



Assignment 2(a) – Programming Fundamentals

1. Write a program to input name and marks of three tests of a student and calculate and print the name and average of best two test marks.
2. Write a program to determine whether the entered character is in upper case or lower case, or is an invalid character.
3. Write a program to calculate the total salary of a person. The user has to enter the basic and the grade and depending upon which the total salary is calculated as:

$t_sal = basic + hra + da + allow - pf$
where : $hra = 20\% \text{ of basic}$
 $da = 50\% \text{ of basic}$
 $allow = 1700 \text{ if grade} = 'A'$
 $allow = 1500 \text{ if grade} = 'B'$
 $allow = 1300 \text{ if grade} = 'C'$
 $pf = 11\% \text{ of basic.}$

4. Write a program to calculate the roots of a quadratic equation $2ax+bx+c=0$, display them on the screen specifying their nature.
5. Write a program to input a number and print the sum of all its even digits and sum of all its odd digits separately.
6. Write a program to find x^n . Take x and n from the user.
7. Write a program to generate the reverse of a given number.
8. Write the programs to print the following patterns:

a. 1
 11
 111
 1111
 11111

b. 1
 11
 202
 3003
 40004

c. 1
11
121
1221
1222

d. 12345
1234
123
12
1

e. 5432*
543*1
54*21
5*321
*4321

f. 11111
0000
111
00
1