PRACTICAL EXERCISES FOR BCA-P2 (LAB 2)

VISUAL BASIC PROGRAMMING

1. To write a Visual Basic application for calculator that will perform simple as well as complex calculations.
2. To write a Visual Basic application for inserting and deleting strings from the list box.
3. To develop a visual basic application for displaying the contents of the selected file using the file list box , directory list box and drive list box.
4. To write a Visual Basic application to make a label to scroll from left to right and vice versa and change the mouse icon at each of the 8 * 8 cells.
5. To create a menu editor with cut, copy and paste operations and search the word in the text.
6. To create a Visual Basic application for a basic designer for drawing Line, Circle, Rectangle, Ellipse and Triangle.

WINDOWS PROGRAMMING

1. Activate the start menu and view the options available.
2. See the contents of the programs option.
3. Start a Paint Application.
4. Start a Note pad Application.
5. Minimize note pad Application.
6. Maximize the paint Application.
7. Write a small note in Note pad and save.
8. Calculate 259650 * 7659 and see the result.
9. Go to the Dos prompt and find out the number of files in C : drive.
10. Go back to the windows desktop.
11. Change the wall paper of the Desktop.
12. Change the appearance of windows in your system by changing the color settings.
13. Set and appropriate screen saver using the control panel.

SOFTWARE ENGINEERING

1. Describe as many source of information as you can think of that should be consulted in order to perform a domain analysis for each of the following systems.
   a. Airline Reservation System
   b. The investments System
2. You are developing a system for managing the processes of a small town public library. List all the actors for this system.
3. An organization has three categories of employees : Professional staff, technical staff and support staff. The organization also has departments and divisions. Each employee belongs to either a departments or a divisions. Draw a class diagram corresponding to this. Assume that there will be different attributes or operations

in all the classes, and that people will never need to change from one category to another.

4. Show a hierarchy of vehicle parts. Show how this hierarchy might be better represented using the General Hierarchy pattern.

5. Imaging you were planning to develop the following types of software projects. What different kinds of users should you anticipate? Consider each of the issues mentioned.
    a. An air – traffic control system
    b. A payroll system

6. Develop E-R diagram for the following
    a. Customers make orders
    b. People work in departments
    c. Customers buy items
    d. Deliveries of parts are made to customers.

7. The list of problems that are to be attempted during the prescribed lab sessions
    a. Project Planning
    b. Requirement Analysis
    c. Design
    d. Testing

8. Data flow model of a car assembly plant.

9. Assume that the size of an organic type software product has been estimated to be 32.000 lines of source code. Assume that the average salary of software engineers is Rs.15,000 per month. Determine the effort required to develop the software product and the nominal development time.

10. How to document the Functional Requirements?
    a. Withdraw Cash from ATM
    b. Search Availability in Library

11. Draw level 0 (context level) and level 1 data flow diagrams for the following students' Academic Record Management Software.
    a. A set of course are created . Each course consists of a unique course number, number of credits, and the syllabus.
    b. Students are admitted to courses. Each student's details include roll number, address, semester number and the courses registered for the semester.
    c. The marks of a student for various units credited are keyed in.
    d. Once the marks are keyed in, the SWA (semester weighted average) is calculated.
    e. The recent marks of a student are added to his previous marks and a weighted average based on the credit points for various units is calculated.
    f. The marks for the current semester are formatted and printed.

12. State chart diagram for an order object.