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What are Page Projects?

Page Projects are a new project type available in Xerte 2.8. Page Projects give Xerte users the best of both worlds. That is they provide the developer with full access to the Xerte development environment whilst also providing full access to all the pre-built page types that Xerte On-line Toolkit users are familiar with.

Who will benefit from Page Type projects?

- Xerte developers

  - Who will now be able to have full access to the Xerte editing facilities whilst being able to jump-start their development by utilising any of the pre-built page types.

- XOT users who would like to modify the design of a page type or learn how to create their own unique page types.

  - Both Xerte and XOT use the same files to define their pages so almost any project you can create in XOT can be created as a Xerte Page Type project.

  - Because the Xerte developer environment provides access to the full detail and structure of how the page is built, every pre-built page type becomes a "worked example" from which one can learn how Xerte pages work.

  - Fledgling developers can "test their wings" by making small changes to existing page types. As their knowledge and experience builds they can easily progress to creating their own new page types.

- XOT users with no intention to develop new pages

  - You probably won't use Page Type projects, but you will still benefit as new page types become available to XOT which have been developed in the Page Type project environment.

Background to Page Projects.

Xerte On-line Toolkits provides an excellent solution for knowledge experts who want to be able to create learning objects without the need for any technical knowledge of how Xerte works or the need for any programming skills. It achieves this by providing the learning object author with a wide variety of pre-built page templates, which the author can select from and then populate with their own data. Xerte users have enjoyed a similar user experience when creating projects by using the Page Templates project template.

Where Xerte excels is in providing developers, who have programming skills, with an icon based development environment in which they can create their own bespoke page types and complete projects.

However until now there has been a clear choice facing the learning object author / developer :-

- You could have access to all the pre-built page templates, but little support for accessing the underlying design of the pages to facilitate making changes to those page designs or to

create new ones.

- You could have access to the complete icon driven development environment but only limited support for accessing the wide variety of pre-built page types that were available to XOT users.

What was missing was the capability to have access to both the development environment and the wide range of pre-built page designs.

Project types available in Xerte 2.8

Xerte 2.8 now offers three different options for creating a new project

- File / New
  - This creates a very basic Xerte project leaving the developer to add all the features they want in their project. This is the traditional Xerte project that developers will be familiar with.
- Pages / Create Template Project from Pages
  - This is the Xerte 2.8 way of creating a Page Templates type of project that closely duplicates the XOT experience.
- Pages / Create new Page Project
  - This creates a project similar to the traditional developer projects offered by File / New but with significant enhancements.
    - Once the project has been created, the Pages Menu now offers access to a complete set of pre-built page types, duplicating the pages available to XOT users.
    - The learning object includes code to support these pre-built pages so these pages will work correctly as soon as they are added to the project.
    - The learning object also includes a wizard to facilitate control over many of the aspects of the Xerte layout and colour scheme.
    - The full structure of the page is accessible to the developer so that anything from the modification of a single page property to the building of a new page based on code "borrowed" from other page types becomes possible.
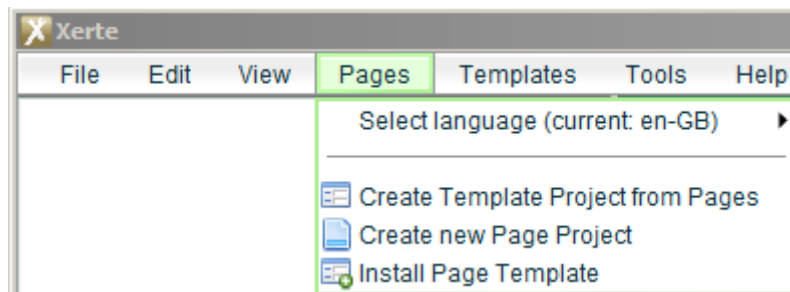   - The Page Project provides a route to creating new page types for inclusion in XOT.

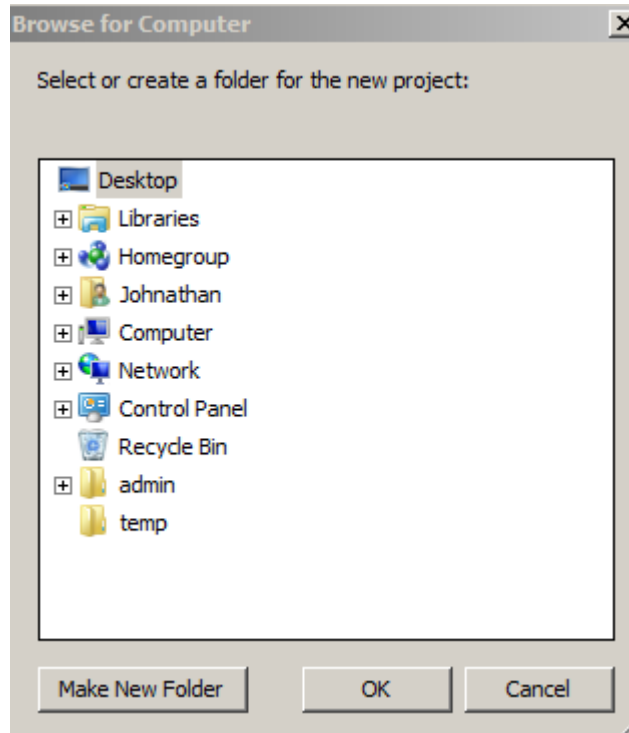# Step by step guide to creating a Page Project.

