**Microprocessor Systems and Interfacing**

**Lab Report**

**Lab02**



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|  |  |
| Class | Microprocessor Systems and Interfacing CPE342 (**BCE-6B**) |
| Instructor’s Name | Dr. Omer Ahmad |

**In Lab Tasks**

**Task 1:**

In this task we made our circuit on the breadboard, we used pin 11 and GND of Arduino Uni, the picture is given below.

A picture containing text

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**Task:2**

In this task we built the provided Assembly code using Microchip Studio and generated a hex file, which we added on our atmega328p in proteus simulation.

The simulation is shown below,

Chart

Description automatically generated

In simulation, four leds represented four-bits, and showed table of 3 from 3 till 30 in binary using the leds.

Chart, scatter chart

Description automatically generated

The picture above shows, decimal 3 represented in binary using LEDs

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**Task:3**

In this task we built the provided C-code using Microchip Studio and generated a hex file, which we added on our atmega328p in proteus simulation.

The simulation is shown below,

Diagram

Description automatically generated with low confidence

In this code, our led keeps turning on and off, with a delay that we have added between the two commands.

A picture containing chart

Description automatically generated

The above simulation shows when the led is on.

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**Task:4**

In this task we Uploaded the provided Assembly and C-code using Microchip Studio to Arduino Uno,

Both the Circuits are shown below,

* Task-2 Circuit with Arduino

A picture containing text

Description automatically generated

* Task-3 Circuit with Arduino

![A picture containing text

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**Post Lab Tasks**

**Task 1:**

The Circuit is shown below,

A picture containing text

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**Task 2:**

I uploaded a code written in Arduino which works, I was not successful in editing the given Inlab code to my requirement.

**Graphical user interface, text

Description automatically generated**

Image below shows circuit when the button is pressed and led is ON.

A hand holding a piece of paper

Description automatically generated with low confidence

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