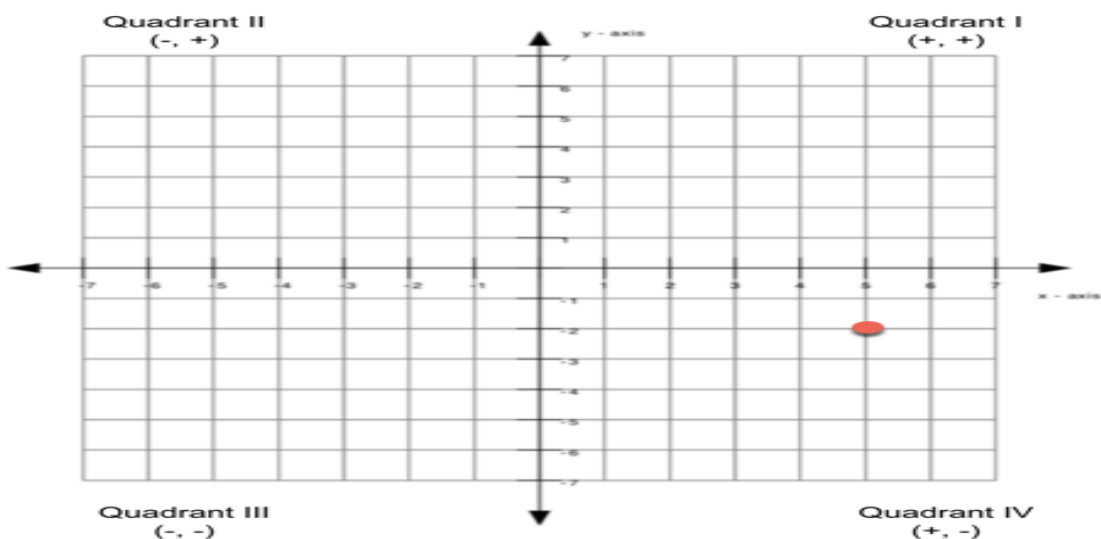# ES202

List of Experiments

1. (a) Write a C program to add two numbers
   (b) Write a C program to add three numbers
2. (a) Write a C program to find area of circle
   (b) Write a C program to calculate simple interest
3. Write a C program to print a block F using hash (#), where the F has a height of six characters and width of five and four characters
4. Write a C program that accepts two item's weight (floating points' values) and number of purchase (floating points' values) and calculate the average value of the items
5. (a) Write a C program to swap two variables using a third variable
   (b) Write a C program to swap two variables without using a third variable
6. (a) Write a C program to convert a given integer (in seconds) to hours, minutes, and seconds.
   (b) Write a C program to convert specified days into years, weeks, and days.
      Note: Ignore leap year.
      Test Data :
      Number of days : 1329-3 years,33 weeks and 3 days
   (c) Write a C program to check whether a number is even or odd.
7. Write a C program to check whether a given year is Leap year or not
8. (a) Write a C program to check whether a triangle is Equilateral, scalene, or isosceles
   (b) Write a C program to check whether a triangle is right angles, obtuse, acute triangle
9. Write a C program to covert temperature from Fahrenheit to Celsius and Celsius to Fahrenheit (User must provide the choice of type of temperature)
10. (a) Write a C program to check whether a character is an alphabet, digit
    (b) Write a C program a program to check whether an alphabet is a vowel or consonant
11. (a) Write a C program to find smallest of two numbers
    (b) Write a C program to find largest of three numbers
12. Write a program in C to implement Simple Calculator.
13. WAP to calculate the root of a Quadratic Equation
14. WAP to to accept a coordinate point in a XY coordinate system and determine in which quadrant the coordinate point lies.

15. Write a program to find gross salary of employee if DA is 40% of basic Salary and HRA is 20% of basic salary. Basic salary will be entered as input by keyboard.
16. Write a program in C to calculate and print the Electricity bill of a given customer. The customer id and unit consumed by the user should be taken from the keyboard and display the total amount to pay to the customer.

