Embedded Systems Development

Task 5.3D RPi - Blink Morse code using GUI

Hardware Required

Raspberry Pi, Keyboard, mouse, LEDs, Breadboard, jumper wires

Software Required

Noob software installed on the Raspberry Pi

Pre-requisites: You must do the following before this task

1) Complete tasks 4.1P, 5.1P, and 5.2C.

Task Objective

In this task, you will develop a more complex GUI interface. The aim is to build a GUI interface on the Raspberry Pi that has two elements: a text box and a button. The text box allows the user to enter a word (maximum 12 characters). When pressing the button, the system will blink a connected LED light with the morse code pattern of the word.

Use the learning you have achieved and the experience of task 5.2C to complete this task. You can use the same programming language and GUI package as 5.2C.

Steps:

1) Build a basic breadboard interface with the Raspberry Pi that allows you to turn on or off an LED.
2) Similar to task 5.2C, build the GUI as described in the task objective.
3) Test the system.

Embedded Systems Development

Task Submission Details

Q1: Take a video of your system demonstrating the outcome, and upload it to youtube. Include the link here.

Q2: Create a repository on Github, name it Morse_GUI. Include the link to your repository here.

Q3: How did you test your system?

Remember, anytime you submit a task to OnTrack, it is a good practice to check the status of any existing tasks, and the future tasks you are expected to complete. If you have got feedback on previous tasks, you may need to fix and resubmit some of your work. You want to check out why, so that you can learn from this and make it faster and easier to accomplish later work to the required standard.