MES's Pillai College of Engineering, New Panvel

A REPORT ON
PROJECT BASED LEARNING (PBL)

Academic Year 2016-2017 (Semester V)
Third Year Undergraduate Students of

Information Technology Department

Objective—To enable the students to apply concepts of the present semester subjects (including those of previous semesters) in the form of a design project based on certain application. It is hoped that it shall eventually lead to a better learning experience as opposed to textbook learning. Separate topics are assigned to all students in groups (maximum 4-6 students per group) of the same year to enable healthy competition among the different teams. The students work in groups and assign and distribute various aspects of work so as to realize the project based on a timeline of about 2 to 3 months. Queries and doubts are clarified by interactions with the PBL coordinators and subject experts. Student groups submit the PBL report during their demonstrations on a specified date in front of the faculty members.

Judges for the PBL Demonstrations
All Computer and IT Engineering Faculty of the concerned class.

PBL Coordinators

Division A	Prof. Sushopti G
Division B	Prof. Amol K

PBL Title: IT with IOT
Objectives

- To learn to work with Arduino interface.
- To use concepts of various subjects those are related with this project and explore its applications.

- To read real time data inputs with the help of different sensors.
- To store sensor data into database.
- To represent data graphically.

Different sensors used in PBL are: Temperature, Soil moisture, Humidity, Water level Sensor

Scope Of Project:

- Reading real time information with the help of sensors and store into database
- Further this information will be use in decision making as per the application domain

Examples as applications:

1. Humidity sensor (For weather forecasting)
2. Temperature sensor (To keep Temperature at controlled environments in check)
3. Water level sensor (To keep Water level at Dams in check)
4. Smoke sensor (Integral component in Fire detection systems)

Conclusion

At the end of this PBL project :

1. The students understood the working with Arduino and are able to use it for various applications.
2. They are able to use various concepts from different subjects to create a real life application using Arduino.
3. As the water level increased the sensor value increases. If the sensor is not in water and is dry then and only then it shows zero. However, if the sensor is not dry then in spite of not being in water a low value is displayed. Thus the sensor efficiency can be increased further or a different sensor is to be used.
4. Similarly students are able to use different sensors with Arduino.

Photos: