Subject Name: Programming for Problem Solving
Subject Code: 3110003
Semester: 1
Faculty Name: Dr. Rutal S. Mahajan**,** Mr. Gaurav V. Patel

Sr. No.	Experiment
1	Write a program to that performs as calculator (addition, multiplication, division, subtraction).
2	Write a program to find area of triangle(a=h*b*.5) a = area h = height b = base
3	Write a program to calculate simple interest (i = (p*r*n)/100). i = Simple interest p = Principal amount r = Rate of interest n = Number of years
4	Write a C program to interchange two numbers
5	Write a C program to enter a distance in to kilometer and convert it in to meter, feet, inches and centimeter
6	Write a program to compute Fahrenheit from centigrade (f=1.8*c +32)
7	Write a C program to find out distance travelled by the equation d = ut + at^2
8	Write a C program to find that the accepted number is Negative, or Positive or Zero
9	Write a program to read marks of a student from keyboard whether the student is pass or fail(using if else).
10	Write a program to read three numbers from keyboard and find out maximum out of these three. (nested if else).
11	Write a C program to check whether the entered character is capital, small letter, digit orany special character.
12	Write a program to read marks from keyboard and your program should display equivalent grade according to following table(if else ladder) Marks Grade 100 - 80 Distinction 79 - 60 First Class 59 - 40 Second Class < 40 Fail
13	Write a c program to prepare pay slip using following data. Da = 10% of basic, Hra = 7.50% of basic, Ma = 300, Pf = 12.50% of basic, Gross = basic + Da + Hra + Ma, Nt = Gross – Pf.
14	Write a C program to read no 1 to 7 and print relatively day Sunday to Saturday.
15	Write a C program to find out the Maximum and Minimum number from given 10 numbers.
16	Write a C program to input an integer number and check the last digit of number is even or odd.
17	Write a C program to find factorial of a given number.
18	Write a program to reverse a number.
19	Write a program to generate first n number of Fibonacci series.

20	Write a program to find out sum of first and last digit of a given number.
21	Write a C program to find the sum and average of different numbers which are accepted by user as many as user wants.
22	Write a program to calculate average and total of 5 students for 3 subjects (use nested for loops).
23	Read five persons height and weight and count the number of person having height greater than 170 and weight less than 50.
24	Write a program to check whether the given number is prime or not.
25	Write a program to evaluate the series 1^2+2^2+3^2+……+n^2
26	Write a C program to find 1+1/2+1/3+1/4+. .....+1/n.
27	Write a C program to find 1+1/2!+1/3!+1/4!+.....+1/n!.
28	Write a program to evaluate the series sum=1-x+x^2/2!-x^3/3!+x^4/4! .....-x^9/9!
29	Write a program to print following patterns: i * * * * * * * * * * * * * * * ii * * * * * * * * * * * * * * * iii ***** **** *** ** *
30	Write a program to print following patterns: i) 1 12 123 1234 12345 ii) 12345 1234 123 12 1 iii) 55555 4444 333 22 1 iv) 1 22 333 4444 55555
31	Write a program to print following patterns: i) AAAAA BBBB CCC DD E ii) ABCDE ABCD ABC AB A
32	Write a C program to read and store the roll no and marks of 20 students using array.
33	Write a program to find out which number is even or odd from list of 10 numbers using array
34	Write a program to find maximum element from 1-Dimensional array.
35	Write a C program to calculate the average, geometric and harmonic mean of n elements in an array.
36	Write a program to sort given array in ascending order (Use Insertion sort, Bubble sort, Selection sort, Merge sort, Quicksort, Heapsort).
37	Write a program to find a character from given string.
38	Write a program to replace a character in given string.
39	Write a program to delete a character in given string.
40	Write a program to reverse string.
41	Write a program to convert string into upper case