    upto 199------------1.20
    200-500-------------1.80
    Above 500----------2.00
    If bill exceeds Rs. 400 then a surcharge of 15% will be charged and the minimum bill should be of Rs. 100/-
17. A library charges a fine for every book returned late. For first 5 days the fine is 50 paisa, for 6-10 days, fine is one rupee and above 10 days, fine is 5 rupees. If you return the book after 30 days your membership will be cancelled. Write a program to accept the number of days the member is late to return the book and display the fine or appropriate message.
18. Write a program to find the factorial of any number.
19. Write a program to print Fibonacci sequence
    0   1   1   2   3   5   8   13…… N terms and prints the sum of sequence.
20. Write a program in C to accept an integer numbers and find sum of digits.
21. Write a program in C to accept an integer numbers and find reverse of this number and check this number for palindrome
22. Write a program in C to accept an integer numbers and to check a number is Armstrong or not
23. Write a program in C to accept an integer numbers and to check a number is Perfect or not
24. Write a program to find the sum of following series:
    S = 2+4+6+8+……………N terms.
25. Write a program to check a number whether it is prime number or not.
26. Write a program to find the sum of following series:
    $1 – 1/2 + 1/3 – 1/4 + 1/5$ - …… up to n terms.
27. Write a program to find the sum of following series:
    $1! + 2! + 3! + 4! + ….. + n!$
28. Write a program to find the sum of following series:
    $S = -1^3 + 3^3 - 5^3 + 7^3 – 9^3 + 11^3$ - ……..N terms.
29. Write a program to find the sum of following series:
    $S = 1/1! + 2/2! + 3/3! + ……………$ 7 terms.
30. Write a program to convert binary number to decimal number.
31. Write a program to find the sum of following series:
    $S = 1^4 + 3^4 + 5^4 + 7^4 +$ …………….. 100 terms
32. Write a program in C to print the following pattern:

    *   *   *
    *   *   *
    *   *   *

33. Write a program in C to print the following pattern:

    1   2   3
    1   2   3
    1   2   3

34. Write a program in C to print the following pattern:

```
1          1          1
2          2          2
3          3          3
```

35. Write a program in C to print the following pattern:

```
3          2          1
3          2          1
3          2          1
```

36. Write a program in C to print the following pattern:

```
3          3          3
2          2          2
1          1          1
```

37. Write a program in C to print the following pattern:

```
*
*          *
*          *          *
```

38. Write a program in C to print the following pattern:

```
1
1          2
1          2          3
```

39. Write a program in C to print the following pattern:

```
1
2          2
3          3          3
```

40. Write a program in C to print the following pattern:

```
3
3          2
3          2          1
```

41. Write a program in C to print the following pattern:

```
3
2          2
1          1          1
```

42. Write a program in C to print the following pattern:

```
                              *
                    *         *         *
          *         *         *         *         *
*         *         *         *         *         *         *
```

43. Write a program in C to print the following pattern:

```
                              1
                    1         2         1
          1         2         3         2         1
1         2         3         4         3         2         1
```

44. Write a program in C to print the following pattern:

```
                    5
              5     4     5
        5     4     3     4     5
   5    4     3     2     3     4     5
5  4    3     2     1     2     3     2     1
```

45. Write a program in C to print the following pattern:

```
1
0     1
1     0     1
0     1     0     1
1     0     1     0     1
```

46. Write a program to print all prime numbers <= a given number.
47. Write a program to convert Decimal no to Binary No.
48. Write a program to find product, sum, average, max and min from a list of n numbers.
49. Write a program in C to display the index of smallest and largest element in 10 integers
50. Write a program in C to display the index of smallest and largest element in 3 X 4 matrix of integers.
51. Write a program in C that accepts N*N matrix as input and print transpose of this matrix
52. Write a program to accept two matrices of some order. (Order must be given by user) find out the sum of these matrices and print the sum of matrices.
53. Write a program to find out the product/Multiplication of two matrices and print the product matrix. (order of matrices must be given by user)
54. Write a program to accept two matrices of some order. (Order must be given by user) find out the subtraction of these matrices and print the sum of matrices.
55. Write a C Program to implement Simple Calculator (Addition, Subtraction, Multiplication, Division) using the concept of function
56. Write a C Program to swap two values using function
57. Write a C Program to Calculate the factorial of a number using function
58. Write a C Program to Calculate the factorial of a number using recursion

Link for Submission of Lab records on regular basis

https://forms.office.com/Pages/ResponsePage.aspx?id=dqBGjZPQbUGle4aSzeE7-KPMxbkfzdZCrnzZ5Axq_nRUMUFXTlFQSDJLOUowQ0tQMVlQWU8wNFdXTy4u