1. Open Xerte 2.8
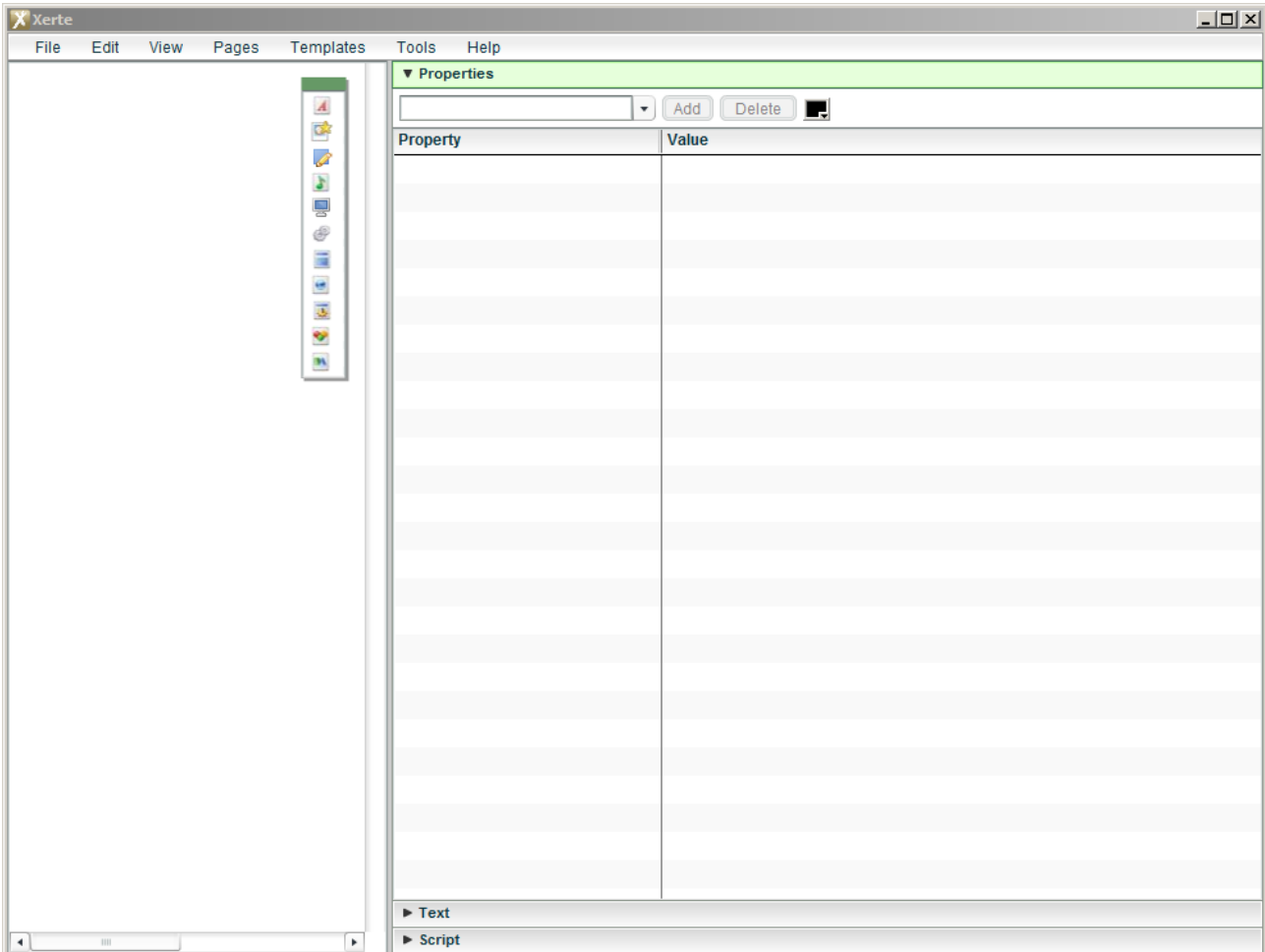
First we need to create a new Page Project
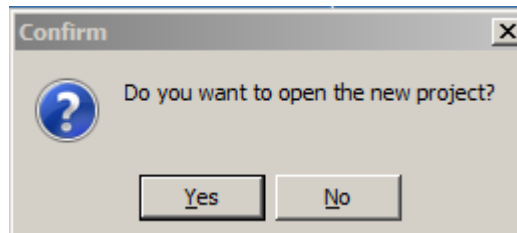
2. Left Click on the **Pages** menu.

