spaces on Empty Content

Where customers do not have a second address line, it looks a bit odd having a gap in the middle of the address block. So, we want to close this space.



In the InDesign Tools panel, choose the **Selection** tool.

Click to select the text frame that contains the address block. Right-click on the selected text frame.

From the context menu, select **Dynamic Content -> Suppress Trailing Spaces on Empty Content**.

Confirm the change by scrolling between records #4 (Jimmy) and #5 (Sandra). You should see the City, State and Zip text move upwards when there is no Address2 line.



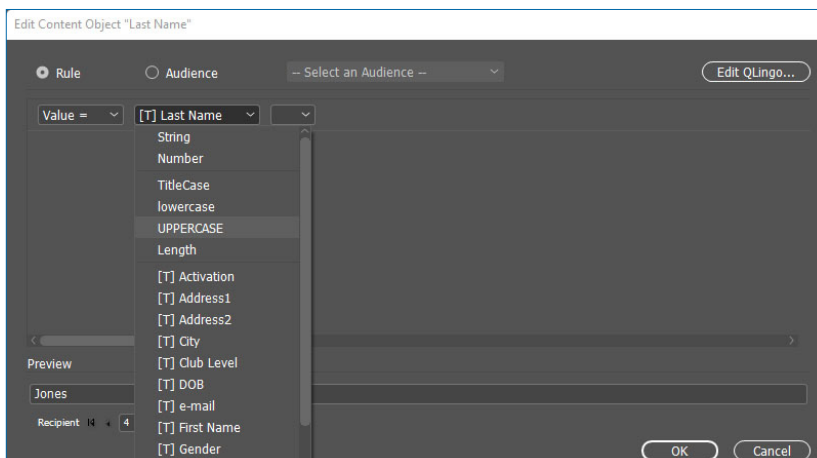
Additional information and notes

In some cases, for example business cards, you may want to top lines to move downwards. You can easily do this by using the standard InDesign **Text Frame Options** dialog and changing the **Vertical Justification** setting.

Edit rules to convert text to upper case

One of the requirements from our customer, StarCom, was to format the Last Name, Address and City fields in upper case. Since these Content Objects are not used anywhere else in the design, we don't need to duplicate them, we can simply edit the rule to add the UPPERCASE function to format the text.

In the Dynamic Content panel, right-click on the **Last Name** Content Object and select **Edit...** from the context menu.



From the second drop-down list, scroll up and choose **UPPERCASE**.

In the preview area at the bottom of the dialog, confirm your expression is working correctly.

Click **OK**.

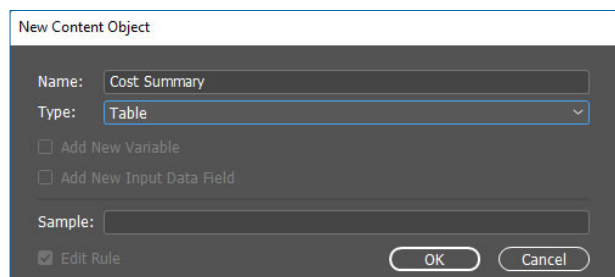
The Last Name in the address block should also now appear in uppercase.

Repeat the process to uppercase the **Address1**, **Address2** and **City** Content Objects.

Create a Table Content Object

Now, we want to create a pie-chart to display the monthly cost summary of services for each recipient. The first step is to create a Table Content Object using the CostSummary.csv file as your data source.

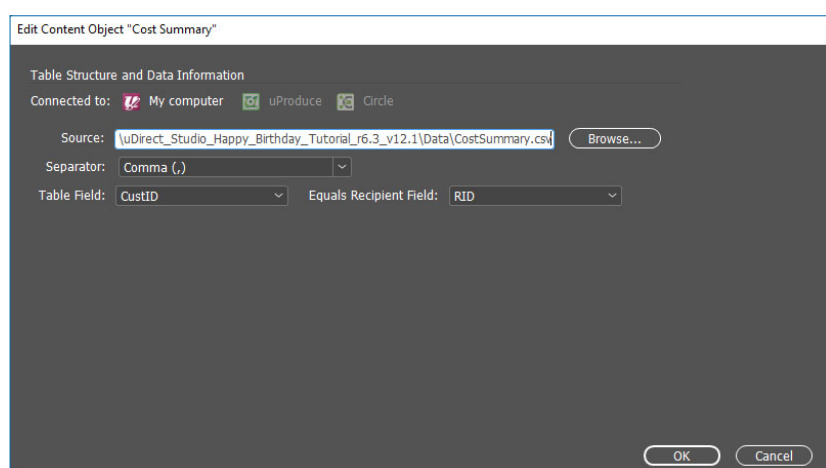
From the Dynamic Content panel menu, select **New Content Object...** (Or right-click any Content Object in the Dynamic Content panel and select **New Content Object...** from the context menu.)

The 'New Content Object' dialog box is shown. It has a title bar 'New Content Object'. Inside, there is a 'Name' field with 'Cost Summary' entered. Below it is a 'Type' dropdown menu with 'Table' selected. There are two checkboxes: 'Add New Variable' and 'Add New Input Data Field', both of which are unchecked. At the bottom, there is a 'Sample' field which is empty, and an 'Edit Rule' checkbox which is checked. At the very bottom are 'OK' and 'Cancel' buttons.

Enter a **Name** for the new Content Object: **Cost Summary**.

From the **Type** drop-down list, select **Table**.

Click **OK**.

The 'Edit Content Object "Cost Summary"' dialog box is shown. It has a title bar 'Edit Content Object "Cost Summary"'. Inside, there is a section 'Table Structure and Data Information'. Below this, it says 'Connected to:' followed by icons for 'My computer', 'uProduce', and 'Circle'. The 'Source' field contains the path 'uDirect_Studio_Happy_Birthday_Tutorial_r6.3_v12.1\Data\CostSummary.csv' and a 'Browse...' button. The 'Separator' dropdown is set to 'Comma (,)'. The 'Table Field' dropdown is set to 'CustID' and the 'Equals Recipient Field' dropdown is set to 'RID'. At the bottom are 'OK' and 'Cancel' buttons.

Click **Browse**. Navigate to your Tutorial folder and in the **Data** folder, select the **CostSummary.csv** file, and click **Open**.

The **Separator** is **Comma**.

From the **Table Field** drop-down list, select **CustID**.

From the **Equals Recipient Field** drop-down list, select **RID**.

Click **OK** to save your new Table Content Object.



Additional information and notes

The above settings tells uCreate Print to select the rows from the CostSummary.csv file where the **CustID** value is the same as the **RID** value from the main recipient data source (StarCom_Customers.csv) for the currently displayed recipient.



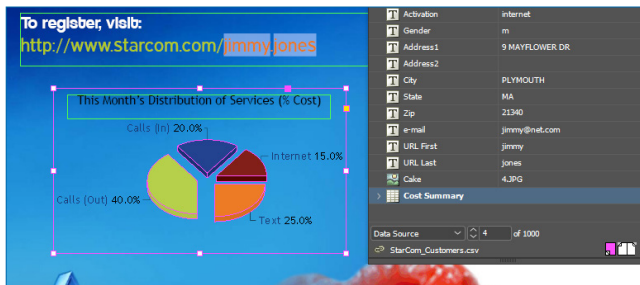
Additional information and notes

A Table Content Object can be used in two ways in uCreate Print. If you select a text frame and double-click, an InDesign table will be created. If you select a graphic frame and double-click, a chart will be created. For this tutorial, we want the graphic frame for a chart.

Create a Dynamic Chart

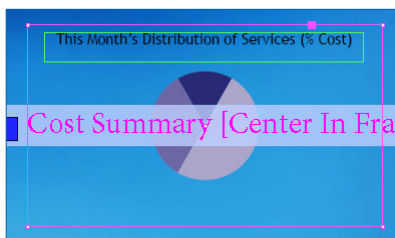
The next step is to create a dynamic chart by tagging a graphic frame with a Table Content Object.

In the InDesign Tools panel, choose the **Selection** tool.

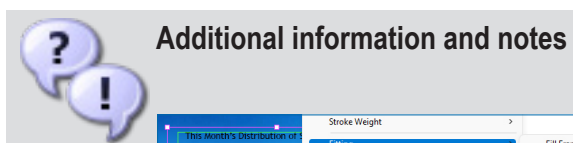


Click to select the static placeholder pie chart graphic frame.

In the Dynamic Content panel, double-click the **Cost Summary** Table Content Object.



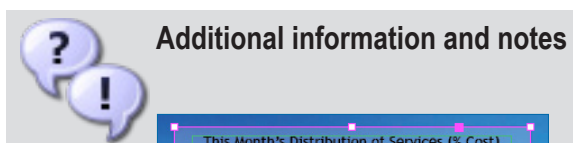
The static placeholder image disappears and a plain pie chart appears indicating that the frame has been associated with the selected Table Content Object.



Additional information and notes

If you do not see a pie chart and the graphic frame appears to be empty, use the selection tool to right-click the graphic frame and select **Fitting -> Fit Content Proportionally**.

Repeat and select **Fitting -> Center Content**.



