Beginner's Assignment

Batch Crux (Java Foundation)

1. Write a program to accept the principal amount, rate and time and calculate the simple interest and the total amount.

2. Write a program to input name and marks of three tests of any student and calculate and print the name and average of best two test marks.

3. Write a program that works as a simple calculator. It reads two integers and a character. If the character is a +, the sum is printed; if it is a -, the difference is printed; if it is a *, the product is printed; if it is a /, the quotient is printed; and if it is a %, the remainder is printed.

4. Write a program to determine whether the entered character is in upper case or lower case, or is an invalid character.

5. 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.

6. Write a program to calculate the roots of a quadratic equation $ax^2 +bx +c=0$, display them on the screen specifying their nature.

7. Write the programs to print the following patterns:

(a)
```
1
11
111
1111
11111
```

(b)
```
1
11
101
1001
10001
```

(c)
```
1
11
121
1331
14641
```

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

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

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