

Question 1:

```
public class Main  
{  
    public static long factorial(int i)  
    {  
        return (i < 1) ? 1 : i * factorial(i - 1);  
    }  
  
    public static void main(String[] args)  
    {  
        System.out.println("Program By Manasa\\nJava1\\nSAP ID:51834754");  
        int i = 10;  
        System.out.println("The Factorial of " + i + " is " + factorial(i));  
    }  
}
```

```
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("Program By Manasa\nJava1");
11        int i = 10;
12        System.out.println("The Factorial of " + i +
13    }
14 }
```

x Terminal

```
Program By Manasa
Java1
SAP ID:51834754
The Factorial of 10 is 3628800

Process finished.
```

Question 3:

abstract class Bank

{

abstract int getBalance();

}

class BankA extends Bank

{

int deposit=1000;

int getBalance()

{

```
        return deposit;  
    }  
}  
  
class BankB extends Bank  
{  
  
    int deposit=1500;  
  
    int getBalance()  
    {  
  
        return deposit;  
    }  
}  
  
class BankC extends Bank  
{  
  
    int deposit=2000;  
  
    int getBalance()  
    {  
  
        return deposit;  
    }  
}  
  
class Main  
{  
  
    public static void main(String args[])  
    {  
  
        System.out.println("Program by Manasa\nJava1\nSAP ID:51834754");  
  
        //object for Bank A
```

```
BankA i=new BankA();
System.out.println("Balance in Bank A: "+i.getBalance());

//object for Bank B
BankB j=new BankB();
System.out.println("Balance in Bank B: "+j.getBalance());

//object for Bank C
BankC k=new BankC();
System.out.println("Balance in Bank C: "+k.getBalance());

}

}
```

```
6 {
7     int deposit=1000;
8     int getBalance()
9     {
10         return deposit;
11     }
12 }
13 class BankB extends Bank
14 {
15     int deposit=1500;
16     int getBalance()
17     {
18         return deposit;
19     }
20 }
21 class BankC extends Bank
22 {
23     int deposit=2000;
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("Program by Manasa\nJava1 \nSA
34         //object for Bank A
35         BankA i=new BankA();
36         System.out.println("Balance in Bank A: "+i.getBal
37
38         //object for Bank B
39
40         //object for Bank C
41
42     }
43 }
```

Terminal

```
Program by Manasa
Java1
SAP ID:51834754
Balance in Bank A: 1000
Balance in Bank B: 1500
Balance in Bank C: 2000

Process finished.
```

Question 4:

```
import java.util.Scanner;

class Pattern

{

    public static void main(String args[])

{
```

```
System.out.println("Program by Manasa\nJava1\nSap:51834754");

Scanner sc=new Scanner(System.in);

for(int i=4;i>=1;i--)

{

    for(int j=4;j>i;j--)

    {

        System.out.print(" ");

    }

    for(int j=2*i-1;j>=1;j--)

    {

        if(j%2==0)

        {

            System.out.print("0");

        }

        else

        {

            System.out.print("1");

        }

    }

    System.out.println();

}

}

}
```

```
1 import java.util.Scanner;
2 class Pattern
3 {
4     public static void main(String args[])
5     {
6         System.out.println("Program by Manasa\nJava1\r");
7         Scanner sc=new Scanner(System.in);
8         for(int i=4;i>=1;i--)
9         {
10             for(int j=4;j>i;j--)
11             {
12                 System.out.print(" ");
13             }
14             for(int j=2*i-1;j>=1;j--)
15             {
16                 if(j%2==0)
17                 {
18                     System.out.print("0");
19                 }
20                 else
21                 {
22                     System.out.print("1");
23                 }
24             }
25             System.out.println();
26         }
27     }
28 }
```

x Terminal



```
Program by Manasa
```

```
Java1
```

```
Sap:51834754
```

```
1010101
```

```
  10101
```

```
    101
```

```
      1
```

```
Process finished.
```



QUESTION 5:

```
import java.util.Scanner;

public class Main
{
    int Id;
    String Name;
    int Age;
    long Salary;

    void GetData()      // Defining GetData()
    {
        Scanner sc = new Scanner(System.in);

        System.out.print("\n\tEnter Employee Id : ");
        Id = Integer.parseInt(sc.nextLine());

        System.out.print("\n\tEnter Employee Name : ");
        Name = sc.nextLine();
    }
}
```

```
System.out.print("\n\tEnter Employee Age : ");
Age = Integer.parseInt(sc.nextLine());

System.out.print("\n\tEnter Employee Salary : ");
Salary = Integer.parseInt(sc.nextLine());

}

void PutData()      // Defining PutData()
{
    System.out.print("\n\t" + Id + "\t" + Name + "\t" + Age + "\t" + Salary);
}

public static void main(String args[])
{
    System.out.println("Program by Manasa\nJava1 \nSAP ID:519834754");
    Main[] M = new Main[10];
    int i;

    for(i=0;i<10;i++)
        M[i] = new Main(); // Allocating memory to each object

    for(i=0;i<10;i++)
    {
```

```
System.out.print("\nEnter details of "+ (i+1) +" Employee\n");
M[i].GetData();
}

System.out.print("\nDetails of Employees\n");
for(i=0;i<3;i++)
M[i].PutData();

}
}
```

```
Program by Manasa
Java1
SAP ID:519834754

Enter details of 1 Employee
Enter Employee Id : 1
Enter Employee Name : Manasa
Enter Employee Age : 18
Enter Employee Salary : 100000

Enter details of 2 Employee
Enter Employee Id : 2
Enter Employee Name : Kushi
Enter Employee Age : 19
Enter Employee Salary : 80000

Enter details of 3 Employee
Enter Employee Id : 3
Enter Employee Name : Rohit
Enter Employee Age : 18
Enter Employee Salary : 130000

Enter details of 4 Employee
Enter Employee Id : 4
Enter Employee Name : Pravi
Enter Employee Age : 17
Enter Employee Salary : 130000

Enter details of 5 Employee
Enter Employee Id : 5
Enter Employee Name : Ishu
Enter Employee Age : 18
Enter Employee Salary : 100000

Enter details of 6 Employee
Enter Employee Id : 6
Enter Employee Name : Vyju
Enter Employee Age : 17
Enter Employee Salary : 80000

Enter details of 7 Employee
Enter Employee Id : 7
Enter Employee Name : Teju
Enter Employee Age : 17
Enter Employee Salary : 80000

Enter details of 8 Employee
Enter Employee Id : 8
Enter Employee Name : Chandu
Enter Employee Age : 18
Enter Employee Salary : 60000

Enter details of 9 Employee
Enter Employee Id : 9
```



```
Enter Employee Age : 18
Enter Employee Salary : 60000
Enter details of 9 Employee
Enter Employee Id : 9
Enter Employee Name : Tany
Enter Employee Age : 17
Enter Employee Salary : 80000
Enter details of 10 Employee
Enter Employee Id : 10
Enter Employee Name : harsha
Enter Employee Age : 18
Enter Employee Salary : 5000
Details of Employees
1 Manasa 18 100000
2 Kushi 19 80000
3 Rohit 18 130000
4 Pravi 17 130000
5 Ishu18 100000
6 Vyju17 80000
7 Teju17 80000
8 Chandu 18 60000
9 Tany17 80000
10 harsha 18 5000
Process finished.
```