Additional information and notes

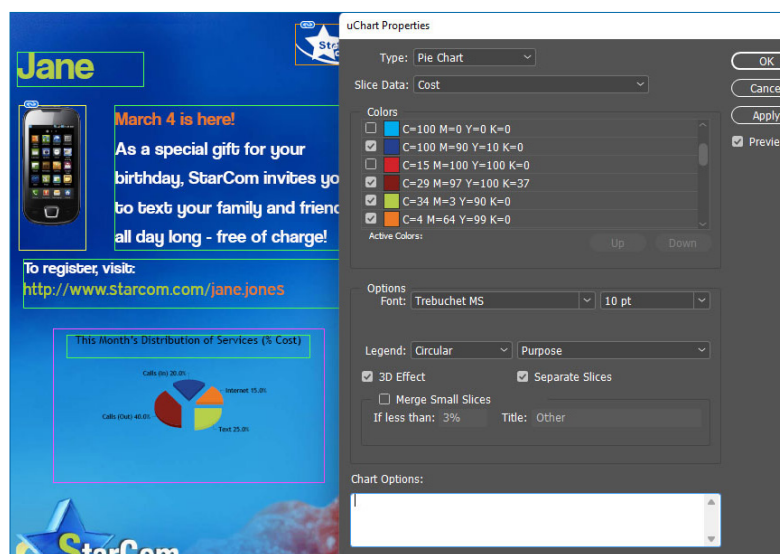
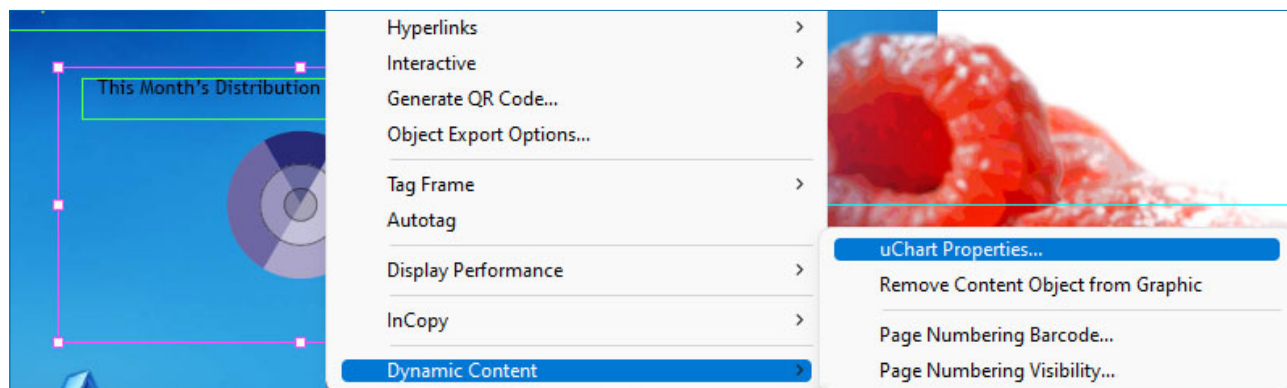
If you do not have a license for uChart, you will notice a "watermark" appears over the chart. This is normal, and can be removed by activating a uChart license. (**Dynamic Content** menu -> **Help** -> **Activate License**). After adding a license you should restart InDesign.

Define uChart Properties

Now we can specify how the Table Content Object data should be presented in the chart.

First, it is easiest if you turn off **Highlight All Content Placeholders** in the **Dynamic Content** menu so you can more clearly see the pie chart.

Right-click on the graphic frame, and select **uChart Properties...** from the **Dynamic Content** group menu.



Check the **Preview** box and position the panel so you can see the graphics frame and see how the settings change the chart design.

Set **Type** to **Pie Chart**.

Set **Slice Data** to **Cost**.

Check the box next to the following CMYK colors:

C=100 M=90 Y=10 K=0

C=29 M=97 Y=100 K=37

C=34 M=3 Y=90 K=0

C=4 M=64 Y=99 K=0

Set the **Font** as **Trebuchet MS**, size 10pt. (Use another font if this is not available on your computer.)

Set **Legend** to **Circular**. And, select to display the value of the **Purpose** field.

Select the **3D** and **Separate Slices** check boxes.



Additional information and notes

uChart has many more settings than can be displayed in the panel, so XMPie provides the Chart Options text box at the bottom of the panel for you to enter more enhanced options. For the full list of available settings, refer to the uCreate Print menu -> **Help** -> **uCreate Print Help**. Select your version/language and from the contents, select **Working with uChart** -> **Using Enhanced Settings**.

For this Tutorial, you could enter the following settings as an example:

```
/3DViewAngle 35  
/LabelColor [ 29 97 100 37 ]  
/SliceCutaway 0.2
```

When typing in the settings, click **Apply** to see the updated settings applied in the chart.

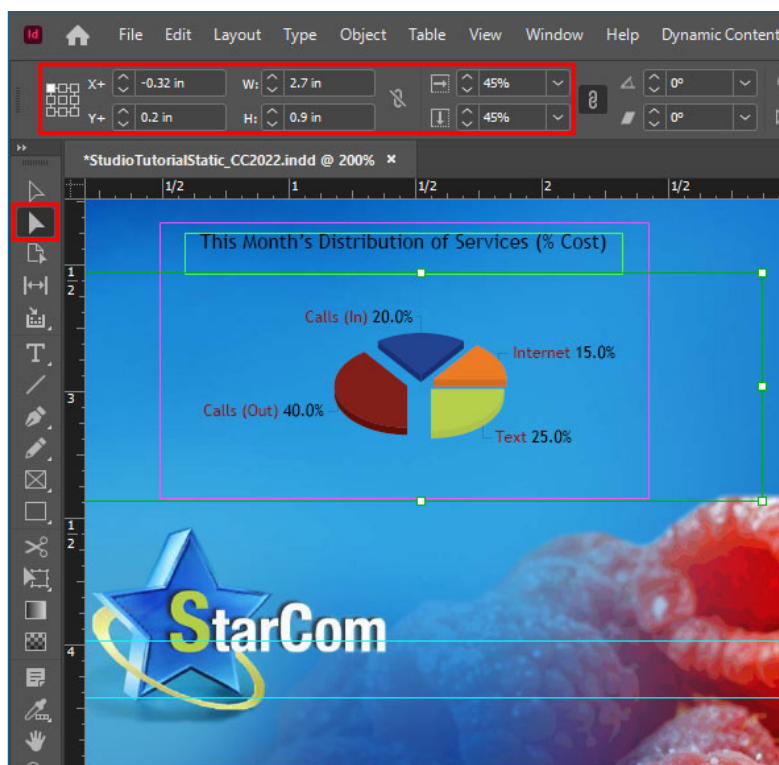
3DViewAngle changes the tilt angle. Try changing the value and click apply to see the effect.

LabelColor changes the color of the property text in CMYK percentages.

SliceCutaway changes the space between the slices with decimal values between 0.0 and 0.5.

When complete, click **OK** to close the uChart Properties dialog.

The chart is like any graphic in InDesign, you can now scale and position the graphic in the frame.



In the InDesign Tools panel, select the **Direct Selection** tool.

Click to select the chart in the graphic frame.

Set both **horizontal** and **vertical scale** to **45%**.

Make sure the reference point is in the **top left-hand corner**, and enter the following positional values:

X+: -0.32 in

Y+: 0.2 in

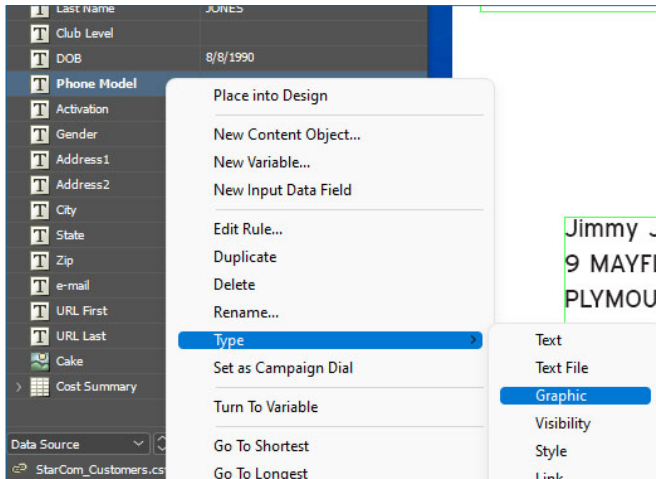
W: 2.7 in

H: 0.9 in

When done, test some other recipients to see the preview of the chart change.

Creating Graphic Content Objects

Our customer wants to display a photo of the customer's phone model on the postcard. All the database values are created as Text Content Objects. Since the phone model is not used as text somewhere else in the document, we don't need to create a new Content Object, we can simply change the Type to Graphic.



In the Dynamic Content panel, right-click on the **Phone Model** Content Object. From the context menu, select **Type** -> **Graphic**.



Additional information and notes

Content Objects have several possible types, which indicate the type of object they can change in the InDesign document. For example: Text, Graphic, Style, Visibility, etc.

By default, all data source fields are created as a Text Content Objects when you link to the data file, and their type can be easily changed as needed.

Tag a static graphic with a Graphic Content Object



In the InDesign Tools panel, choose the **Selection** tool.

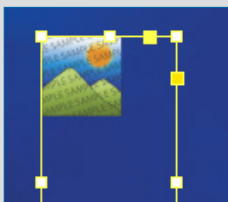
Click to select the static phone graphic frame.

Double-click the Phone Model Content Object.

Scroll through the records to see the phone image change for different recipients.



Additional information and notes



If you see a positional image instead of the phone model images, then you must have missed the step to set the Assets Folder.

From the **Dynamic Content** menu, select **Assets...** and browse to the **Assets** folder provided in the tutorial files.

The phone image that is displayed is controlled by the database. There are six different phone models listed in the data SC_001 through to SC_006. The Assets folder contains six EPS images with the same names.

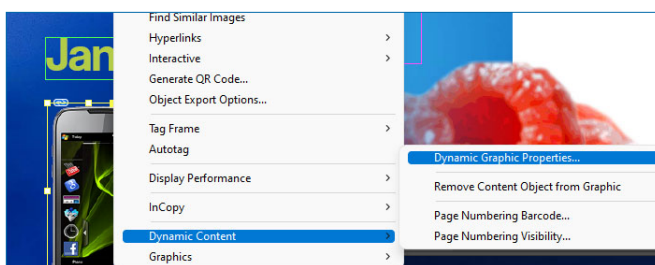


Additional information and notes

Those with a keen eye will notice that the data source contains only a model number, and yet the asset images are named by the model number and a file extension. uCreate Print uses an asset resolution algorithm to select appropriate file types, so it is not necessary to specify the file extension.

Handling image fitting dynamically

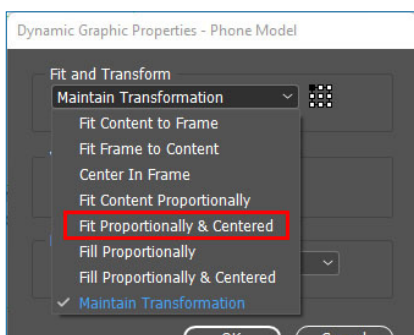
In some cases, you may have different sized asset images and need to control the way each asset is handled dynamically. If you move to record #11 (Gilian) you will see that the phone image does not fit in the frame.