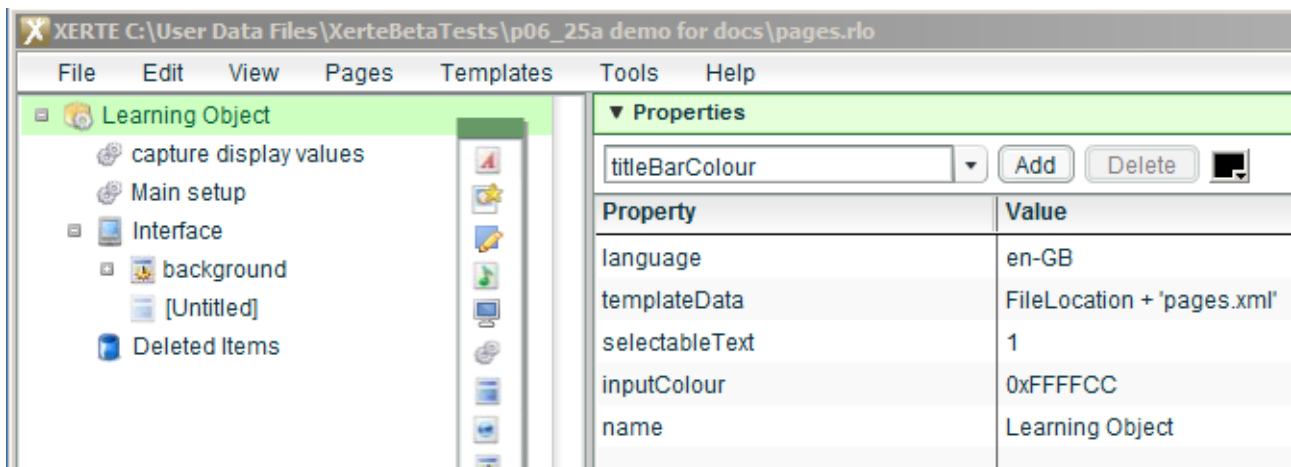3. Left Click on **Create new Page Project**

4. Use the Browse for Computer dialogue to create an empty folder for your project.

5. Confirm that you want to open your project by clicking the **Yes** button. Your new project will be loaded into the Xerte editor.

Introduction to Xerte "Page" projects

This guide is not an introduction to programming in Xerte. However for those new to Xerte here is a quick guide to what you can see in the Project Tree in the left panel

- Learning Object
  - This is the top level object in the project, it contains all the other objects in the project.
  - The little doughnut shape over the icon indicates that this icon has a wizard (a form) associated with it which will open if you double click on the icon.

- Capture display values
  - A script icon with script supporting the handling of customising the Xerte interface.

- Main setup
  - Another script icon containing script that sets up the learning object.

- Interface
  - The Interface icon is a container for all the pages in your project.
  - When you add a new page to your project you first select the Interface icon as new pages are added to the interface.

- background
  - This is an Entry Frame icon.
  - Entry Frames are a special type of page icon that display behind whatever page is currently being viewed and hence can be used to contain items that will display on all pages, or code that will run for every page.

- Untitled
  - This is a page icon. Every project starts with a single empty page icon (empty in that it contains no child icons.

6. To add a pre-built page to your project click on the **Interface** icon to select it.
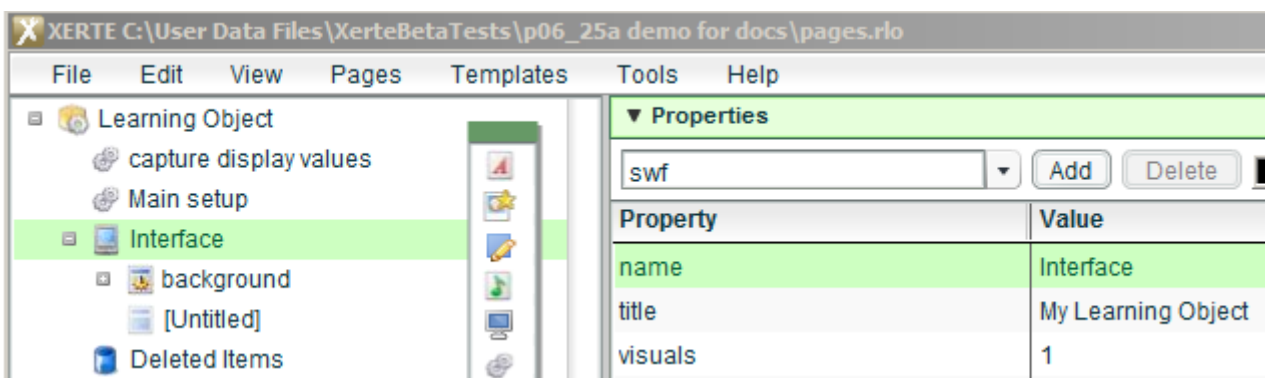
Notice how the right hand properties panel has changed – it now displays the properties for the Interface icon and not the properties for the Learning Object.
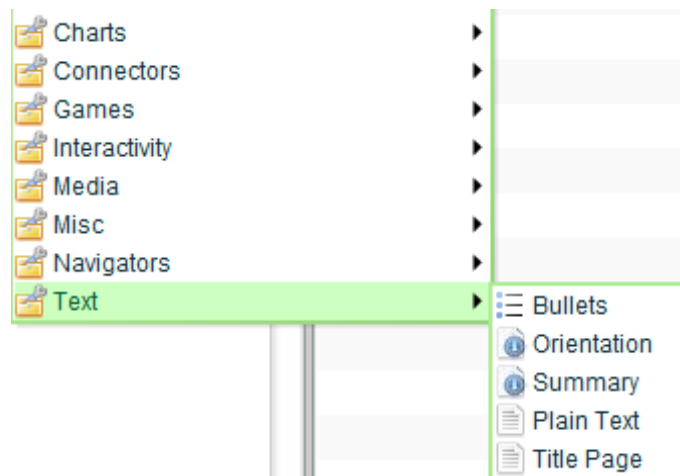
7. With the Interface icon selected click on the **Pages** menu.
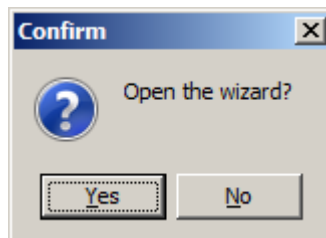
Introduction to Xerte "Page" projects
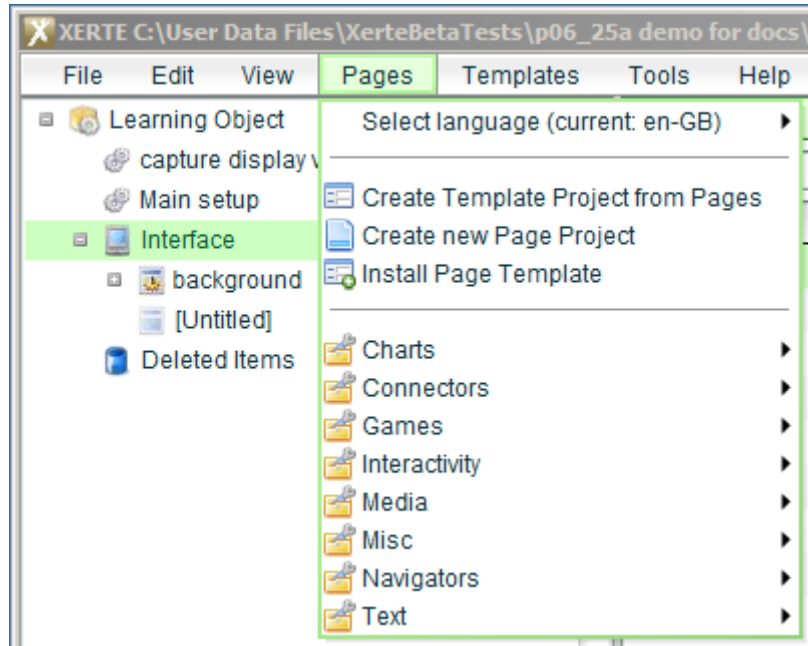
Note that there are now options listed for all the types of pages available

