**Internet of Things**

**Lab Report 3**

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**Section-7A2**

**Introduction to Arduino Programming**

**INTRODUCTION:**

Arduino IDE is a special software running on your system that allows you to write sketches synonym for program in Arduino language for different Arduino boards. The Arduino programming language is based on a very simple hardware programming language called processing, which is like the C language. The Arduino integrated development environment IDE is a cross-platform application for Microsoft Windows, macOS, and Linux that is written in the Java programming language. Arduino is cost-effective and easily accessible. Arduino is easier to learn as a programming language as it is a simplified version of the C++ programming language. Arduino is cross-platform which makes it easy to run on any sort of device compared to other microcontrollers which can only run-on Windows.

**OBJECTIVES:**

To learn about Arduino Programming to perform various tasks

To learn about Arduino IDE

**Application:**

**Arduino UNO Applications**

* Weighing Machines.
* Traffic Light Count Down Timer.
* Parking Lot Counter.
* Embedded systems.
* Home Automation.
* Industrial Automation.
* Medical Instrument.
* Emergency Light for Railways.

 Arduino boards we can control the home activities with the control systems such as motion sensors, outlet control, temperature sensors, blower control, garage door control, air flow control, sprinkler control and bill of materials. This application makes use of the Arduino Uno board, Bluetooth interface for connectivity, and smartphones. Software loaded boards are connected to the home devices like lamps, A/C, TV, Refrigerator, and Bluetooth software is interfaced with the board.

**Issues:**

I never find any issue regarding this lab.

**Conclusion:**

In this lab we learn and understand about:

1. Arduino Programming to perform various tasks
2. Arduino IDE