In the InDesign Tools panel, choose the **Selection** tool.

Click to select the phone model's graphic frame.

Right-click and from the **Dynamic Content** group, select **Dynamic Graphic Properties...**



As you can see, there are several options for you to use. The most appropriate setting for our use is **Fit Proportionally & Centered**.

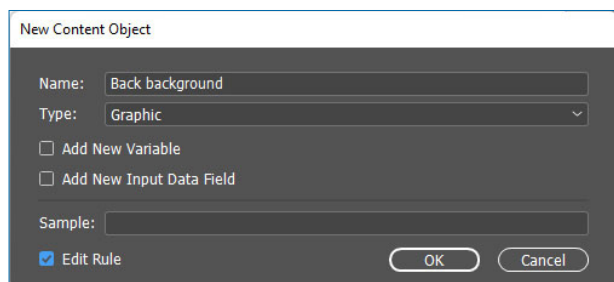
Click **OK**.

Using logic to select a graphic

The previous example shows how the database can contain the name of a graphic to use. But in some cases, you may need to use logic to control which image to display. For this example, we have two background images in the assets folder: back1 and back2.

If you move to record #2 (Jerry) you will notice that his phone model (SC_002) is a light gray color that is not as easy to see on the blue background, so we will change the background image if the Phone Model = "SC_002".

From the **Dynamic Content** panel menu, select **New Content Object...**

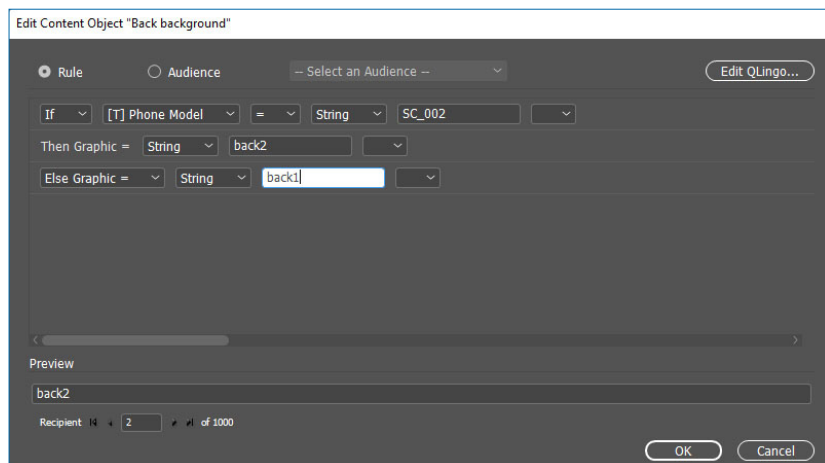
The 'New Content Object' dialog box is shown. It has a 'Name' field with 'Back background' entered. The 'Type' is set to 'Graphic'. There are checkboxes for 'Add New Variable' and 'Add New Input Data Field', both of which are unchecked. A 'Sample' field is empty. The 'Edit Rule' checkbox is checked. At the bottom are 'OK' and 'Cancel' buttons.

Enter a **Name** for the new Content Object: **Back background**.

From the **Type** drop-down list, select **Graphic**.

Check the box to **Edit Rule**.

Click **OK**.

The 'Edit Content Object "Back background"' dialog box is shown. It has tabs for 'Rule' and 'Audience', with 'Rule' selected. There is a dropdown for 'Select an Audience' and an 'Edit QLingo...' button. The rule is defined as: 'If [T] Phone Model = String SC_002, Then Graphic = String back2, Else Graphic = String back1'. A 'Preview' section shows 'back2'. At the bottom, it says 'Recipient 2 of 1000'. 'OK' and 'Cancel' buttons are at the bottom right.

Change the first drop-down from **Graphic** = to **If**.

Change the second drop-down to **[T] Phone Model**.

Change the third drop-down from **<>** to **=** and enter the text **SC_002** in the text box.

On the second row of the expression, after **Then Graphic =**, change the drop-down to **String** and enter the text **back2** into the text box.

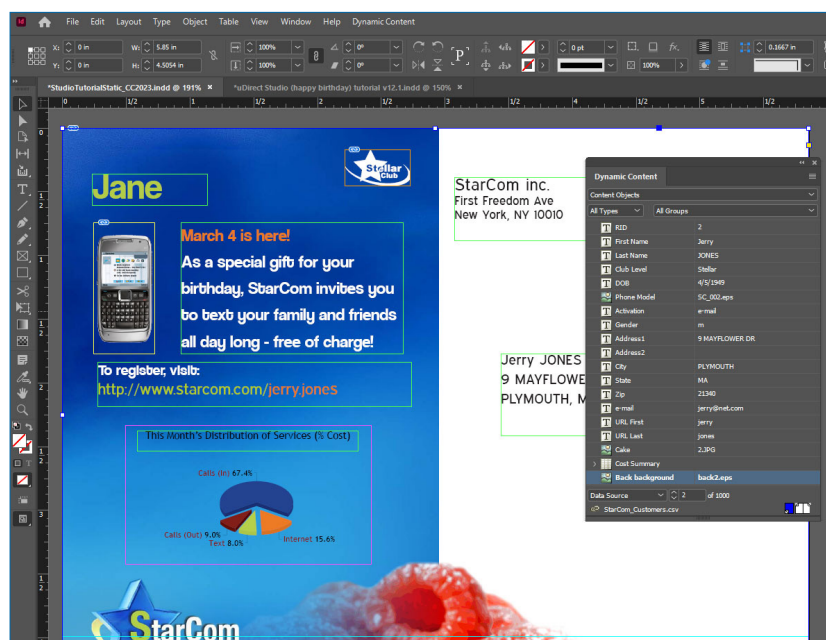
On the third row of the expression, enter the text **back1** into the text box.

When the settings look as they do above, click **OK** to save the expression.



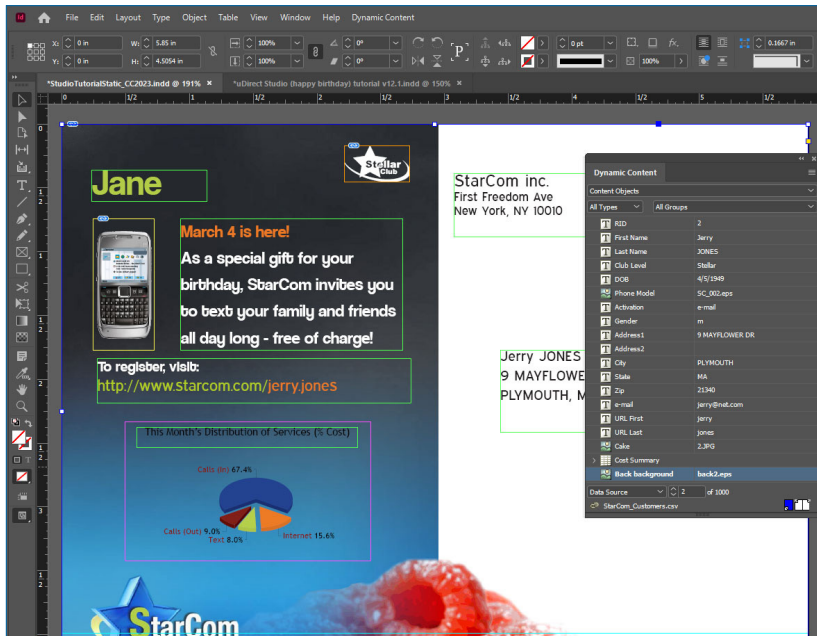
Additional information and notes

Note that string comparisons in uCreate Print are case sensitive. You need to enter SC_002 in the text box using upper case letters: "SC".



Use the Selection tool to select the background graphic frame.

Double-click the new **Back background** Graphic Content Object in the Dynamic Content panel to place it into the document design.



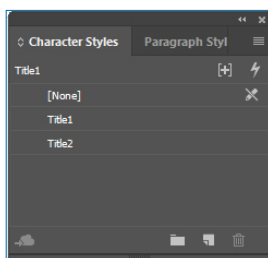
Move onto record #2 (Jerry).

You should see the background image change so that the light gray phone model graphic is easier to see.

Check other records to see the blue background returns for other phone models.

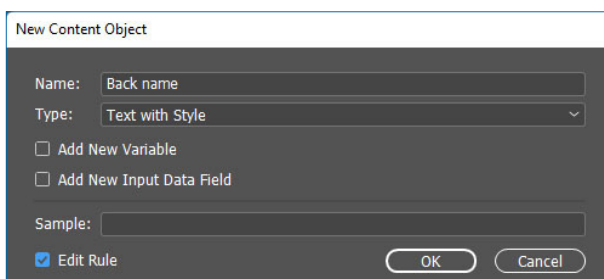
Changing Text and InDesign Styles dynamically

As you can see in the design, the alternate, dark background (back2) complements the light gray phone model. However, in your future campaigns you may find that changing a background image makes the overlaying font difficult to read. In this tutorial we will change the color of the recipient's name, which is currently formatted in green in the top left corner of the back page.



The InDesign file already has two Character Styles defined - Title1 (green - to use with the original blue background) and Title2 (orange - to use with the alternate dark background).