8. Click on the **Text** option to reveal the list of Text page types available.
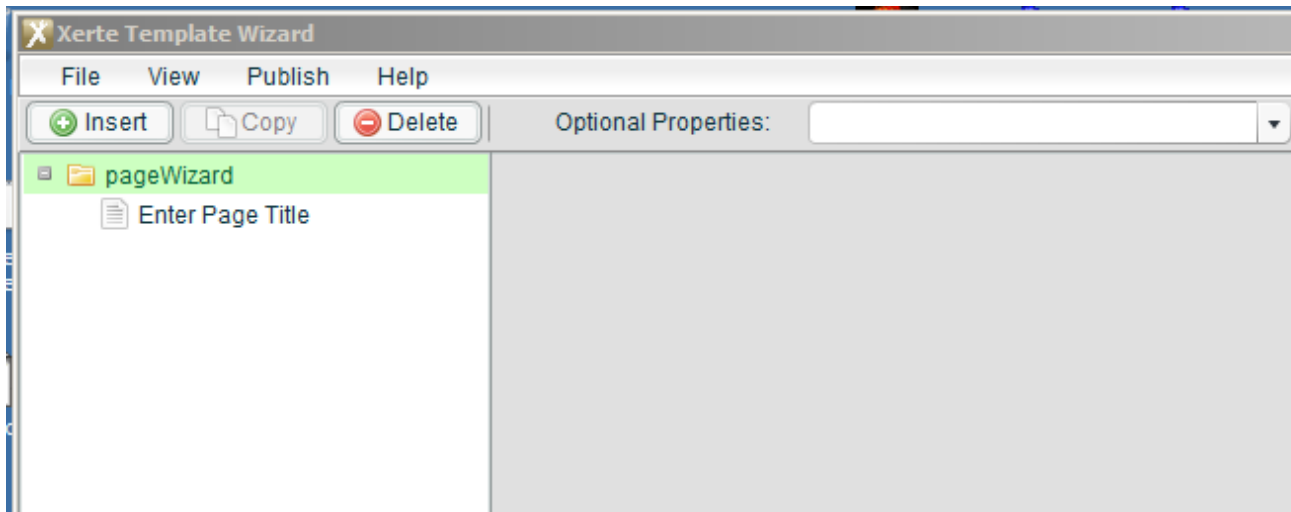

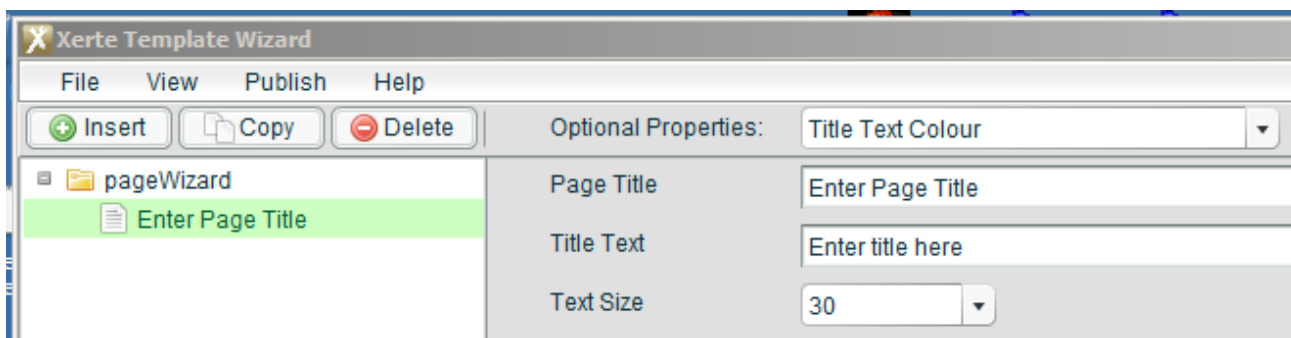9.   Then click on **Title Page** to add an Title Page to your project.