42	Write a program that defines a function to add first n numbers.
43	Write a function in the program to return 1 if number is prime otherwise return 0.
44	Write a function Exchange to interchange the values of two variables, say x and y. illustrate the use of this function in a calling function
45	Write a C program to use recursive calls to evaluate F(x) = x – x 3 / 3! + x 5 / 5 ! – x 7 / 7! + … x n / n!.
46	Write a program to find factorial of a number using recursion.
47	Write a C program using global variable, static variable.
48	Write a function that will scan a character string passed as an argument and convert all lowercase character into their uppercase equivalents
49	Write a program to read structure elements from keyboard.
50	Define a structure type struct personal that would contain person name, date of joining and salary using this structure to read this information of 5 people and print the same on screen.
51	Define structure data type called time_struct containing three member's integer hour, integer minute and integer second. Develop a program that would assign values to the individual number and display the time in the following format: 16: 40:51
52	Define a structure called cricket that will describe the following information: Player name Team name Batting average Using cricket, declare an array player with 50 elements and write a C program to read the information about all the 50 players and print team wise list containing names of players with their batting average.
53	Design a structure student_record to contain name, branch and total marks obtained. Develop a program to read data for 10 students in a class and print them.
54	Write a program to print address of variable using pointer.
55	Write a C program to swap the two values using pointers.
56	Write a C program to print the address of character and the character of string using pointer
57	Write a program to access elements using pointer.
58	Write a program for sorting using pointer.
59	Write a program to write a string in file
60	A file named data contains series of integer numbers. Write a c program to read all numbers from file and then write all odd numbers into file named "odd" and write all even numbers into file named "even". Display all the contents of these file on screen

Subject Name: Database Management Systems
Subject Code: 3130703
Semester: 3
Faculty Name: Ms. Hemangini J. Patel, Mr. Sandip K. Tandel, Ms. Jagruti R. Boda

Sr. No.	Experiment
1	To study DDL-create and DML-insert commands
2	Create table and insert sample data in tables.
3	Perform queries involving predicates LIKE, BETWEEN, IN etc.
4	To Perform various data manipulation commands, aggregate functions and sorting concept on all created tables.
5	To study Single-row functions.
6	Displaying data from Multiple Tables (join)
7	To apply the concept of Aggregating Data using Group functions.
8	To solve queries using the concept of sub query.
9	To apply the concept of security and privileges
10	To study Transaction control commands
11	Write Cursor
12	Write Trigger

Subject Name: Computer Networks
Subject Code: 3150710
Semester: 5
Faculty Name: Mr. Kevin K. Prajapati, Mr. Dhaval J. Patel

Sr. No.	Experiment
1	Study of different network devices in detail.
2	Study of different types of network cables and practically implement the cross-wired cable and straight through cable using clamping tool.
3	Study of basic network command and Network configuration commands.
4	Implement different LAN topologies using Network Simulator.
5	Implement the concept of VLAN using Network Simulator.
6	Implement the concept of static routing.
7	Implement the concept of dynamic routing (RIP, OSPF, BGP).
8	Packet capture and header analysis by wire-shark (TCP,UDP,IP).

Subject Name: Mobile Application Development
Subject Code: 3170726
Semester: 7
Faculty Name: Ms. Bhavesh D. Patel

Sr. No.	Experiment
1	Design Login activity and implement control events : Use EditText, Checkbox and Buttons.
2	Implement Practical 1 using following layouts: 1. Linear Layout 2. Relative Layout 3. Table Layout
3	Create Activities & implement following 1. Implicit intent 2. Explicit Intent 3. StartActivityForResult
4	Implement activity Lifecycle and State Callbacks
5	Practical : Use an Options Menu
6	Create a Recycler View and list the details of student using following fields: 1. Name 2. Address 3. Photo (Image) 4. Delete (Button Operation)
7	Practical: Theme, Custom Styles, Drawables
8	Practical: Save user data in a database
9	Use an AsyncTask to access remote database (make a use of simple PhP Web service)
10	Use Retrofit to access remote database (make a use of simple PhP Web service)
11	Practical : Use Firebase to perform CRUD operation
12	Practical: Broadcast Receiver
13	Practical: Notifications
14	Practical: Get and Save User Preferences
15	Practical : make a use of android system
16	Using location service get the current location and display in TextView
17	Practical : Display the use of animations

Subject Name: Analysis and Design of Algorithms
Subject Code: 3150703
Semester: 5
Faculty Name: Mr. Gaurav V. Patel

Sr. No.	Experiment
1	Implementation and Time analysis of sorting algorithms. Bubble sort, Selection sort, Insertion sort, Merge sort and Quicksort
2	Implementation and Time analysis of linear and binary search algorithm.
3	Implementation of max-heap sort algorithm.
4	Implementation and Time analysis of factorial program using iterative and recursive method.
5	Implementation of a knapsack problem using dynamic programming.
6	Implementation of chain matrix multiplication using dynamic programming.
7	Implementation of making a change problem using dynamic programming
8	Implementation of a knapsack problem using greedy algorithm.
9	Implementation of Graph and Searching (DFS and BFS).
10	Implement prim's algorithm.
11	Implement kruskal's algorithm.
12	Implement LCS problem.