

```
1 import java.util.Scanner;
2 class Pattern
3 {
4     public static void main(String args[])
5     {
6         System.out.println("author: A.swathi \n sapid: 51834629");
7         System.out.println("question 4");
8         Scanner sc=new Scanner(System.in);
9         for(int i=4;i>=1;i--)
10        {
11            for(int j=4;j>i;j--)
12            {
13                System.out.print(" ");
14            }
15            for(int j=2*i-1;j>=1;j--)
16            {
17                if(j%2==0)
18                {
19                    System.out.print("0");
20                }
21                else
22                {
23                    System.out.print("1");
24                }
25            }
26            System.out.println();
27        }
28    }
29 }
```

## X Terminal



```
author: A.swathi
sapid: 51834629
question 4
1010101
10101
101
1
Process finished.
```

```
1 public class Main
2 {
3     public static long factorial(int i)
4     {
5         return (i < 1) ? 1 : i * factorial(i - 1);
6     }
7
8     public static void main(String[] args)
9     {
10        System.out.println("Author:A.swathi \nSAP ID:51834629");
11        System.out.println("question 1");
12        int i = 5;
13        System.out.println("The Factorial of " + i + " is " + fact
14    }
15 }
```

## X Terminal



```
Author:A.swathi
SAP ID:51834629
question 1
The Factorial of 5 is 120
Process finished.
```

```
1 abstract class Bank
2 {
3     abstract int getBalance();
4 }
5 class BankA extends Bank
6 {
7     int deposit=100;
8     int getBalance()
9     {
10         return deposit;
11     }
12 }
13 class BankB extends Bank
14 {
15     int deposit=150;
16     int getBalance()
17     {
18         return deposit;
19     }
20 }
21 class BankC extends Bank
22 {
23     int deposit=200;
24     int getBalance()
25     {
26         return deposit;
27     }
28 }
29 class Main
30 {
31     public static void main(String args[])
32     {
33         System.out.println("Author:A.swathi \nSAP ID:51834629");
34         System.out.println("question 3");
35         //object for Bank A
36         BankA i=new BankA();
37         System.out.println("Balance in Bank A: "+i.getBalance());
38
-- . . . . .
```

## X Terminal



```
Author:A.swathi
SAP ID:51834629
question 3
Balance in Bank A: 100
Balance in Bank B: 150
Balance in Bank C: 200
Process finished.
```