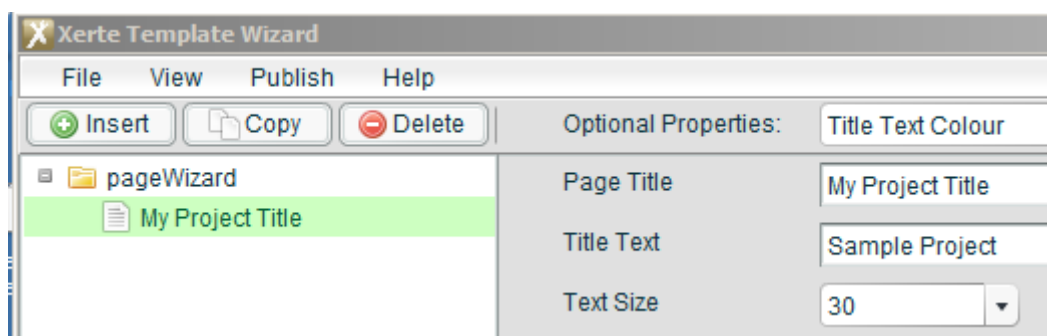10. Click on **Yes** to open your new page.

11. The Title Page's wizard form opens.

12. To access the Title Page's properties click on **Enter Page Title** in the left panel.

This form enables you to enter the data that this page will use in your project.

13. Change the **Page Title** to "My Project Title" and the **Title Text** to "Sample Project"

This completes our setting up of the Title Page.

If you ever want to start you page afresh you can select the Page Title in the left panel then Click on the Delete button to delete the data for this page. A new set of data for the page can then be added by clicking on the Insert button.
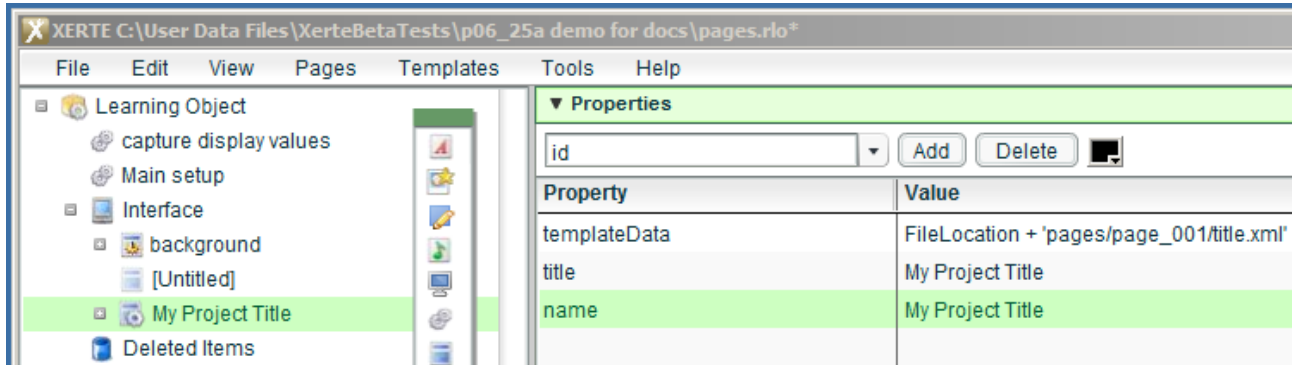
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14. Click on the close window button (looks like an X) at the top left of the Wizard window.

The wizard will close and you will be returned to the Xerte Editor Environment.

There are a few points worth noting in this display of your project.

- A new page has been added to your project.

- The Icon for the new page has a doughnut shape on it indicating that this page has a wizard form. You can open the wizard form simply by double clicking on the icon.

- The page title and name properties have copied through from the Page Title value entered into the form.

- The page has a templateData property.

  ◦ FileLocation is a Xerte variable that locates your project folder.

  ◦ 'pages/page_001/title.xml' tells you that Xerte automatically created a folder called "pages" in which to store the data for every pre-built page you add to your project. Xerte then created a folder within the "pages" folder for your new page. Xerte automatically handles the incremental numbering of the folders. Each pre-built page gets its own unique folder. This folder will contain the .xwd file for the page that defines the form for the page and a .xml file which contains the data for the page. The xml file is created automatically when you enter information into the form.

- The page icon has a "+" icon beside it indicating that the page icon contains child icons.