From the **Dynamic Content** panel menu, select **New Content Object...**

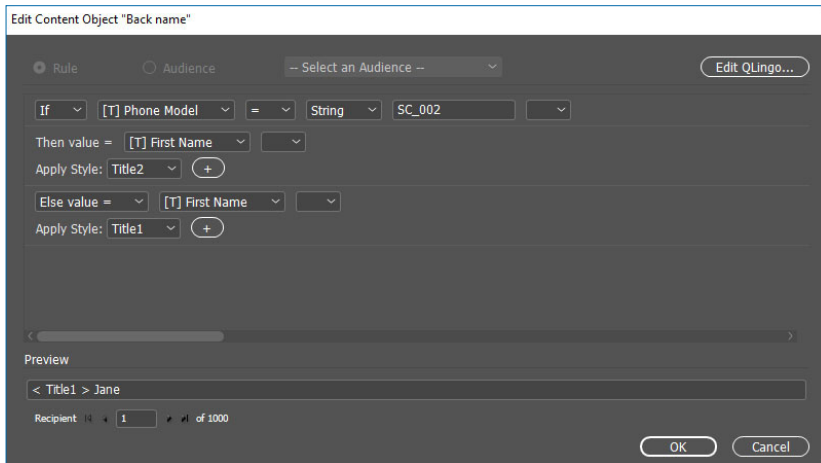


Enter a **Name** for the new Content Object: **Back name**.

From the **Type** drop-down list, select **Text with Style**.

Check the box to **Edit Rule**.

Click **OK**.



Change the first drop-down from **Graphic =** to **If**.

Change the second drop-down to **[T] Phone Model**.

Change the third drop-down from **<>** to **=** and enter the text **SC_002** in the text box.

On the second row of the expression, after **Then Value =**, change the drop-down to **[T] First Name** and select to apply the **Title2** style.

After **Else Value =**, change the drop-down to **[T] First Name** and select to apply the **Title1** style.

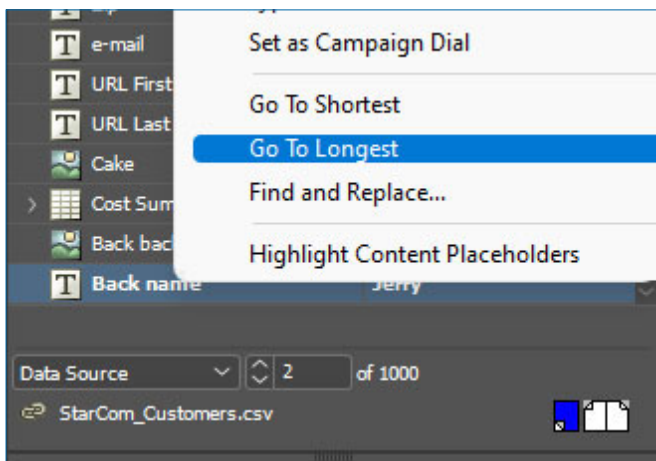
When the Content Object definition or rule appears as shown above, click **OK** to save your changes.

Use the InDesign Type tool to select the static text **Jane** and double-click the **Back name** Content Object.

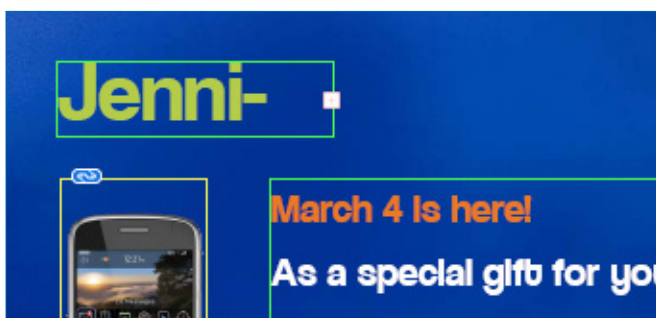
Test the design by browsing through different records. For example, record #1 (Jane) should have the blue background image and the green text; record #2 (Jerry) should have the dark background image and his name should appear in orange text.

Handling text copy fitting dynamically

The text frame where we just placed the Back name Content Object is fairly small. It is possible that a long name in the database might not fit in the provided space. XMPie provides an option to find the longest value (by character count) in any Content Object.



In the Dynamic Content panel, right-click on the **Back name** Content Object and select **Go to Longest** from the context menu.

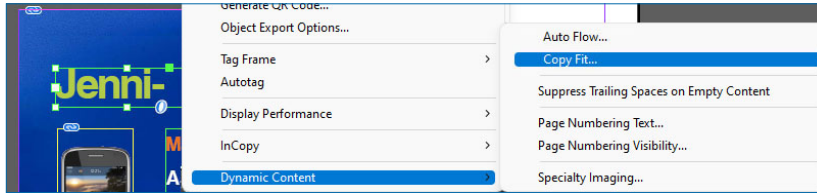


uCreate print will move to the longest record (Jennifer), and you can see that this name will not fit in the available space.

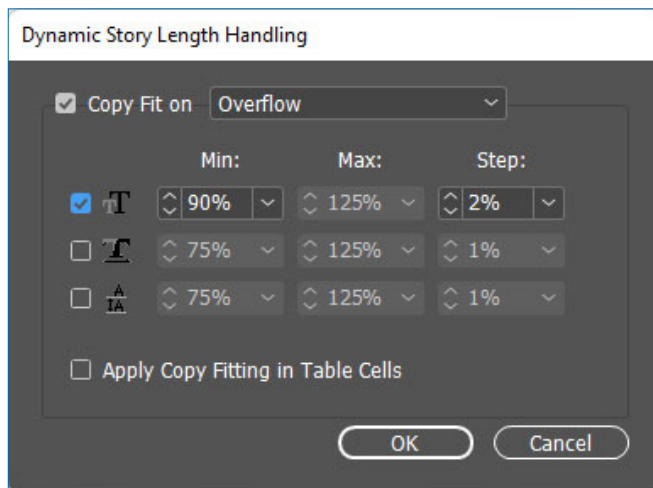
Of course, we could make the box larger, but in future we could link to a different data source with even longer names, so we should take care of fitting the text dynamically.

In the InDesign Tools panel, choose the **Selection** tool.

Click to select the text frame.



Right-click on the selected text frame, and from the context menu, select **Dynamic Content** -> **Copy Fit...**



Check **Copy Fit on** and then select **Overflow** from the drop-down list.

Check the **text size** box and set the minimum size to **90%** with a **2%** step.

This setting will shrink the text size in 2% increments (98%, 96% etc.) until it fits the text box, and will not shrink below 90% of its original size.

Click **OK**.

You should find that Jennifer now fits within the text frame, and if you preview other records, the text will revert to the pre-set size. Overflow copy fitting will only change the font size if the text overflows the text frame.



Additional information and notes

The **Minimum** change value prevents uCreate Print from making the text so small that it becomes unreadable. In the event that the minimum set is not enough for the text to fit the frame, you will see the overflow on screen, and during output print production, uCreate Print will display a warning about the overset text.

The **Step** value gives great control over how to increment through text size, scale and/or leading. The smaller the value, the closer the text would fit the frame, but the longer it would take to process your print output since uCreate Print would have to test more times before finding a text size that fits the frame.

Formatting a date

This step will format the date of birth (DOB) to appear as the month name and number to use in the birthday wish text.

In the InDesign Tools panel, select the **Type** tool.

Select the static text **March 4** in the text next to the phone model image, and double-click the **DOB** Content Object.

Note that the date appears in the same way that it is displayed in the data source - which is not very user friendly.

In the Dynamic Content panel, right-click on the **DOB** Content Object and from the context menu, select **Edit...**

From the second drop-down, select **FormatDate**.

From the third drop-down, select **[T] DOB**.

In the Text box, enter **MMMM d**.

This will format the date as the full month name and the date.

For detailed information on the **FormatDate** function, refer to the **uCreate Print User Guide**.

Click **OK** to save your change.

Confirm the date is now formatted correctly by browsing through some different records.

Using logic or rules to create a promotional text message

Our customer, StarCom wants to provide a birthday offer to their customers, based on their Club Level.

Customers in the Stellar club will be offered free text messaging on their birthday, while other customers will receive 50% discounted text messaging on their birthday.

In the Dynamic Content panel right-click any Content Object and select **New Content Object...** from the context menu.

Enter a **Name** for the new Content Object: **Offer**.

From the **Type** drop-down list, select **Text**.

Check the box to **Edit Rule**.

Click **OK**.

Change the first drop-down from **Value =** to **If**.

Change the second drop-down to **[T] Club Level**.

Change the third drop-down to **=**.

Change the fourth drop-down to **String** and enter the text: **Stellar**.

On the second line of the expression, after **Then value** = change the first drop-down to **String** and enter the text: **free of charge!**

On the third line of the expression, enter the text: **at 50% discount!**

When the rule appears as shown above, click **OK** to save your changes.



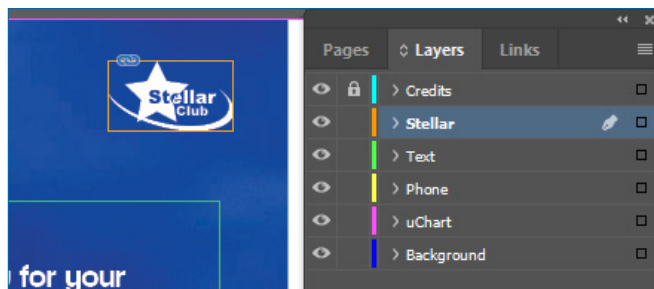
In the InDesign Tools panel, select the **Type** tool

Select the static text **free of charge!** in the text next to the phone model image, and double-click the **Offer** Content Object.

Test the design by browsing through different records. For example, records #1 and #2 (Jane and Jerry) who are in the Stellar club, should have the free offer; while record #3 (Jennifer) should have the 50% discount offer.

Create and Use a Visibility Content Object

Visibility Content Objects are used to turn layers or page spreads on or off, depending on a value from the data source.



For this tutorial, there is a separate InDesign layer which contains only the Stellar club logo.

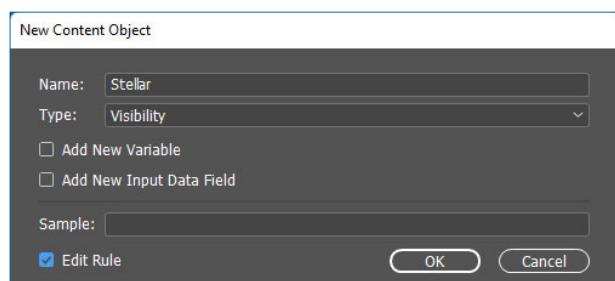
We need to turn the layer on, only if the recipient is a member of the Stellar club.



