Name: Devdatta Ganesh Raorane

PRN : 024

Q.1) Find Factorial of a Number using Recursion

```java
package mypack;

//Find Factorial of a number using recursion
public class Ques1 {

	public static int fact(int x)
	{
		int f;
		if(x==0 || x==1)
		{
			return 1;
		}
		else
		{
			f= x*fact(x-1);
			return f;
		}
	}
	public static void main(String[] args)
	{
	  int no=5;
	  int res=fact(no);
	  System.out.println("The Factorial is: "+res);
	}

}
```

Q.2) Find Fibonacci series in following pattern

1

2 3

5 8 13

```java
package mypack;
public class Ques2 {

	public static void main(String[] args) {

		int rows = 3;
		int a = 1, b = 2;

		for (int i = 1; i <= rows; i++) {
		    for (int j = 1; j <= i; j++) {
		        System.out.print(a + " ");
		        int c = a + b;
		        a = b;
```

```
                    b = c;
                }
                System.out.println();
            }

        }
}
```

Q.3) Patterns

```
package mypack;

public class Ques3 {

        public static void pattern()
        {
                int n = 3;

         for (int i = n; i >= 1; i--)
         {
              for (int j = i; j <= n; j++)
              {
                  System.out.print(j);
              }
              for (int j = n - 1; j >= i; j--)
              {
                  System.out.print(j);
              }
              System.out.println();
          }


          for (int i = 2; i <= n; i++)
          {
              for (int j = i; j <= n; j++)
              {
                  System.out.print(j);
              }
              for (int j = n - 1; j >= i; j--)
              {
                  System.out.print(j);
              }
              System.out.println();
          }
        }


        public static void pattern2()
        {
               for(int i=1;i<=3;i++) {
               for(int j=3;j>=i;j--)
               {
                      System.out.print("* ");
               }
               System.out.println();
               }
        }
```

```
        public static void main(String[] args)
        {
           pattern();
           System.out.println();
           pattern2();
        }

}
```

Q.4) Print binary of a number in reverse order eg. Input 4 O/P 0 0 1

```
package mypack;
//print binary of a number in reverse order
public class Ques4 {

        public static void main(String[] args)
        {
          int no=4;

          if(no==0)
          {
                System.out.print(0);
          }

          while(no>0)
          {
                int rem=no%2;
                System.out.print(rem);
                no=no/2;
          }
        }

}
```