15. Click on the "+" icon next to the **My Project Title** page icon.
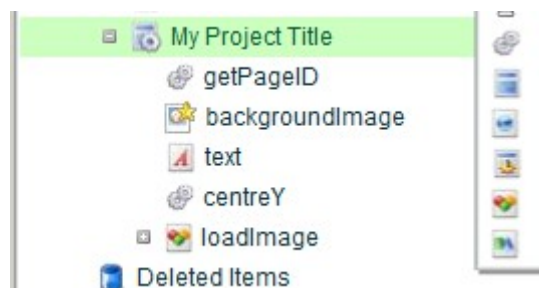
Notice how every page is built up of icons from the icon palette that floats over the right side of the Project Tree panel.

16. The **[Untitled]** page is redundant now that we have added a page to the project so right click on it and select **Delete Icon**.
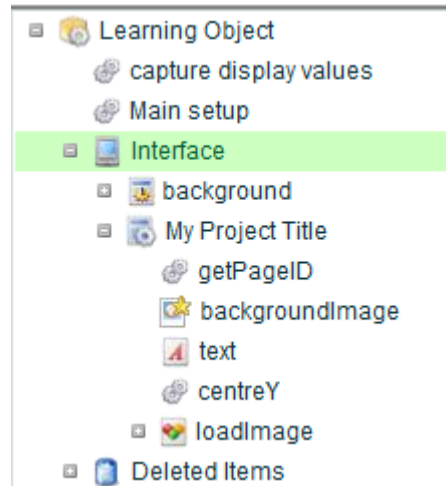
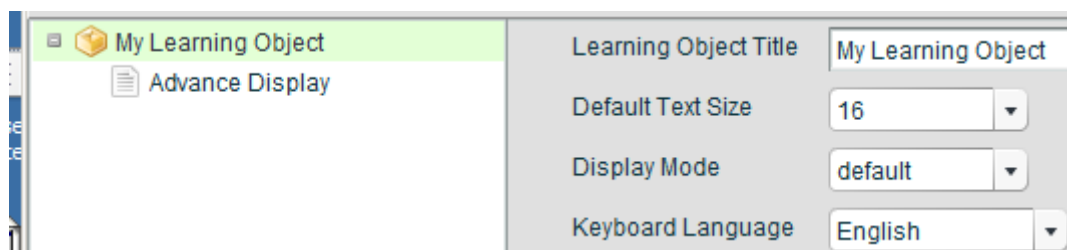The Untitled page has now been placed in the "Deleted Items" container – notice there is now a "+" next to the Deleted Items container, showing that it has contents.

17. Double click on the **Learning Object** icon to open the learning object's wizard form.
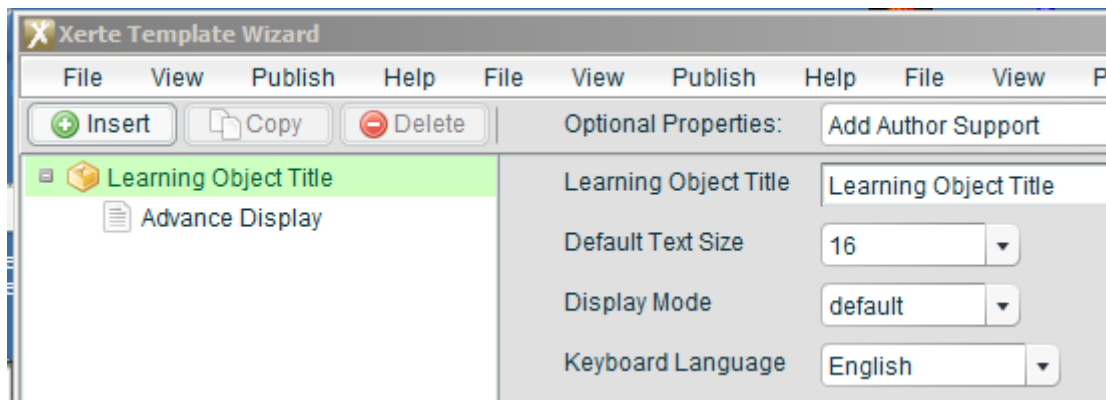
18. Change the **Learning Object Title** to "My Learning Object".