Additional information and notes

Visibility is the only type of Content Object whose condition can be set to a single line, "Is Visible if". All other Content Object types can have both "If", and a one-line expression "Then value" and "Else value" using the Value = condition. In this step, we will learn to use the shortened version of the condition.

Right-click anywhere in the Dynamic Content panel and select **New Content Object...** from the context menu.

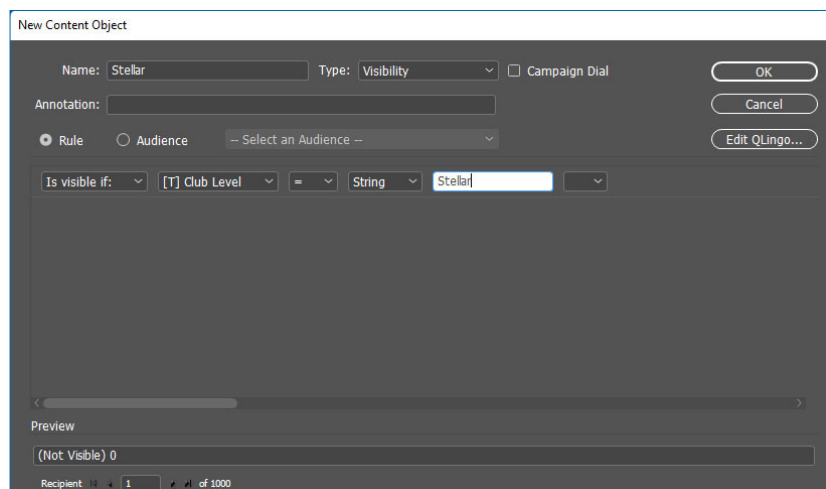
A dialog box titled "New Content Object". It has a "Name:" field with "Stellar" entered. Below it is a "Type:" dropdown menu with "Visibility" selected. There are two checkboxes: "Add New Variable" and "Add New Input Data Field", both of which are unchecked. Below these is a "Sample:" text field. At the bottom left is a checked checkbox labeled "Edit Rule". At the bottom right are "OK" and "Cancel" buttons.

Enter a **Name** for the new Content Object: **Stellar**.

From the **Type** drop-down list, select **Visibility**.

Check the box to **Edit Rule**.

Click **OK**.

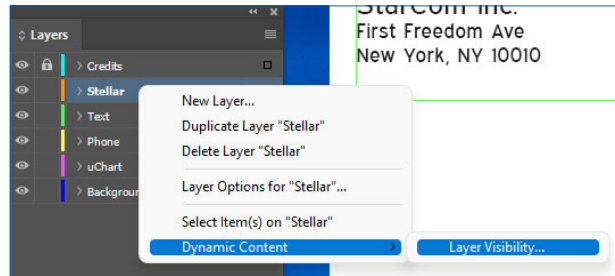
A dialog box titled "New Content Object" showing the "Rule" tab. The "Name:" field contains "Stellar" and the "Type:" dropdown contains "Visibility". There is an "Annotation:" field. Below is a section for selecting an audience, with "Rule" selected and a dropdown showing "[T] Club Level". Below that is a section for defining the rule: "Is visible if:" followed by a dropdown showing "[T] Club Level", an equals sign, a dropdown showing "String", and a text field containing "Stellar". There are "OK", "Cancel", and "Edit QLingo..." buttons. At the bottom is a "Preview" section showing "(Not Visible) 0" and a "Recipient" section showing "1 of 1000".

Change the second drop-down to **[T] Club Level**.

Change the third drop-down to **=**.

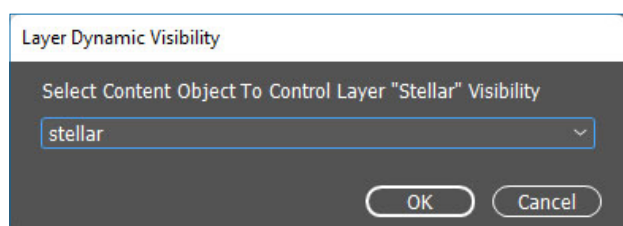
In the text box, type **Stellar**.

When the rule appears as shown left, click **OK** to save your changes.



In InDesign's Layers panel, select and right-click on the **Stellar** layer.

From the **Dynamic Content** menu group, select **Layer Visibility...**

A dialog box titled "Layer Dynamic Visibility". It has a label "Select Content Object To Control Layer 'Stellar' Visibility". Below is a dropdown menu with "stellar" selected. At the bottom are "OK" and "Cancel" buttons.

From the drop-down, select the name of your Visibility Content Object, and click **OK**.

The Stellar layer is now tagged with the Stellar Visibility Content Object.

Test the design by browsing through different records. For example, records #1 and #2 (Jane and Jerry) who are in the Stellar club, should have the logo visible; while record #3 (Jennifer) should not see the logo.

If you have the Layers panel open while you move through the different records, you will see the layer visibility turned on and off automatically by uCreate Print.

Save the document

Congratulations! You have now completed the template setup. Save your work.

Module 3:

Printing a dynamic document

Now that we have completed the template setup and everything looks good on screen, we need to create the print output file. Note that this module will only be possible if you have a uCreate Print license. The trial version (without a license) will not permit print production. If you have not yet purchased uDirect and need to test print output, please contact your XMPie Sales Manager - it is possible to get a 30-day evaluation license that will permit printing for a limited time.

Duration

About 10 minutes.

Objectives

After completing this module, you will be able to:

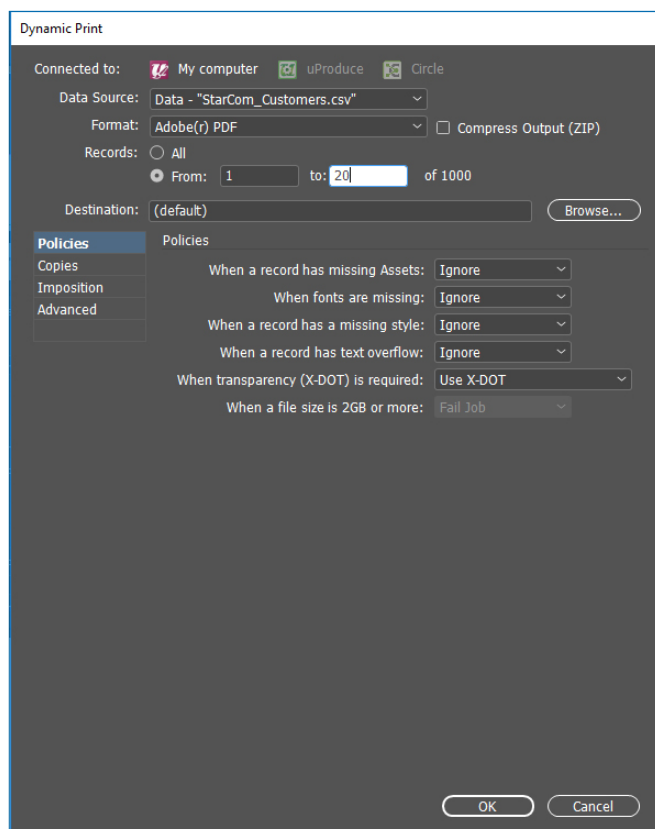
- Locate and use the Generate VDP Output print dialog.

Procedure

For the purposes of this exercise, we will print the “Happy Birthday” postcards in a PDF format, for the first twenty recipients in the data source. For a full list of the available VDP print options, please refer to the uCreate Print User Guide.

From the Dynamic Content menu, select the **Generate VDP Output** option.

If you have unsaved changes, you will be prompted to save the InDesign document.



From the **Format** drop-down list, choose **Adobe(r) PDF**.

Next to **Records** check the option to use the to and from text boxes.

Set the **to** box to **20**, to print only records 1-20 from our data source.

Use the **(default)** **Destination** setting.



Additional information and notes

The Format setting defines the Variable Information (VI) output format in which the document will be printed. uCreate Print provides output formats including PDF, PDF/VT-1, VPS, PPML, VIPP, PPML/VDX and PostScript.



Additional information and notes

The (default) output destination will create a folder named **output**, next to the InDesign document. A sub-folder named using the current date and time will be created in the Output folder and will contain the output file.

To set a different destination, click Browse and select to the desired folder.

If you choose a different location, each time you print, you will be warned that any existing output file in that folder will be over written. This warning does not occur with the default setting because a new date/time folder is created each time preventing the possible loss of previous output files.

Click **OK** to create your output PDF.

The print progress window is displayed, allowing you to monitor the progress of the output files' production.

When production completes, you will be returned to InDesign.

Open the Tutorial folder.

Name	Date modified	Type	Size
Assets	10/07/2022 4:47 PM	File folder	
Data	10/07/2022 4:47 PM	File folder	
Document Fonts	10/07/2022 4:47 PM	File folder	
output	11/07/2022 5:51 PM	File folder	
Resources	10/07/2022 4:47 PM	File folder	
ulmageTemplate	10/07/2022 8:08 PM	File folder	
StudioTutorialCompleted_CC2022.cpkg	11/07/2022 5:38 PM	CPKG File	15,119 KB
StudioTutorialCompleted_CC2022.indd	11/07/2022 5:38 PM	InDesign Document	3,244 KB
StudioTutorialStatic_CC2022.indd	11/07/2022 5:38 PM	InDesign Document	3,244 KB
uDirect_Studio_Tutorial_r6.2_v11.3_EN.pdf	11/07/2022 5:53 PM	Adobe Acrobat D...	7,092 KB

The default output location will create an **output** folder next to your InDesign document.

Inside the output folder, each time you dynamic print using the default output location, a new sub-folder is created with the current date and time. Inside that folder will be your output file.

Open the PDF and check your work. One PDF file should be created containing 40 pages - 2 per recipient/record.

Congratulations! You have now produced the "Happy Birthday" VDP postcard and have successfully completed the uCreate Print tutorial.

Appendix A:

Viewing the Completed Tutorial

OK, so you don't have a spare 40 minutes or so to run through the tutorial, but you want to look at the completed document?

XMPie provides a "package" mechanism to allow import/export of all the resources necessary to transport a completed VDP document between different computers.

