Formatting

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When working with data, it is important that the data is formatted correctly - otherwise it might get interpreted incorrectly. To make sure that your data is formatted the way you want it to be, XperiDo has plenty of formatting options.

Concept

When a field is mapped, you can format it to alter the content. You can turn the field into a number, data, time, an image, a barcode, a hyperlink, an e-signature... All of these change the original mapping's content to something else - that's formatting.

The XperiDo Mapping window

The XperiDo Mapping window is where you apply formatting to your mapping. Double-click a mapping in the Mapping tab of the XperiDo pane (or select a mapping and click Settings) to bring it up. Here's the Formatting part of that window:
In this article, we'll go over all the tabs in the **Formatting** tab. The other parts of the XperiDo Mapping window are explained in the [Conditional content chapter](#).

### Reset to default

If you want to reset your mapping's settings to the default values, you can click the **Reset all formatting to default** button:

![Reset all formatting to default button](image)

### Format

This tab can be used to change the data type of your field. By default, all fields are interpreted as **text**. This is the list of available formats:

- Text
- Currency
- Number
- Date
- Datetime
- Time
- Duration
- Percentage
- Custom number
- Custom date
- Capturing groups

Note that displaying numbers as text may make them appear correct, but that you'll need to convert them to numbers/currencies if you want to use them in calculations.

### Numbers, times & dates

How the **currency**, **number**, **date**, **datetime**, **time**, **percentage**, **custom number** and **custom date** formats work is covered in the [Numbers & dates chapter](#).

### Durations

Durations can be used to specify a **period of time**. This is used primarily to output a pseudo-field or formula (that has been through date/time calculations by using XperiDo's date/time functions) in a certain duration format.
You can (but you don't have to) define a base moment, by clicking the calendar button or grabbing a value from a field. This base moment will then be used to calculate months. This is important because not every month is of the same length, so turning e.g. 90 days into months will require that you specify a base moment. If you do not specify a base moment but the calculation requires it (months to something or something to months), then the current moment will be used.

Capturing groups

Capturing groups can be used to disassemble a field into groups, after which you can choose which of those groups to show and in which order. This is useful for output that needs to follow a certain pattern, such as telephone numbers.

Creating, moving and removing groups

First, you need to create your groups. Click the green plus to add a new group:

You can add more groups by clicking the green plus. Select a group and click the red X to remove a group. Finally, you can move a group up or down the list by selecting it and clicking the up or down arrows.

Defining groups

Now that you've created your groups, you need to define them. Click the .+? button in a group's text box to bring up a list of regular expressions which you can use to define your group:

You can select one the expressions (this page has more information about regular expressions) and click OK to insert it, or you can type it in yourself in the text box:

Setting the output

Once you've set up and defined your groups, you can decide how to output them. You can type in the group identifiers (such as {0}) and other characters in the Assemble Output text box:
For instance, if group {0} contains A, group {1} contains B and the output is set as in the above screenshot, then this will be the output: A/B.B.B.

Check the box Input must be an exact match of the break-up pattern above to force the input to adhere to the set pattern. This means that (if you check the box), and you have 4 groups that each catch a digit, 1234 will be matches, but 12345 won't, because there are 5 digits.

Example

Capturing groups is a powerful feature, but it can get quite complex - so let’s use a real-life example. Take the following setup, which we use for formatting a telephone number:

This setup defines 4 groups with the following rules:

- Group {0} contains the first 2 characters of the mapping's content (a dot means any character).
- Group {1} contains the following 3 characters.
- Group {2} contains the following 2 characters.
- Group {3} contains the following 2 characters.

The telephone number that we want to format is 047770123. This means that the groups will contain the following:

- Group {0}: 04
- Group {1}: 777
- Group {2}: 01
- Group {3}: 23

Finally, here’s how we set up our output:

This results in the following output: 04/777.01.23

Formatting telephone numbers is only one very basic example, but this should give you an idea of what is possible with capturing groups.

Font

This tab can be used to style your mapping. You can change the font, color, weight etc.

You can find more information about this tab in the Styling chapter.

Text editing

This tab can be used to replace parts of your text, or to insert parts into your text.

Replacing text

To replace part of your text, type the part you wish to replace in the left text box, and the part you wish to replace it with in the right text box:
This example will replace all lowercase occurrences of invenso with INVENSO. Click the ellipsis (...) to bring up more options:

![Configure how to do the find and replace.]

