Qn 21) Print Pattern

```
import java.io.*;
import java.util.*;
public class Main{
   public static void main(String[] args){
      Scanner obj= new Scanner(System.in);
      char c=obj.nextLine().charAt(0);
      int n=obj.nextInt();
      int i=0,j=0;
      for (i=1;i<=n;i++){
         for (j=1;j<=i;j++){
            System.out.print(c+" ");
         }
         System.out.println();
      }
   }
}
```

Qn 22) Hollow square

```
import java.io.*;
import java.util.*;
public class Main{
   public static void main(String[] args){
      Scanner obj= new Scanner(System.in);
      int n=obj.nextInt();
      int i=0,j=0;
      for (i=1;i<=n;i++){
         for (j=1;j<=n;j++){
            if (i==1||i==n||j==1||j==n){
               System.out.print("*"+" ");
            }
```

```
            else{
               System.out.print("  ");
            }
         }
         System.out.println();
      }
   }
}
```

Qn 23) Pattern

```
import java.io.*;
import java.util.*;
public class Main{
   public static void main(String[] args){
      Scanner obj= new Scanner(System.in);
      int n=obj.nextInt();
      int c=1;
      for (int i=1;i<=n;i++){
         for (int j=1;j<=i;j++){
            System.out.print((c)+" ");
         }
         c++;
         System.out.println();
      }
   }
}
```

Qn 24) Pattern

```
import java.io.*;
import java.util.*;
public class Main{
```

```
    public static void main(String[] args){
        Scanner obj= new Scanner(System.in);
        int n=obj.nextInt();
        int c=1;
        for (int i=1;i<=n;i++){
            for (int j=1;j<=i;j++){
                System.out.print((c*c)+" ");
                c++;
            }
            System.out.println();
        }
    }
}
```

Qn 25) Pattern

```
import java.io.*;
import java.util.*;
public class Main{
    public static void main(String[] args){
        Scanner obj= new Scanner(System.in);
        int n=obj.nextInt();
        int c=1;
        for (int i=1;i<=n;i++){
            for (int j=1;j<=i;j++){
                System.out.print((c)+" ");
            }
            c++;
            System.out.println();
        }
        c=c-2;
        for (int i=n-1;i>0;i--){
```

```
            for (int j=1;j<=i;j++){
                System.out.print((c)+" ");
            }
            c--;
            System.out.println();
        }
    }
}
```

Qn 26) $ Hollow Square

```
import java.io.*;
import java.util.*;
public class Main{
    public static void main(String[] args){
        Scanner obj= new Scanner(System.in);
        int n=obj.nextInt();
        int i=0,j=0;
        for (i=1;i<=n;i++){
            for (j=1;j<=n;j++){
                if (i==1||i==n||j==1||j==n){
                    System.out.print("$"+" ");
                }
                else{
                    System.out.print("  ");
                }
            }
            System.out.println();
        }
    }
}
```

Qn 27) Inverted Pyramid

```
import java.io.*;
import java.util.*;
public class Main{
   public static void main(String[] args){
      Scanner obj= new Scanner(System.in);
      int n=obj.nextInt();
      for (int i=n;i>0;i--){
         for (int j=1;j<=n-i;j++){
            System.out.print(" ");
         }
         for (int k=1;k<=2*i-1;k++){
            System.out.print("*");
         }
         System.out.println();
      }
   }
}
```

Qn 28) Reverse Number

```
import java.io.*;
import java.util.*;
public class Main {
   public static void main(String[] args) {
      Scanner s = new Scanner(System.in);
      int n = s.nextInt();
      boolean f = n < 0;
      n = Math.abs(n);
      int r = 0;
      while (n > 0) {
         r = r * 10 + n % 10;
```

```
        n /= 10;
      }
      if (f) {
        r = -r;
      }
      System.out.println("Reverse Number: " + r);
   }
}
```

Qn 29) Int to bin - rev bin to int

```
import java.io.*;
import java.util.*;

public class Main {
   public static void main(String[] args) {
      Scanner s = new Scanner(System.in);
      String i = s.nextLine();
      boolean isValid = true;
      if (i == null || i.isEmpty()) {
        isValid = false;
      } else {
        for (int j = 0; j < i.length(); j++) {
          if (!Character.isDigit(i.charAt(j)) && (i.charAt(j) != '-' || j != 0)) {
            isValid = false;
            break;
          }
        }
      }
      if (!isValid) {
        System.out.println("Invalid input. Please enter a valid integer.");
        return;
```

```
        }
        int n = Integer.parseInt(i);
        if (n < 0) {
            System.out.println("Please enter a non-negative integer.");
            return;
        }
        String b = Integer.toBinaryString(n);
        StringBuilder r = new StringBuilder(b).reverse();
        int x = Integer.parseInt(r.toString(), 2);
        System.out.println("Output: " + x);
    }
}
```

Qn 30) Voting check

```
import java.io.*;
import java.util.*;

public class Main {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        System.out.print("Enter your age: ");
        int a = s.nextInt();
        int votingAge = 18;
        if (a >= votingAge) {
            System.out.println("You are eligible to vote.");
        }
        else {
            int yearsLeft = votingAge - a;
            System.out.println("You are allowed to vote after " + yearsLeft + " years.");
        }
    }
```

}