

Practical Number	05
Areas covered	Iteration control structure

Section A

Q1) Write a C program to print numbers from 0 to 100. (You are required to write 3 separate answers each using While, Do..While, For, looping structures).

Q2) Write a C program to calculate and print the total of 10 marks and the average. If the average is less than 50 program should print “Fail!” otherwise “Pass!”

Q3) Write a C program to calculate factorial of a user given number.

Hint:

- ☐ Select an appropriate looping structure.
- ☐ Factorial of ‘0’ is ‘1’ ($0! = 1$)
- ☐ Ex: factorial of number 5 is calculated as $5! = 5*4*3*2*1$

Q4) Write a C program to calculate the sum of all digits of a user given number.

- ☐ If user input 123 your program should output 6. (calculated as $1+2+3$)

Q5) Write a C program to reverse the digits of a number using *do-while* statement.

Q6) Write a C program to calculate nth power of a given integer. The user input base and exponent. (Do NOT use inbuilt functions, instead use a loop)

Q7) Write a C program to print first 10 numbers of “Fibonacci Sequence”.

Q8) Write a C program to check whether a given number is an Armstrong Number! (Refer to previous flowcharts)

Q9) Write a C program to print all the ASCII values for letters A to Z.

Q10) Write a program to print this pattern.

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Q11) Write a program to check whether a given number is prime or not.

Q12) Write a C program to print all factors of a given integer.

Q12) Write a C program to add all user inputs until user input '-1'. And then display the sum.

Q13) Write a C program to read user inputs for an integer array (size = 10) and print the array.

Q14) Re-Write the above code to count all the even numbers in above integer array and display the count.

Section B

1. Input 10 numbers and to output number of positive, number of negative, number of zeros.
2. Input Marks of 10 students and output the maximum , minimum and average Marks.
3. Input price of 10 items and display the average value of an Item , number of items which the price is greater than 200.
4. Input the Employee no and the Basic Salary of the Employees in an organisation ending with the dummy value -999 for Employee no and count the number Employees whose Basic Salary ≥ 5000 .

5. Input employee number, and hours worked by employees, and to display the following:

Employee number, Over Time Payment, and the percentage of employees whose Over Time Payment exceeding the Rs. 4000/-.

The user should input -999 as employee number to end the program, and the normal Over Time Rate is Rs.150 per hour and Rs. 200 per hour for hours in excess of 40.