19. Click on **Advance Display** to take a look at the layout settings available to Page Projects.
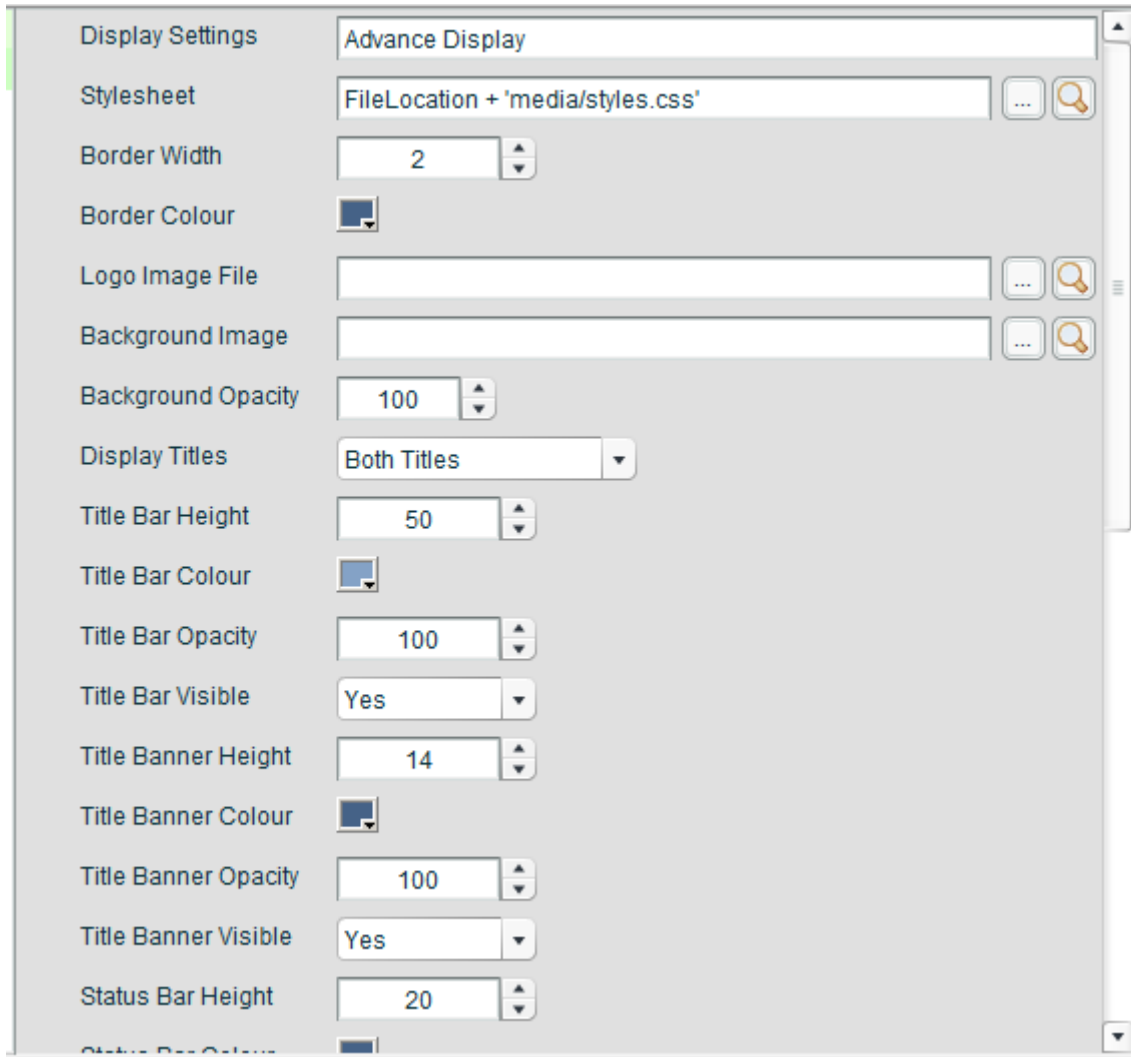
In this wizard you can set a variety of colour options, resize or even hide some of the Xerte window features, add a corporate logo and a background image if required.

Try different settings to see what effect they have.

20. Click on the Wizard form's **close button** at the top right of the window, to return to the project.

21. Click on the **View** Menu

22. Click on Preview to preview your project.
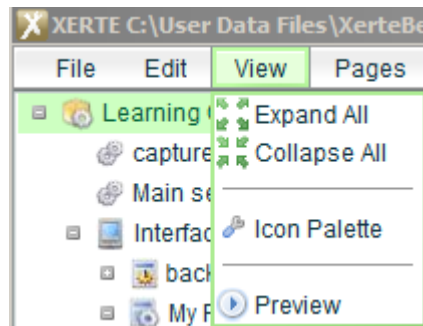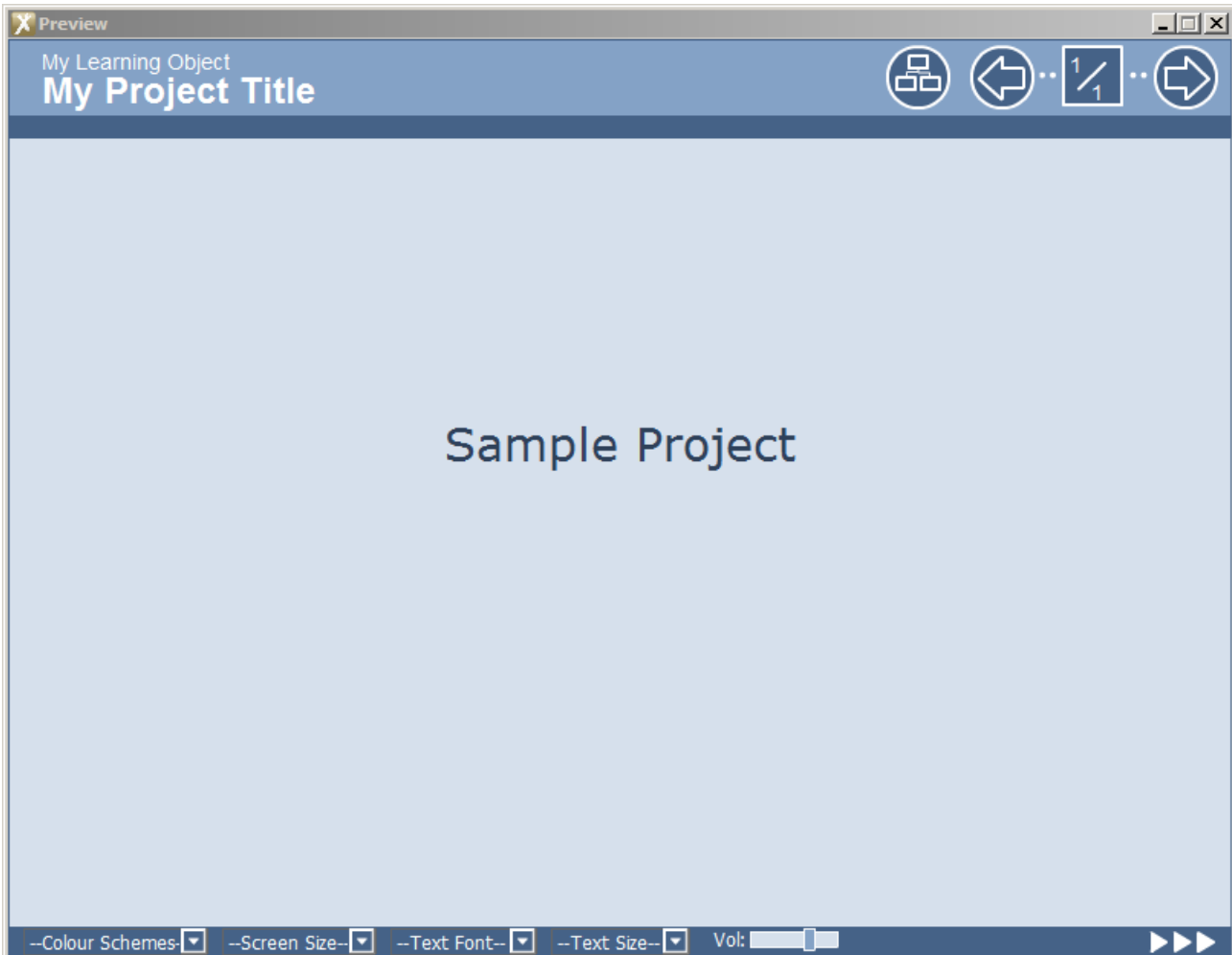