- **Find what**: invenso
- **Replace with**: INVENSO
- **Ignore case**: Check this if you want to treat lowercase and uppercase letters the same. When this is checked, there is no difference between BLUE, blue, bLuE, Blue etc.
- **Normal search mode**: the text is considered to be plain text without special characters.
- **Extended search mode**: this allows the insertion of special characters in the text. [This Wikipedia page](https://en.wikipedia.org/wiki/Regular_expression) has more information about special characters.
- **Regular Expression search mode**: this treats the text as a regular expression. [This page](https://regex101.com/) has more information about regular expressions.

In here, you can change some settings:

- **Ignore case**: check this if you want to treat lowercase and uppercase letters the same. When this is checked, there is no difference between BLUE, blue, bLuE, Blue etc.
- **Normal search mode**: the text is considered to be plain text without special characters.
- **Extended search mode**: this allows the insertion of special characters in the text. [This Wikipedia page](https://en.wikipedia.org/wiki/Regular_expression) has more information about special characters.
- **Regular Expression search mode**: this treats the text as a regular expression. [This page](https://regex101.com/) has more information about regular expressions.

Click **OK** to save the settings for that text replacement.

After you've set up the text replacement, click the **green plus** to add it to the list:

You can add multiple text replacements and move the order in which they are checked by selecting one of them and clicking the **up** and **down** arrows. If you want to remove a text replacement, select it and click the **red X**. Finally, you can update a text replacement by selecting it, changing the text/settings and clicking the **update** button:

**Inserting text**

To insert text, type the text you want to insert in the **text box**, choose the **position** where you want to insert it and click the **green plus**:

![Insert]

This adds the text insert to the list of text inserts.

There are multiple positions to insert your text:
• At the beginning: the typed text is inserted at the beginning of the field's text.
• At the end: the typed text is added to the end of the field's text.
• From start (forwards): the typed text is added in the position you specify to the right. 0 is at the beginning, 1 is after the first character etc.
• From end (backwards): the typed text is added in the position you specify to the right. 0 is at the end, 1 is before the last character etc.

You can add multiple text inserts and move the order in which they are checked by selecting one of them and clicking the up and down arrows. If you want to remove a text insert, select it and click the red X. Finally, you can update a text insert by selecting it, changing the text/settings and clicking the update button.

Convert to image/barcode

These tabs can be used to convert your mapping into an image or a barcode.

You can find more information about this tab in the Images & Barcodes chapter.

Preserve formatting

This tab deals with preserving your text formatting.

Check the box Preserve formatted text to keep the field's original text formatting. This is very useful for e.g. including HTML text, or entire docx files. These types of content have formatting applied to them, which might lead to XperiDo misinterpreting this formatting.

Note that activating this setting causes Word's and XperiDo's font settings to be ignored. For more information, please read this article.

There's also this article that describes the outcomes of various combinations of settings.

Format

The format of the original content.

We strongly advise you to find the right format before trying the Auto setting. If you use the Auto setting, XperiDo will try to find the right format, and it may succeed, but it will definitely be slower. Manually setting the correct format is therefore the better thing to do, as XperiDo can skip the "look for the right format" step.

Source
Where your data comes from.

- **This mapping’s value**: this treats the value of the mapped field as plain text.
- **A file in a folder**: this treats the value of the mapped field as a link to a file, relative to the XperiDo server. You can use this to get the data from files on the XperiDo server. If you use this option, know that you need to specify the path in between apostrophes and by using double backslashes, like this example: `c:\temp\file.doc`.
- **An asset**: this treats the value of the mapped field as a link to a file in the XperiDo repository. For instance, `/Project/Group/File.docx`.
- **URL**: this treats the value of the mapped field as a URL. You can use this to get the content of a web page.

### Formatting import mode

How XperiDo imports Word styles when converting Word files.

- **Use template styles** means that your current template's Word styles will overwrite the ones found in the original content.
- **Use styles of the original document** keeps the original styles intact. (as said above, all content is assigned a Word style. Plain text will get the Normal style, HTML H1 will become Heading 1 etc. The best way of determining how XperiDo converts your original content into Word styles is to preview your template in docx format and then see which styles are assigned to the content)

### Create separate section for content

When checked, this setting gives you the power to add structure to your document by creating Word sections along with preserving the formatted text. By default this is **continuous**, but you can also choose to create a **new page, new column, even page** or **odd page** section.

