

Muhammad Sameed Gilani - 231488347  
Adeel Akmal - 231465420

2 students  
21-10-22

**FORMAN CHRISTIAN COLLEGE**  
**A Chartered University**  
**Embedded Systems CSCS306**  
**LAB-02**

This lab is time constrained. It should be completed within prescribed time. Failure in doing so will result upto 50% drop in lab performance grade. Make sure to keep this graded and signed lab handout with you to be presented at a later stage if required.

You need to submit a report comprising of an introduction to the said lab, circuit diagram, image of your final circuit and code. All labs will be graded out of 100. Rubric for this lab is as follows:

Hardware properly wired and working	0%
Code	70%
Report	30%

**Group Members:**

**Lab Task 1 [35]**

In this lab we will play with LEDs and learn how to write code in Arduino that can make LEDs glow in a required sequence.

Connect four LEDs with the Arduino. Now write a code in Arduino IDE that should make LEDs glow in a chasing sequence. Initially all LEDs should be OFF. Then the least significant LED should get ON and then the second one and so on until all four LEDs are ON. Now make all four LEDs blink for three times and then the process should be repeated in a reversed fashion. This completes one iteration of the whole operation. Make sure your code should execute in an infinite loop unless power is shut down. Make sure that your code should be properly commented.

**Lab Task 2 [35]**

Connect one LED with your Arduino. You can also use the on-board LED for this task. Write a program that prompts the user to enter his/her name. The name should be terminated by a terminal symbol say '\$'. Once the user enters the name, your program should count characters (excluding spaces, and new line character) display it on serial monitor and blink the LED for that many number of times.