Assignment 2

Batch Launchpad (C++ Foundation)

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% of basic
    da = 50% of basic
    allow = 1700 if grade = 'A'
    allow = 1500 if grade = 'B'
    allow = 1300 if grade = 'C'
    pf = 11% of basic.

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

9. Write the programs to print the following patterns:

(a)
```
1
11
111
1001
11111
```

(b)
```
1
11
101
1331
10001
```

(c)
```
1
11
202
3003
40004
```

(d)
```
1
11
121
1221
12221
```

(e)
```
5
44
333
2222
11111
```