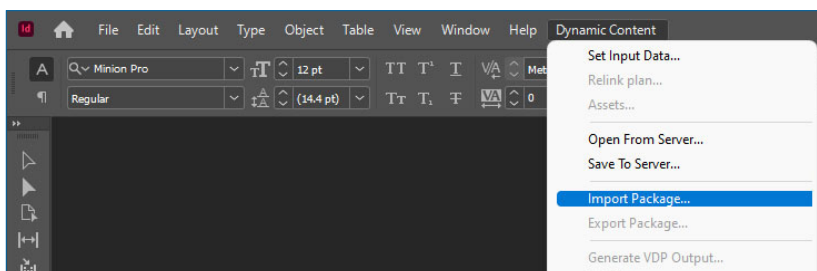
Follow these steps to import the completed campaign package.

Preparation

- If Adobe InDesign and Photoshop are not already installed, use the Adobe Creative Cloud tool to install InDesign and Photoshop CC2023.
- If uCreate Print is not already installed, browse to <https://www.xmpie.com/trial-software-and-tutorials/> to download and then install uDirect.
- If you have purchased uDirect, add your license:
Dynamic Content -> Help -> Add license...
(If you do not have a license, you can still create the template and see how uCreate Print works, but you will not be able to create the final print output.)
- Download and unzip the tutorial files.

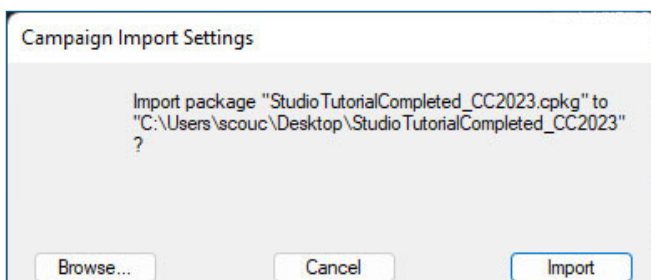
Importing a Campaign Package

Open Adobe InDesign.



From the **Dynamic Content** menu select **Import package...**

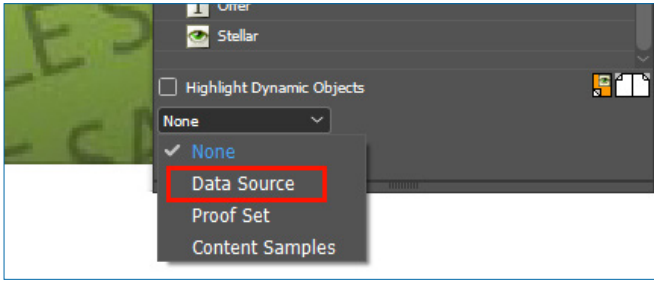
Browse to the tutorial folder, and select the **StudioTutorialCompleted_CC2023.cpkg** file.



By default, the import will extract the files to the same folder that contains the package file.

You can click **Browse** if you want to change the location, or simply click **Import** for the default location.

The package file will be unzipped and the InDesign file will be opened.



At the bottom of the Dynamic Content panel, select to preview data from the data source.

Adobe Photoshop should launch to create the first personalized Cake image.

Please be patient for a moment while the Photoshop file is opened and the image created.

In a few moments, swap back to InDesign.

You are now viewing the completed document.

Appendix B:

uCreate Print quick reference

Quick Reference to the Dynamic Content panel

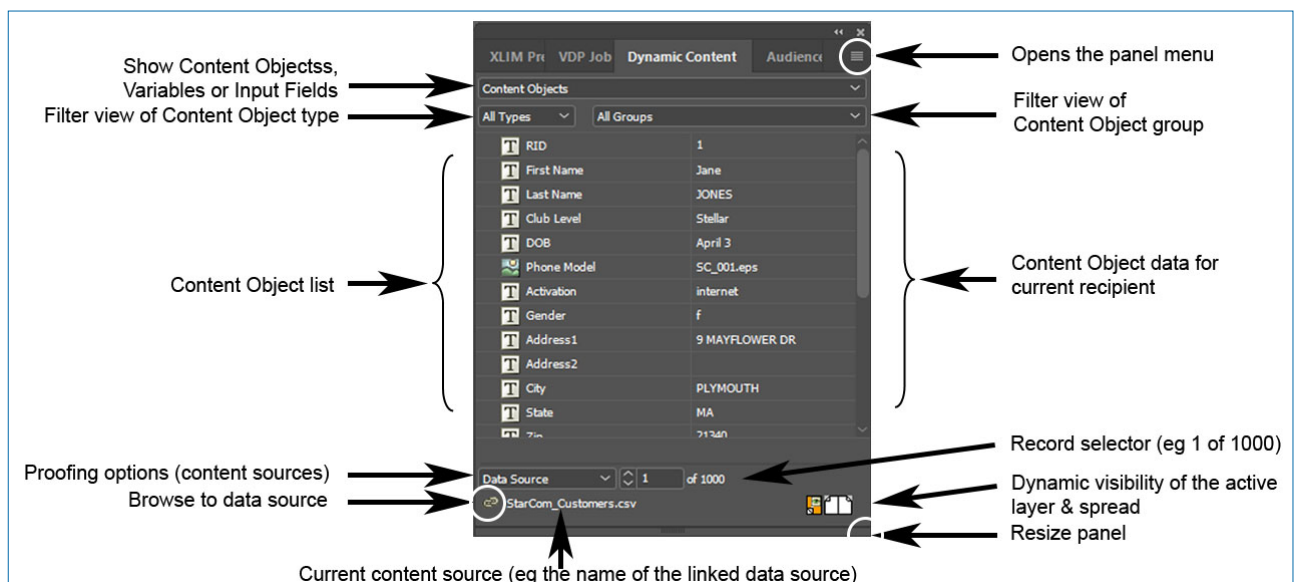
The following section is not a procedure; instead it provides useful information on the Dynamic Content panel, which will make it easier for you to understand and perform this tutorial.

The data source that your document is linked to is a database table. The table's columns contain different types of recipient data: RID, First Name, Last Name, Club Level etc...

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	RID	First Name	Last Name	Club Level	DOB	Phone Model	Activation	Gender	Address1	Address2	City	State	Zip	e-mail
2	1	Jane	Jones	Stellar	3/04/1950	SC_001	internet	f	9 Mayflower Dr		Plymouth	MA	21340	jane@n
3	2	Jerry	Jones	Stellar	4/05/1949	SC_002	e-mail	m	9 Mayflower Dr		Plymouth	MA	21340	jerry@n
4	3	Jennifer	Jones		3/06/1978	SC_003	none	f	9 Mayflower Dr		Plymouth	MA	21340	jennifer
5	4	Jimmy	Jones		8/08/1990	SC_004	internet	m	9 Mayflower Dr		Plymouth	MA	21340	jimmy@
6	5	Sandra	Smith	Stellar	2/11/1970	SC_002	e-mail	f	29 Pine Ridge Rd	Apt 9C	Bridgeport	CT	11743	sandra@
7	6	Sam	Smith		7/03/1970	SC_006	none	m	29 Pine Ridge Rd	Apt 9C	Bridgeport	CT	11743	sam@n
8	7	Mary	McAndrews		5/12/1975	SC_001	internet	f	8 Avon St		Jacksonville	FL	94210	mary@r

Once you link to a data source table, uCreate Print automatically creates a Content Object for each of the table's column headers.

When you start editing your design, you will be using simple point-and-click operations to tag different design objects with the relevant type of Content Object. (For example, the First Name Text Content Object or the Phone Model Graphic Content Object.) The tagged InDesign object becomes a dynamic object: a design object that derives its content and/or appearance from the Content Object's value.



The populated Dynamic Content panel shows the following details and options:

- **Show Content Objects, Variables or Input Fields**—While Content Objects are available to place into the document design, variables are used behind the scenes. Variables use the same kind of business rules or logic that we used for Content Objects in this tutorial. Variables are useful to calculate a value once – you can then use that variable in several Content Objects instead of having to calculate the

value each time. Input fields represent the expected data source structure. For example, if you expect to get another datasource from your customer that has additional fields/columns, you can add Input fields for these new data columns and work with them in uCreate Print before getting the new data file. Later you can link to the new data and map the input fields to the fields in the datasource.

- **Filter Content Object types** — Use the drop-down list to show **All Types** of Content Objects, or to filter the list to show a specific type (For example, **Text**, **Graphic**, **Visibility**, etc.).
- **Content Object list** — lists the names and types of the Content Objects included in the document you currently have open in InDesign. The name and value of Content Objects can be directly read from the data source you are currently linked to, or have been created and edited to show other values based on Content Object rules or expressions.
- **Proofing options** — uCreate Print offers you a number of ways to check what your dynamic document will look like when actual values are used in place of the dynamic objects. These actual values can come from various types of content sources, including your data source, a proof set file or content samples.
- **Browse to data source** — Allows you to link to a different data source than the one listed that the document is currently connected to. In order to keep all the rules and logic, the field names and data types of the new data source should be the same as the existing data source. You will be prompted to remap fields in the new data source if they do not match.
- **Filter Content Object Group** — When using a Plan file instead of linking to a data source, it is possible to group Content Objects into folders. This option allows you to filter the list to different groups.
- **Content Object data** — if Show Data Column is enabled in the **Dynamic Content** -> **Preferences** menu, the Content Object values for the current recipient will also display in the panel.
- **Record selector** — used to proof your dynamic document: browse through the records of your content source (the linked proof set, a content sample or the linked data source), and see how the dynamic objects' content changes when you scroll from recipient to recipient.
- **Dynamic Visibility** — Opens the dynamic visibility dialog, so you can assign a Visibility Content Object to the active spread or active layer (Note that the icon is the color of the active layer). When dynamic visibility is assigned, an eye symbol is added to the respective icon.
- **Resize panel** — to see the complete list of Content Objects, resize the panel by dragging its bottom right corner. Alternatively, use the horizontal scroll bar to scroll down the list.

Quick Reference to the Content Object rule editor

This section will help you get familiarized with Content Object rule editor.