This is just a simple example. But it shows how you can create projects using the new Page Project feature.

23. Click on the Close Button to close your preview and return to your project in the Xerte Editor.

24. Click on the **File Menu**.
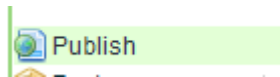
25. Click on the **Publish** option, this will add the necessary files to your project folder so that you can post your whole project to a web site and open the project by accessing the index.htm file contained in the project folder.

This completes the demonstration of how to create a Page Project

A key difference between Xerte Page Projects and XOT projects.

All XOT projects share a common set of model files that define the structure of each page and a file that defines the wizard form and hence the xml data available for the model file to consume.

- Advantages

  - Any modifications to the page design can be rolled out across all your projects by simply updating the central model file or form file

- Disadvantages

  - All pages based on a particular page type e.g. Title Page must offer the same features in the wizard form and process the data created by the form in exactly the same way.

In a Xerte Page Project when a page is initially created it takes a local copy of the form file for the page and the model file for the page is copied into the project to create the page entry.

- Advantages

  - You can create several pages based on the same page type but then make local modifications to the pages so that you end up with different features in each page e.g. add an extra text block to a page, add an extra image icon, modify the properties of a text icon to change the font size.

- Disadvantages

  - If either the form or model file for the page is updated e.g. if a bug or error is found in the page, or new features are added to the page by the Xerte Team then when you install the update it will only affect any new pages created since the upgrade. The changes will not be available to existing pages that were created before the update.

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Developing your Xerte Skills

This introduction is not a guide to programming in Xerte so discussing the individual icons is beyond this documents scope. However the following points may help you on your way to creating your own pages.

- You can learn a great deal about how to create your own pages by examining the structure of the pre-built pages. Start with the simplest pages and then progress to the more complex ones.

- Remember a page has three components

    ○ The .xwd file that defines the Wizard form.

    ○ The .xml file that contains the data created when you complete the Wizard form.

    ○ The .rlm model file that is used to create the structure of the page in your project. The page in your project references the xml file.

- Create a page and then look in the page's folder for the xwd file. Open this in an editor such as FlashDevelop (available free from www.flashdevelop.org). Use the form in your project and then compare the code for the form in FlashDevelop with the xml it creates. Start with simple pages and soon you will get a feel for how the form structure defines the xml.

- The code for the page creates an object from the xml called pageIcon.templateData so that the code can access the xml data. Each page has a type name that is part of the xml so for example the title page creates an object called "pageIcon.templateData.title. Individual values in the xml are accessed by name and by their position in the xml structure. It sounds complicated but if you start with simple page types and examine the xml created by the form and the references in the code such as "pageIcon.templateData.title[projPI].bgImageAlpha" you will soon get a feel for how one relates to the other. (Ignore "projPI" for now in most cases it is automatically set to "0" as each page normally only has one set of xml data defined.

- To learn more about the icons refer to the Xerte help file accessible from the Xerte Editor by selecting Help / Help. The Xerte Reference section gives a good guide to all the icons.

- Xerte uses ActionScript 2 so a good guide to this is useful. The Xerte Editor provides a link to an online resource – just do Help / Actionscript.

- In the beginning keep things simple, when you understand the basic relationship between the xwd form file, the xml data it generates and the page's structure, so that you can add an extra data item to a form and reference that data in your page you have a good grounding to move on.

- Use the discussion forum at xerte@lists.nottingham.ac.uk. There are many knowledgeable people who read the postings and will respond to help you in your learning.