

Jadavpur University
Department of Computer Science and Engineering
MCA, 1st Year, 1st Semester
Programming Practice Lab
Assignment-1

1. Write a program to use sizeof operator to check the sizes (in bytes) of the different datatypes.
2. Write a program to find average of 3 integers. Input variables must be declared as the integer variables.
3. Write a program to find the largest of three numbers using fourth variable.
4. Write a program to find the largest of three numbers using fourth variable.
5. Write a program to print value of z where
 - i. a=5, b=6, z= a++ + b++
 - ii. a=5, b=6, z= a++ + --b
 - iii. a=5, z= a++ + ++a
6. Write a program to calculate the marks obtained by any student in 5 different subjects, entered from keyboard, finally the grade will be assigned depending on the following criteria on the average marks obtained:--
 - i. If avg is greater than "90" but less than "100" assign grade as 'A'
 - ii. If avg is greater than "80" but less than "90" assign grade as 'B'
 - iii. If avg is greater than "70" but less than "80" assign grade as 'C'
 - iv. If avg is greater than "60" but less than "70" assign grade as 'D'
 - v. If avg is greater than "50" but less than "60" assign grade as 'E'
 - vi. If avg is less than "50" assign grade as 'F' and mention the student as a failed candidate.
 - vii. Otherwise he/she will be considered as a successful one.
 - viii.
7. Write a program to swap the values of two variables
 - (i) Case 1:-- using third variable
 - (ii) Case 2:-- without using any third variable
8. Run the following code segments and point out the differences if any,

```
code =4
if (code == 4) printf("bonus");
else printf("penalty");
.....
```

```
code =4
if (code = 4) printf("bonus");
else printf("penalty");
```

9. Write a program to test whether a given number is even or odd.
10. Write a program to test whether any given year is a Leap year or not.
11. Write a program to Calculate simple interest given principal (p), rate of interest per annum (r), number of years(n) and consider all the relevant cases.
12. Write a program to calculate the real roots of any quadratic equation where a, b, c (i.e. the co-efficients) will be taken as input by the user.
13. Write a program to take a three digit number from the user to test whether the sum of the first & last digits is equal to the twice of the middle element /digit.
14. Write a program to convert any centigrade temperature value to fahrenheit and vice versa.
15. Write a program to convert the digits of a 3-digit number into words.
for example, if input: 123 Output: One Two Three