

Department of Computer Science and Engineering
Jaypee University of Engineering and Technology
18B11CI111 – Software Development Fundamentals

LAB-6 C Programs: Getting Started

1. Write following Basic C program

```
#include<stdio.h>

void main()
{
printf("Hello JUET");
}
```

Compile the program

Run (Execute) the Program

Try to make modifications in it like write comment on each line by using //, change void to int, comment the header file etc.

2. Write a C Program (WAP) to add two numbers and display/print the sum.
3. The distance between two cities (in km.) is input through the keyboard. Write a program to convert and print this distance in meters, feet, inches and centimeters.
4. Temperature of a city in Fahrenheit degrees is input through the keyboard. Write a C program to convert this temperature into Centigrade degrees.
5. The length & breadth of a rectangle and radius of a circle are input through the keyboard. Write a C program to calculate the area & perimeter of the rectangle, and the area & circumference of the circle.
6. Two numbers are input through the keyboard into two locations C and D. Write a C program to interchange the contents of C and D.
7. Write a C program that takes two numbers as an input and print the average them.
8. If the marks obtained by a student in five different subjects are input through the keyboard. Write a C program to find out the aggregate marks and percentage

marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject is 100.

9. Write a C program to compute the area of triangle given its coordinates of its three vertices (to be read).
10. Write a C program which evaluates value of following function given two input values x (a real number) and y (an integer), and prints the result of following expression:

$$x^2 + y \cdot x - x/y$$

11. Write a C program to print the Quotient and Remainder when a number is divided by another number.
12. Write a C program to print the sum of n natural numbers.

The sum of first 'n' natural no`s-

$$1+2+3+\dots+n=n*(n+1)/2$$

13. Write a C program to print the sum of the square of n natural numbers.

the sum of squares of first 'n' natural no`s-

$$1^2+2^2+3^2+\dots+n^2=n*(n+1)*(2n+1)/6$$

14. Write a C program to print the sum of the cube of n natural numbers.

The sum of cubes of first 'n' natural no`s-

$$1^3+2^3+3^3+4^3+\dots+n^3 = (n^2 * (n+1)^2)/4$$

15. Write a C program to determine the amount of interest to be paid by the borrower, if the principal amount, rate of interest, and tenure are entered by the user.
16. Write a C program to determine the amount of compound interest to be paid by the borrower, if the principal amount, rate of interest, and tenure are entered by the user.
17. Write a C program to convert a given number of days into months and days.
18. Write a C program to find the gross salary of an employee

$$\text{Gross salary} = \text{base salary} + \text{DA} + \text{HRA} + \text{Bonus}$$

DA= 40 % of the base salary, HRA=80% of DA, and Bonus= 25% of HRA.

Ask user to enter the base salary only.