### Insert as image

This setting can be used when you want to insert the content as an image rather than text. This is especially useful for inserting PDF files, as you cannot insert their content as text.

Checking this setting opens up another Settings button. Clicking that brings up a window where you can adjust the image's position, size, text wrapping etc. like you can do with regular Word images.

### Merge PDF documents when the document is converted to PDF

This is an interesting feature for when you are **inserting PDF files in a template whose documents are to be outputted to PDF**. Checking this box will make sure that the documents are added as fully-fledged PDF files to the document, keeping text etc. intact. However, this will only work when the document format is PDF, as you can only add PDFs to other PDFs.

This setting helps keep the file size small and increases performance by speeding up the output process. Because you output as PDF, XperiDo can insert PDFs without having to re-render them, and this allows for faster document generation.

Checking this setting opens up another Settings button. Clicking that brings up a window where you can give the inserted PDF a description and table of contents position (for use in PDF’s table of contents), and you can also include a background layer (both near the header or footer) that you can use to put in front of your PDF. This is useful for when you are using page numbering, and you want to make room for that.

If you are going to output to other formats and you want to insert PDFs, this setting needs to be unchecked. Instead, you need to check the **Insert as image** box instead.

### Other settings

There are other settings, not grouped together:

- **Data is base64 encoded**: check this when the data is base64 encoded.
- **Skip external content**: checking this prevents XperiDo from waiting on web content that doesn't load by skipping its content. For instance, when including a Word file that has links to images on a website, this setting would not let XperiDo wait until the images are retrieved - the cached versions will be used.
- **Ignore formatting rules**: when importing a text file (.txt), check this if you want to ignore all formatting that Word might automatically detect. For instance, Word will detect 1. Table 2. Chair 3. Lamp as a list, but if you check this box then it will just be imported as text.
- **Remove empty paragraphs at the end**: check this if you want to remove empty paragraphs at the end.

### E-signature

This tab can be used to convert your mapping into an electronic signature.

You can find more information about this tab in the Electronic signatures chapter.

### Other

This tab can be used for setting various rules that impact the formatting of your mapping.

### Removing blank paragraphs
Check the box Remove the paragraph this mapping is in when the value is not specified or blank if you want to prevent blank lines from appearing in this mapping.

For instance, this is very useful when dealing with addresses. Typically, addresses are input in address lines, but not every line is always used:

<table>
<thead>
<tr>
<th>250 North Main Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memphis TN 38103</td>
</tr>
<tr>
<td>United States</td>
</tr>
</tbody>
</table>

Turning on this setting fixes this:

<table>
<thead>
<tr>
<th>250 North Main Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memphis TN 38103</td>
</tr>
<tr>
<td>United States</td>
</tr>
</tbody>
</table>

Creating hyperlinks

Check the box Create a hyperlink to render your mapping as a clickable hyperlink. The mapping will still contain whatever is in it, but you can define a URL that is links to when you click it.

Insert the URL that you want to go to in the Hyperlink Target text box, or click the button in the text box to insert a field's value for the hyperlink target. You can change what is shown when hovering over the link in the Tooltip text box. You can insert a field's value by clicking the button in the text box.

E-mail hyperlink

If you want to create an e-mail hyperlink, follow these steps:

1. Create a pseudo-field of type Text.
2. Give it the value `concat('mailto://',${field with link})`, where `${field with link}` is the field that contains the link. Insert this by dragging it from the data set.
3. Then, use this created field as the Hyperlink Target by selecting it from the data set after clicking the button inside the Hyperlink Target text box.

By adding the `mailto://`, the field is specified to be an e-mail link.

Converting case

Check the box Apply advanced case-convert rules to change the casing of certain letters in a text.

The following options are available:

- Don't change: the text stays as it is.
- **Sentence case**: everything is converted to lowercase, except the first letter and every letter following a dot.
- **lowercase**: everything is converted to lowercase.
- **UPPERCASE**: everything is converted to uppercase.
- **Capitalize Each Word**: everything is converted to lowercase except the first letter of each word.
- **tOGGLE cASE**: invert the case of each character.