A REPORT ON
PROJECT BASED LEARNING (PBL)

Academic Year 2019-2020 (Semester III)
Second Year Undergraduate Students of

Computer Engineering 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.

Key Skills : Core Java, Java AWT, Database Technology, C Programming

PBL Coordinators

Division A	Prof. Smita Joshi
Division B	Prof. Ranjita Gaonkar

Topics

OOPM Topics

1. Traffic Signal Demonstration using Applet
2. Contacts Manager
3. Application for school kids for Time & Currency Conversion for various Countries and to display its capital
4. Faculty Profile Generation
5. Find Best student of the year
6. Result Analysis of Students
7. I-CARD GENERATOR SYSTEM for Alegria
8. Employee Leave Management System for college office
9. Certificate Generator System
10. Java Applet to display Analog Clock

Data Structure Topics

1. Design Hash data structure with linear probing and double hashing as collision resolution technique
2. "Check syntax of c program and give error, statement missing ; if any statement is not terminated by semicolon"
3. Construct a parse tree for the simple SQL query selectSELECT<select-list> FROM <from-list> WHERE <condition>
4. Check syntax of c program in terms of well formedness of parenthesis using suitable data structure
5. Implement CPU scheduling technique using suitable data structure
6. Implement Hashing with linear probing and Quadratic probing as collision resolution technique
7. Design Hash data structure with Quadratic and double hashing probing as collision resolution technique
8. Build a new datatype by the namevarcharto store variable length data, similar to varchar data type in DBMS softwares like Oracle, MySql, PostgrSql
9. Perform Polynomial operations using suitable data structure
10. Perform Rational number operations using suitable data structure
11. Implement UNDO and REDO functionality like text editor, WORD using suitable data structure
12. Provide efficient solution to travelling salesperson problem using suitable data structure
13. Build an Expression tree using suitable data structure
14. Design a keyboard based menu navigation using suitable data structure e.g FILE with sub menu New, Open, Close, ...,Exit
15. Store C keywords or dictionary using suitable data structure
16. Build a new data type by the name date, which will accept date in the format dd-mm-yyyy (range of yyyy is 1900 to 2099). Using new data type, date, store student roll no, name, admission date in a file student.txt

Photos :

Winners list:

Division A:

Topic : Design a keyboard based menu navigation for 3 menus using suitable data structure	
38	Aditya Sivaram Nair
63	Vettithanam Alex Sebastian
20	Manish Jadhav
55	Kaustubh Sawant

Topic : Travelling salesperson problem using suitable data structure	
18	Tanmay Hinge
30	Soham Lanke
39	Arjun Nair
36	Rahul Maurya

Division B:

Topic : Employee Leave Management System For College Office	
45	Manish S Pillai
30	Abhinav A Menon
27	Sujith S Kurup
37	Srivenkatesh S Nair

Topic : Employee Leave Management System For College Office	
11	Swajit Ghatte
29	Sahil Mendon
33	Sahil Mhatre
42	Tejas Pathak