Content Objects can be defined based on a number of attributes; their name, their type, and by their business rule (rule) which is an expression that is part of the campaign logic, and determines how to calculate the Content Object's value for each recipient.

When you connect your design to a data source, uCreate Print automatically creates an Content Object for each column header in that data source. You may wish to edit these Content Objects or create new ones, to use to tag your design with dynamic formatting, conditional rules or math operations.

Content Objects are both edited and created using the Content Object rule editor.

The rule editor is a simple graphic user interface, consisting of basic drop-down lists and text boxes. It is specifically designed to allow non-technical users to easily define or modify Content Object rules.

Launching the Content Object rule editor

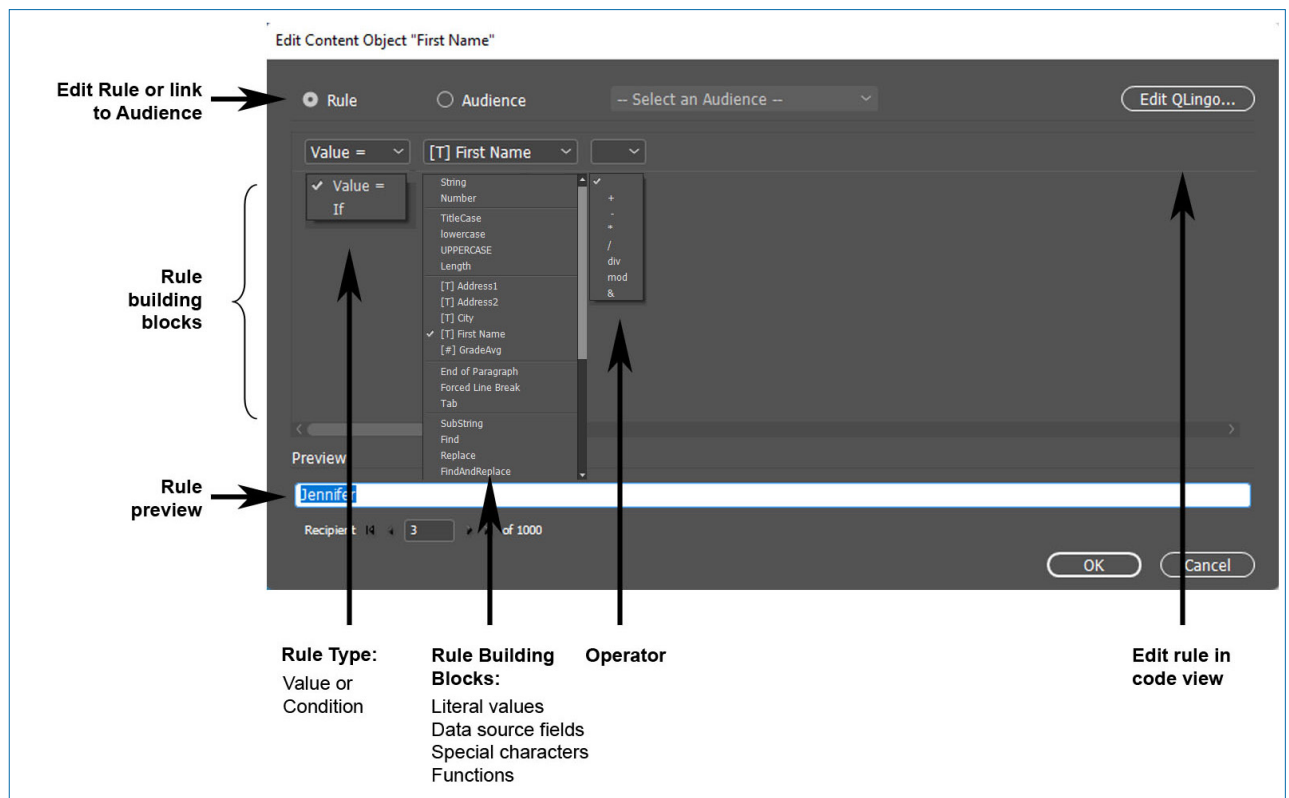
You can launch the rule editor in one of the following ways:

- **To add a new Content Object** — in the Dynamic Content menu, select **New Content Object...**
- **To add a new Content Object** — in the Dynamic Content panel, right-click any Content Object, and select **New Content Object...** from the context menu.
- **To edit an existing Content Object** — in the Dynamic Content panel, right-click the Content Object you wish to edit, and then select **Edit...** from the context menu.

The following description applies to both the “New Content Object” and the “Edit Content Object” windows of the rule editor.

Using the Content Object rule editor’s building blocks

Below is an sample rule editor window, used to edit a Text Content Object (First Name). The drop-down lists have been expanded to reveal the available options.



The rule editor options vary, depending on the type of Content Object you are currently editing or defining (Text, Graphic etc.).

The first drop-down list determines whether this rule sets a value or a condition.

The second drop-down list contains building blocks for defining the Content Object’s value or condition: literal values (string or number), functions, and an alphabetical list of the data source columns.

The third drop-down list includes operations, such as “+”, “-”, etc. When you define a condition (by setting the first drop-down list to “If”), the operations list is enhanced with comparison operators, such as “AND”, “OR” etc.

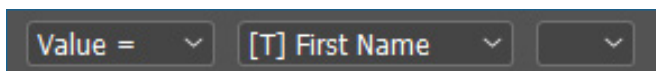
Value rules

To define a rule as a value, set the first drop-down list to **Value=** for Text Content Objects, **Graphic=** for Graphic Content Objects, etc.

Value expressions are used in the following cases:

- **The Content Object is a data source column header:**

An Content Object created for a data source column header is fed with the value of the appropriate data source field, and this value changes dynamically per-recipient. For example, the First Name Content Object receives the value of each recipient's First Name field:



A screenshot of a configuration interface for a value rule. It shows three dropdown menus in a row. The first dropdown is set to "Value =", the second is set to "[T] First Name", and the third is an empty dropdown.

- **The Content Object has a literal value (a number or a string of text):**

You can set an Content Object object to use a fixed value, which will be common to all recipients. For example, to set the value of a **Company Logo** Graphic Content Object, specify the image's filename. For example, **CompanyLogo**:



A screenshot of a configuration interface for a value rule. It shows three dropdown menus in a row. The first dropdown is set to "Graphic =", the second is set to "String", and the third is a text input field containing "CompanyLogo".

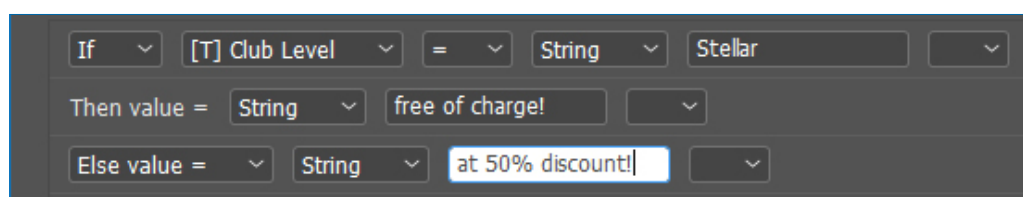
Condition rules

Condition Rules allow you to determine an Content Object's value using "If-Then-Else" statements. In this case, we will use a condition rule to determine the value of the Offer Content Object, depending on the value of the Club Level data source field:

- If the value of Club Level is Stellar, then the value of the Offer is "free of charge!"
- Otherwise, the value of the Offer is "50% discount!"

To define a rule as a condition, set the first drop-down list to **If**.

A basic condition consists of three lines:



A screenshot of a configuration interface for a condition rule. It shows three lines of configuration. The first line is an "If" statement: "If [T] Club Level = String Stellar". The second line is a "Then value" statement: "Then value = String free of charge!". The third line is an "Else value" statement: "Else value = String at 50% discount!".

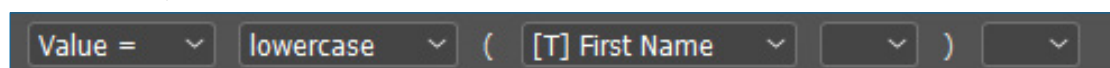
- The first line is an "If" value rule—a value rule that may be either true or false, for example: "The recipient's Club Level = Stellar".
- The second line is a "Then value"—the Content Object's value if the above expression is true.
- The third line is an "Else value"— the Content Object's value if the above expression is false.

Functions

Functions are displayed in the second drop-down list. Functions give you the flexibility to convert and manipulate the data source value so that it fits your specific needs.

For a detailed description of all uCreate Print functions, please refer to the uCreate Print User Guide.

The following example rule uses the lowercase function to format the recipient's first name in lowercase



A screenshot of a configuration interface for a value rule. It shows three dropdown menus in a row. The first dropdown is set to "Value =", the second is set to "lowercase", and the third is a text input field containing "([T] First Name)".

Appendix C:

XMPie Terminology

The following is a glossary of XMPie terminology that is relevant to this tutorial. For the complete uCreate Print Standard glossary, please refer to the uCreate Print User Guide.

Asset Source — in the XMPie context, this term refers to a collection of campaign assets (for example images, or formatted text files) and their location. In uCreate Print, you can define one asset source for a single campaign. The asset source can contain multiple folders and files.

Assets — in the XMPie context, this term refers to content (such as graphic files and text files) that feed the Content Objects in a design (as opposed to resources, which are static content).

Business rule — see Rule.

Campaign — a representation of a set of dynamic documents, possibly of different types, all sharing the same plan (logic/rules), data source and asset source.

Content Object — Content Objects can be of various design-centric types. For example: text, graphic, etc. The designer uses simple point-and-click operations to tag different design objects with the relevant type of Content Object. (For example, the First Name Text Content Object or the Phone Model Graphic Content Object.) The tagged InDesign object becomes a dynamic object: a design object that derives its content and/or appearance from the Content Object's value.

Content Object values are calculated by plan rules, using the given data source(s). These calculations are performed iteratively, once for each recipient, resulting in a set of recipient-specific values for each Content Object. In a way, one can think of Content Objects as the intermediaries between the logic (i.e., Plan) and data (i.e., data source) and the design (i.e., XMPie tagged InDesign document).

