Practical Exercise for B.Sc., Computer Science

BSCS-P1: C Programming

1. Write a program to determine whether a number is 'odd' or 'even' and print the message
2. Write a program to accept a character and check whether the char is vowel or not!
3. Write a program to find out the factorial of given Number.
4. Write a program to check the given string is Palindrome (ex) "LIRIL" or NOT,
5. Write a program to find out the Max No, Min No of specified three Numbers.
6. Write a program for bubble sort?
7. Write a program to display fibonacci of a numbers
8. Write a program to find whether the number is an Armstrong number or not.
9. Write a program to read the decimal number, round them off to the nearest integer and print out the results in integer form.
10. Write a program to read the price of an item in decimal form and print the output in paise.
11. Write a program to find the number of digits in a number.
12. A positive number is entered through a keyboard write a function to obtain the prime factor of this numbers.

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.

BSCS- P2: C++ PROGRAMMING

1. Write a C++ program to calculate average marks scored by a student for 3 subjects.
2. Write a C++ program to find the area and perimeter of a circle and rectangle.
3. Write a C++ program to swap two numbers.
4. Write a C++ program to find largest of three numbers.
5. Write a C++ program to find the maximum number among three numbers.
6. Write a C++ program to generate Fibonacci series.
7. Write a C++ program to perform string manipulation.
8. Find the length of a string. Compare two strings, Concatenate two strings, Reverse a string, Copy a string to another location.
9. Write a C++ program to find quotient and remainder of 2 numbers.
10. Write a C++ program to manipulate the class account using classes and function. A user should be able to perform the following functions. a. Deposit money.   b. Withdraw money, c. Calculate the interest   d. Check the total balance in his account.
11. Write a C++ program to generate Prime numbers between 1 and 50.
12. Write a C++ program to perform matrix addition and multiplication.
13. Write a C++ program to check whether the given matrix is a sparse matrix or not.
14. Write a C++ program to overload unary minus operator.

RDBMS:

1. Display all the employees in alphabetical order from employee table.
2. Change the basic salary Rs,3000 where basic salary less than 2500 from employee table.
3. Change the basic_sal = 3000 where job in clerk from employee table.
4. Delete all records from Dept table.
5. Add a column " Telephone_No" of data type 'number' and size = '10' to the employee table.
6. Create an index for client _no on client_mast table.
7. Display the length of each employee name from employee table.
8. Find average salary per job in each department _no.
9. Display only those jobs where max sal >=3000.
10. Find out the difference between highest and lowest salaries.

11. Display the sequence root of 81.

12. Display the total number of working days of each employee from employee table.

13. Count the number of products having price greater than equal to 1200.

14. Calculate the average price of all the products from product –mast table.

15. Find out the employees who earn the highest salary in each dept_no

16. Display all clerks from emp table using cursor.

17. Update all Sal < 1000 to Sal = 2000 using cursor.

18. Create a function for Simple Interest.

19. Create a recursive function for Fibonnaci series.

20. Create a package for checking the Even or Odd numbers.

21. Create a package for bank transactions for account debit and credit.

BSCS – P3: JAVA PROGRAMMING

1. Converting Temperature in Fahrenheit into Temperature in Celsius.

2. Program for student Mark-List preparation

3. Program for reverse and finding sum of individual digits of a given number

4. Program to generate Fibonacci series

5. Program for finding Factorial of a given number

6. Program for find whether a given number is prime or not.

7. Program for sorting the given numbers in Ascending and Descending order.

8. Program for Matrix Multiplication

9. Program for finding roots of the given quadratic equation

10. Program for finding volume of a sphere (Concept: Class and Object)

11. Program for preparing Employee salary Report (Concept : Array of Objects)

12. Program for implementing stack Operations (Concept : Constructor)

13. Program for checking whether a given number is palindrome or not
    (Concept : Abstract Class).

14. Program for Electricity charge calculation (Concept : Implementing Multiple Inheritance).

15. Program to find area of Triangle and Rectangle (Concept : Package , Interface).

16. Program for queue implementation (Concept : Exception Handling; User defined Exception).

17. Program to implement Multi- Threading (Concept: Multi- Threading by extending Thread class).

18. Program for simple Railway Reservation System (Concept : IO Streams: DataInput Stream & DataOutputStream).

19. Program to display graphical components (Concept : Graphics class)

20. Program to display an image (Concept : Pixel Grabber Class : Getting pixels of an image)

BSCS-P4: PROJECT WORK

OBJECTIVES

The objective of the Project Course is to help the students to study, analyze and design software or utility for research problems focused in the recent journals or application of such software related to problems in the area of Computer Science. The development of algorithms and derivation with respect to theoretical Computer Science in relevance to performance comparison, which will improve the skills of software development of the students, will be another objective of the mini project course.