

MES's Pillai College of Engineering, New Panvel

**A REPORT ON  
PROJECT BASED LEARNING (PBL)**

**Academic Year 2020-2021 (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 applications. 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. Jinesh Melvin.
Division B	Prof. Mimi Cherian

## PBL Topics :

Topic Name	Abstract
<b>SOCIAL DISTANCING.</b>	<p>This project is based on the Idea of maintaining the social distance. Considering the current situation the device which will be made in this project will be a distance measuring device which will be directly linked to the system . For instance it can we used at a counter which is generally crowded ,at specific distances and will the devices will the linked to system, if person comes too close to counter there will be a beep . Even after the pandemic situation is over such devices can be used at banks, hospitals on a chaotic day or at sensitive places where people should not cross a specific distance .</p>
IOT Family Health Monitoring System using Android App	<p>The rising growth of IOT has made an enormous effect on human services. Health monitoring systems are gaining their importance as the fast-growing global elderly population increases demands for caretaking. Family Health monitoring system records the family members’s heart beat rate, temperature and blood pressure. Pulse rate,blood pressure and body temperature readings are recorded so that person’s health can be monitored from anywhere in the world over internet. The family health status is stored using an Android app in order to control the device using the app.</p>
<b>Pet Feeding System Using IoT</b>	<p>Using IOT, we will make a remote pet feeding system for pet owners as usually they cannot take pets everywhere they go. We will make use of sensors to identify whether the pet is in vicinity of the feeder. And this will give notification to the owners device. Then after owners permission from his device, the feeder will release some amount of food in the bowl for the pet .</p>
Smart Cradle System	<p>The current number of working mothers has greatly increased. Subsequently, baby care has become a daily challenge for many families. Thus, most parents send their babies to their grandparents' house or to baby care houses. However, the parents cannot continuously monitor their babies' conditions.Thus, we have come up with an idea to design a Smart Cradle System using IOT which will help the Parents to monitor their child even if they are away from home &amp; detect every activity of the Baby from any distant corner of the world.This cradle swings automatically on detection of baby cry sound. Also it activates buzzer and gives alerts on phone</p>
Flood detection system	<p>Flood disaster is one of the most frequent natural disasters that occur all around the world. For flood prone area or countries, flood management is an essential part of their governance. The flood detection system is basically a flood warning mechanism that can detect the water level and measure the speed of the rise of the water level. It will give an earlier notification to evacuate before the water rises to the dangerous level. The measurement result is sent as the alert to a mobile phone through short message service (SMS). This project is designed on the IOT-based platform where data from the sensor is</p>

	<p>collected at the processor and alert is generated and transmitted as SMS to a smartphone. The users will also be notified through email. Also a buzzer will be used as an alarm to warn. it,whereas a seller can upload their books that can be viewed by sellers to purchase them</p>
Smart Mirror	<p>A smart mirror is a two-way mirror with an electronic display behind the glass. The display can show the viewer different kinds of information in the form of widgets, such as weather, time, date, and news updates.An IR frame is used to add touch screen functionality to the mirror . magic mirror modules for touch control can be added to control the mirror.</p>