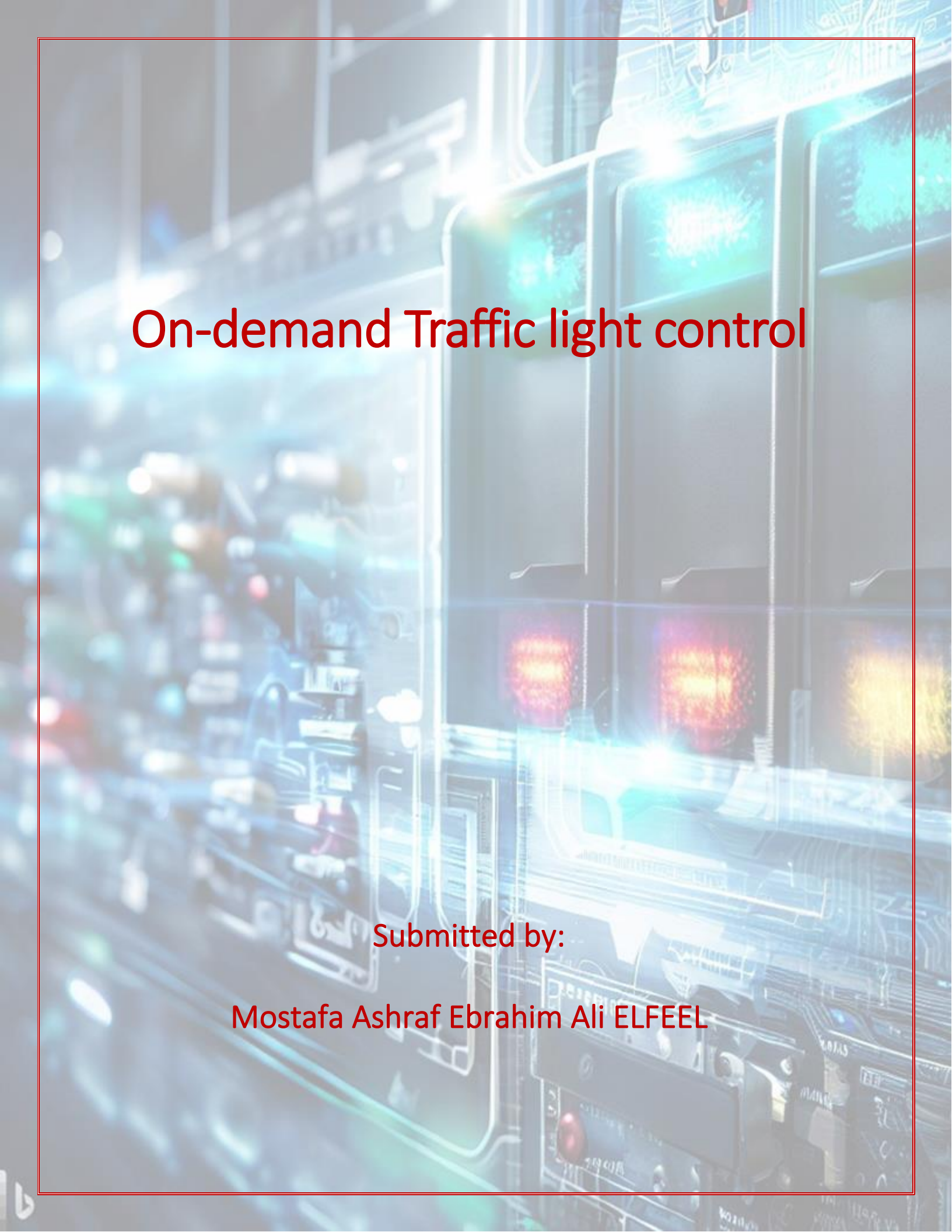

# On-demand Traffic light control

Submitted by:

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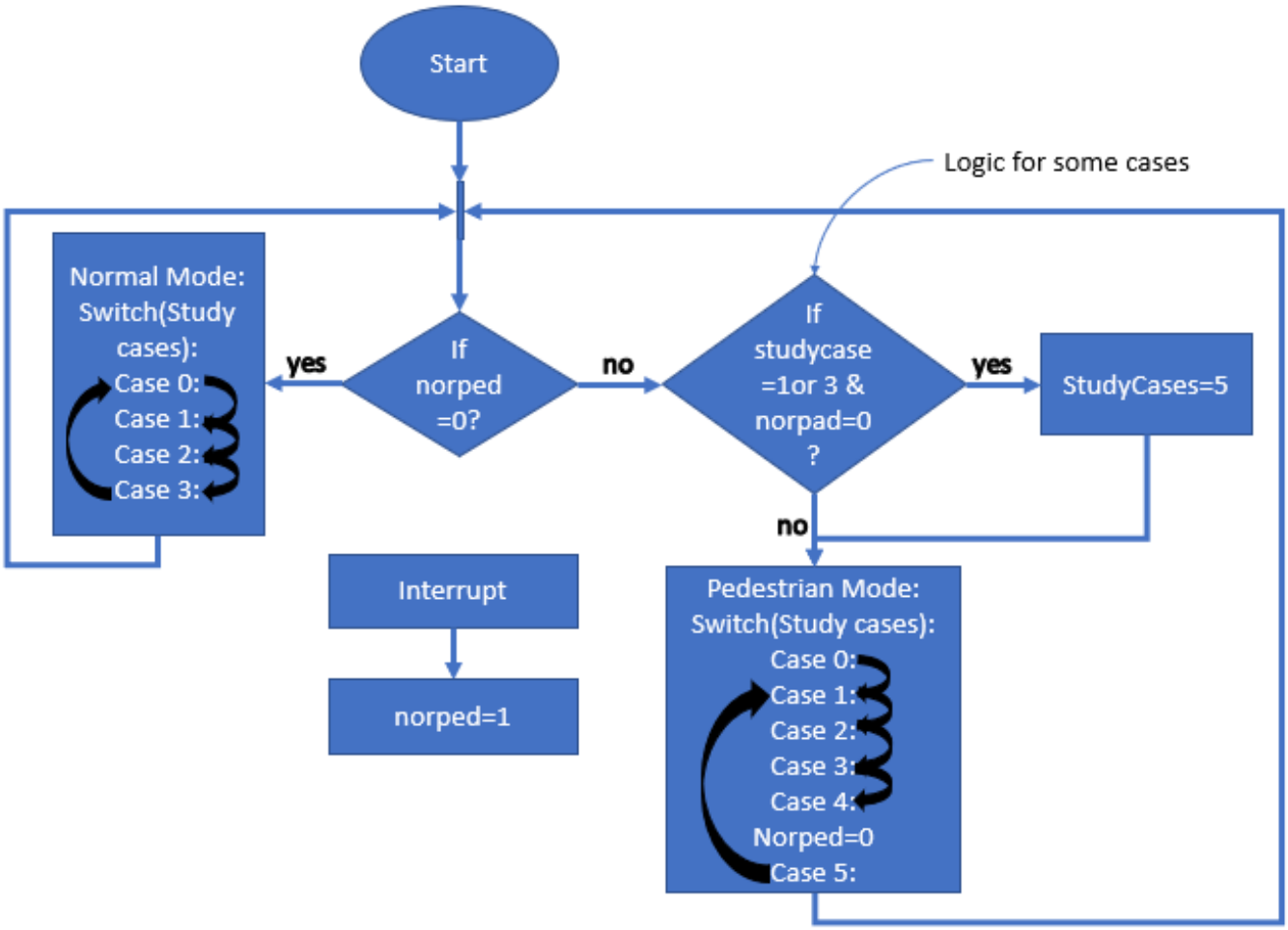
## System Description

First normal mode works by switching tasks to the next task and not by only sequencing them behind each other with a delay in the middle, that is because I will use the switching method to break from delays and change to pedestrian mode when the button is pressed. Same goes for pedestrian mode. This system only uses interrupts for DIO and no timer interrupts.

## System design

| SYSTEM LAYERS | DEFINE |
|---|---|
| **APPLICATION (DESIGN OF THE HOUSE)** | The main (application) resides at a specific location and possesses the capability to invoke functions from the lower layers. |
| **ECUAL (ROOMS IN THE HOUSE)** | The functions responsible for handling buttons and LEDs are situated in a designated location and possess the ability to invoke functions solely from the MCAL (Microcontroller Abstraction Layer) layer. |
| **MCAL (BUILDING BLOCKS OF THE ROOMS)** | The functions responsible for managing timers, interrupts, registers, and Digital Input/Output (DIO) operations are located within a dedicated layer. These functions are invoked by the higher layers but do not have the ability to call functions within those layers in return. |

## Flow Chart




## System Constrains

I believe there are no constraints or limitations that I can identify at the moment. The only potential issue that may arise is if the output differs from the expected outcome due to my limited understanding of the specific cases in normal and pedestrian modes. However, I assure you that rectifying any discrepancies can be easily managed following the review.

# Solution Explorer