Content Samples — a set of possible values, defined by the user, for a given Content Object; different Content Objects can have different sets of values associated with them. There are no constraints on these values; except that they need to adhere to the type of Content Object with which they are associated (for example, the Content Samples associated with a Graphic Content Object should be a set of images). For example, one can define three images— "CarA", "CarB", and "CarC"—as the possible values of a "CarPicture" Graphic Content Object. It is then possible to flip through these Content Samples, to see how the different images appear in the Design, without being forced to rely on a complete data source or Proof Set that may not necessarily be available at the early stages of the design process.

Content source — the source that provides values that feed the Content Objects (via rules or directly), which in turn change the content (or format) of the dynamic objects in your design. There are different types of content sources, including data sources, proof sets and content samples.

Copy Fit — adjustment of the type size to make text fit in a given amount of space.

Data — one of the dynamic document's basic components. In the XMPie context, the data component is represented by data sources and asset sources.

Design (also known as tagged documents, dynamic document templates and uProduce documents)— an InDesign document that includes regular and tagged design objects. Tagging is performed using the uCreate Print plug-in and the Dynamic Content menu and panel.

Dynamic Document Template (also known as a Tagged Document)—see Design.

Expression — the rule that drives the information for an Content Object. Use the rule editor to modify the expression for a given Content Object.

Graphic (Content Object) — A Content Object which is designed to dynamically change the content of a Graphic Frame in InDesign. The Graphic Content Object rule should return the textual file name of a graphic asset file. Graphic files can be .jpg, .gif, .eps, .tif, and so on depending on the desired output.

Logic— refer to Rule.

PersonalEffect — the server-version of XMPie's revolutionary solution for cross-media direct marketing. Makes personalized publishing across multiple channels simple and cost-effective. PersonalEffect consists of three modules: a web-based production server, uProduce, and two desktop tools, uPlan and uCreate, for campaign creation.

Plan — the encoding of the rules for all Content Objects in the document or campaign is called the Plan. In uCreate Print the plan is encoded internally, as part of the uCreate Print document, and is not visible as a separate object. In PersonalEffect, the Plan can be a separate file encoded in XML, and stored in a file with a ".plan" extension. This enables the one plan and data source to be applied to multiple documents.

Proof Set — an XML-encoded table where columns represent Content Objects and rows represent a set of values - one for each Content Object - for a given recipient. Proof Sets are generated by uPlan, uProduce or Circle. They are typically generated for a subset of the recipients list, with possibly a few more filtering criteria, by executing the Plan for each such selected recipient and storing the resulting Content Object values in that recipient's row. Sometimes Proof Sets may represent the whole set for which a specific production run is going to be executed. In such cases they may be referred to as Production Sets.

QLingo — a scripting language developed by XMPie, to allow the use of classical conditional logic - such as 'if-then-else' or 'switch' constructs - in expressions that compute values for Content Objects or Variables in a Plan file. QLingo also supports many domain-specific constructs for formatting, process control, and other data manipulation functions. Together with SQL and the ability to call upon external functions, QLingo makes the Plan file expressions (rules) extremely powerful, yet not overly complex.

Recipient — the person who receives an individual instance of the dynamic document. If the document is static, all recipients receive identical copies; if the document is dynamic, each recipient receives a unique document instance, which has been personalized based on this recipient's specific data.

Recipient List — a table whose records represent the recipients of a particular dynamic document. At production time, a personalized dynamic document instance is generated for each recipient (i.e., record) in this recipient list.

Resources — static graphic files, which are used in the design and are fixed throughout production (as opposed to Assets, which change per-recipient). An example may be the company logo.

Rule (also known as business rule) — part of the logic defined in the document or campaign's Plan file. Rules are expressions that calculate Content Object values for each recipient. Rules can also be added or edited using uCreate Print's Rule Editor. In the uCreate Print context, the terms "Logic" and "Rules" are interchangeable.

Static Document — a regular desktop publishing document, such as an InDesign document.

Tagged Document — see Design.

Text (Content Object) — A Content Object which is designed to dynamically change text in InDesign. The rule or expression of a Text Content Object can return any characters which can be letters, numbers and symbols. Of course, the font of the selected text in InDesign should support the characters (glyphs)

returned by the Content Object rule. Note: This is the default Content Object type, in other words all Content Object, when first created are Text type.

Text file (Content Object) — A Content Object which is designed to dynamically change the content of a Text Frame in InDesign. The textual name of an asset file containing text formatted in a specific style: a preformatted tagged-text file for use with InDesign templates. Text Files can be formatted as plain text, Rich Text (RTF), Adobe InDesign Tagged Text, or a proprietary XMPie format called XNIP.

uChart — Part of the uDirect suite, that enables the integration of data-driven charts and graphs into the variable data template, ensuring chart elements fit properly within the user-defined InDesign graphic box.

uCreate Print — Part of the uDirect suite, that plugs into Adobe InDesign to enable the connection of the document design to the logic and data to create a variable data template.

uDirect — An integrated suite of XMPie software tools; uCreate Print, ulmage and uChart, enabling the creation of variable data-driven documents using personalized images and illustrations, and data-driven charts and graphs.

ulmage — Part of the uDirect suite, enables the integration of personalized images into templates created in Photoshop or Illustrator.

Variable — an internal object of the Plan, which can be assigned values of expressions (QLingo, SQL, etc.). Variables are not visible to document design.

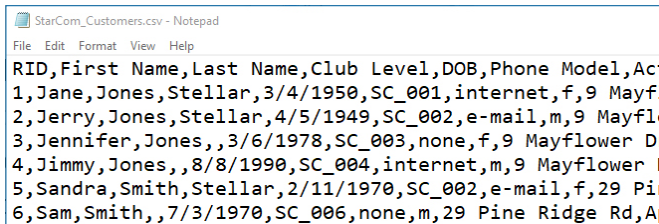
Visibility (Content Object) — A Content Object which is designed to dynamically turn on/off an InDesign page (spread) or layer. The Visibility Content Object rule should return true/false value which acts an ON / OFF switch to show or hide a layer or page spread. When used with InDesign Layers, the rule can also return the layer name. In this case, layers which are tagged with the rule will be turned on when the layer name matches the Content Object value, and off when name does not match. This is helpful when you want to control several layers from one Visibility Content Object.

Appendix D:

Database Terminology

A **Flat database** is one table, often stored in a Comma-Separated Values (.CSV) file, a text file (.TXT), or a Microsoft Excel worksheet (.XLS).

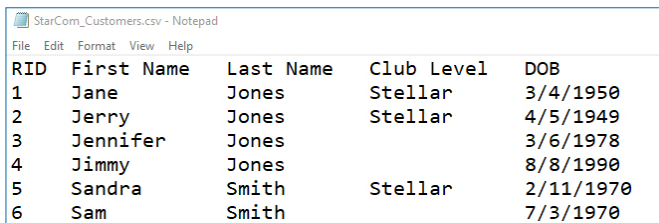
Comma Separated Values files (.CSV) are a special type of text file:



RID	First Name	Last Name	Club Level	DOB	Phone Model	Activatio
1	Jane	Jones	Stellar	3/4/1950	SC_001	internet
2	Jerry	Jones	Stellar	4/5/1949	SC_002	e-mail
3	Jennifer	Jones		3/6/1978	SC_003	none
4	Jimmy	Jones		8/8/1990	SC_004	internet
5	Sandra	Smith	Stellar	2/11/1970	SC_002	e-mail
6	Sam	Smith		7/3/1970	SC_006	none

- A CSV file contains one table.
- The first line is usually called a “header” or “header row”, because it contains the names of the fields.
- Each line in this text file is a record.
- Each record consists of one or more fields, which are separated by commas. Sometimes the text between the commas is placed inside quotes, to identify that the information is to be treated as if it were one piece of information. This is especially useful for hidden characters, such as carriage returns.

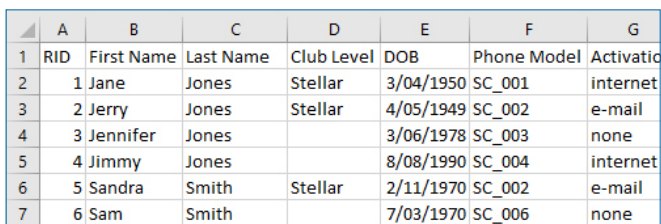
Tab Separated Text files (.TXT) resemble CSV files:



RID	First Name	Last Name	Club Level	DOB
1	Jane	Jones	Stellar	3/4/1950
2	Jerry	Jones	Stellar	4/5/1949
3	Jennifer	Jones		3/6/1978
4	Jimmy	Jones		8/8/1990
5	Sandra	Smith	Stellar	2/11/1970
6	Sam	Smith		7/3/1970

- A TXT file contains one table.
- The first line is usually called a “header” or “header row” because it contains the names of the fields.
- Each line in this text file is a record.
- Each record consists of one or more fields which are separated by tabs or other kind of special character (for example: a pipe “|” symbol)
- Text/String fields are often placed inside quotes if there are spaces between the text.

Microsoft Excel worksheets (.XLS or .XLSX):



	A	B	C	D	E	F	G
1	RID	First Name	Last Name	Club Level	DOB	Phone Model	Activatio
2	1	Jane	Jones	Stellar	3/04/1950	SC_001	internet
3	2	Jerry	Jones	Stellar	4/05/1949	SC_002	e-mail
4	3	Jennifer	Jones		3/06/1978	SC_003	none
5	4	Jimmy	Jones		8/08/1990	SC_004	internet
6	5	Sandra	Smith	Stellar	2/11/1970	SC_002	e-mail
7	6	Sam	Smith		7/03/1970	SC_006	none

- An Excel files may contain multiple tables, unlike a one-table flat file (CSV, TXT)
- uCreate Print can link to Excel files in Windows only, not in Mac.
- Each worksheet is a table
- The first line is usually called a “header” or “header row”, because it contains the names of the fields.
- Each row is a record.

- Each column is a field.
- The first column is usually the primary key field. While it is not required, it is **STRONGLY** suggested that you always include a unique or primary key field in your Excel sheets, even if you have to add it manually .