**Purpose**

The purpose of this panel is to display the possibility of input validation on input fields in FactoryTalk Optix and some possible configurations based on runtime conditions. To display this I decided to choose an input field that takes in an Eircode value.

**Research Conducted**

Seeing as I have no prior experience working with this software, I was required to conduct some extensive research to begin working. I began by following a YouTube tutorial series focusing on the basic features the software has to offer to become familiar with it. With this tutorial I learned about the functions of each of the buttons displayed to the user on the main screen, how objects interact with each other and how to create responsive designs based on user input, amongst other basic features.

Following on from this, I began to research the documentation provided by Uniqo. This documentation was written for Uniqo (earlier version to FactoryTalk Optix) but seeing as the software is largely the same the documentation is still useful. I read about some more advanced features that FactoryTalk Optix has to offer but practicing using these features is the best way to understand them therefore I moved onto the sample projects that are also provided with the documentation.

I studied a sample project that included a fully functional login and logout form which navigated panels based on user inputs (correct password entry navigated the user to the main panel and pressing the logout button in the bottom right of the screen brought the user back to the login panel). From studying this project, I began to grasp how NetLogic files can be used to provide additional functionality to projects based on user inputs and how to include navigation between panels. Once I concluded studying this project, I decided to begin working on my first panel.

**Outcome**

**Project View**

Graphical user interface

Description automatically generated with medium confidence

**No Input Processed**

Include picture of panel just started once background chosen.

**Incorrect Input**

Same as above

**Correct Input**

Same as above

**Submit Pressed**

Same as above

**Design Decisions**

* Dynamic input validation: As the user enters the Eircode into the input field, the text is validated with each change in input (as user types characters and also as characters are deleted). Error text is displayed if the conditions of the string are not met. I used a regex pattern in the form of a string to test the conditions of the user inputted value.
* The submit button is greyed out until the conditions for the input have been met (correct regex and 8 characters including a space)
* A label confirming the submission of the Eircode is displayed once the submit button is pressed. This label fades out after a set amount of time. This has no further application other than to enhance the appearance of this panel.

**Findings & Considerations**

I encountered difficulties in making the input validation dynamic. It was simple setting up the input validation to validate upon pressing the submit button as it contains a ‘MouseClick’ event but there was no similar event for on key press or on key down. I eventually figured out I can add an on modified text event to the textbox which solved this issue.

Another thing I quickly came to realise is the lack of customisation the software has to offer to the user currently. I attempted modifying the textbox so that the edges were rounded but no such feature exists. Modifying the textbox border thickness is also missing. Overall the customisation is very lacklustre but seeing as the software is not yet released, I am assuming customisation features are not top of the priority list coming up to the release of the software.

Another feature which would be a nice addition is an alignment guide. It can be quite difficult to get objects to align as there is no guide provided. I found myself moving objects with the use of mouse keys whilst zoomed in.