1.**PROGRAM:**

```
import java.util.*;
class UserMainCode{
  public static int validateDate(String date){
     int valid =0;
      for(char c : date.toCharArray()){
         if((c >= '0' && c<='9') || c=='-' ){
            continue;
         }
         else{
            valid = 1;
            break;
         }
      }
      return valid;

   }
}
public class Main
{
public static void main(String[] args) {
  Scanner sc = new Scanner(System.in);
System.out.println("Enter the date:");
String date = sc.nextLine();
  int validate = UserMainCode.validateDate(date);
  if(validate == 0){
     System.out.println("Valid");
  }
  else{
     System.out.println("Invalid");
  }
```

```
}
}
```

OUTPUT:

Enter the date:

12-08-2020

Valid

Enter the date:

12/08/2020

Invalid

2.**PROGRAM:**

```
import java.util.*;
class UserMainCode{
  public static int validatePlayer(String name){
     int j=0,a=0,i=0;
      for(char c : name.toCharArray()){
         j++;
         if(c == '*' && j>1 && j<name.length()-1){
            i++;
            continue;
         }

      }
      if(i == (name.length()-4)){
         return 0;
      }
      else{
         return 1;
      }
```

```
    }
}
public class Astrick
{
        public static void main(String[] args) {
            Scanner sc = new Scanner(System.in);
                    System.out.println("Enter the name:");
                    String playerName = sc.nextLine();
            int validate = UserMainCode.validatePlayer(playerName);
            if(validate == 0){
                System.out.println("Valid");
            }
            else{
                System.out.println("Invalid");
            }
        }
}
```

OUTPUT:

Enter the name:

ch**ai**

Valid

Enter the name:

Mum*i**

Invalid

3.**PROGRAM**:

```
import java.util.Scanner;
```

```
public class Alpha {

	public static void main(String[] args) {

		String str;

		Scanner scan=new Scanner(System.in);
	   System.out.println("Enter the name:");
		str=scan.nextLine();
		int index=str.indexOf('A');
		int index1=str.indexOf('a');
		if(index==0||index==0)
		{
			System.out.println("valid");
		}
		else if(index%2!=0)
		{
			System.out.println("Invalid");
		}
		else {
			{
				System.out.println("valid");
			}
		}


	}

}
```

OUTPUT:

Enter the name:

Albie Morkel

Valid

Enter the name:

Suresh Raina

Invalid

4.PROGRAM:

```
import java.util.*;
class Shape{
   protected String shapeName;
   Shape(String shapeName){
      this.shapeName = shapeName;
   }
   public double calculateArea(){
      return 0.0;
   }
   public String getShapeName(){
      return this.shapeName;
   }
}

class Square extends Shape{
   private int side;
   Square(String shapeName, int side){
      super(shapeName);
      this.side = side;
   }
   public double calculateArea(){
      return side*side;
```

```
    }
    public int getSide(){
        return this.side;
    }
}

class Rectangle extends Shape{
    private int length, breadth;
    Rectangle(String shapeName, int length, int breadth){
        super(shapeName);
        this.length = length;
        this.breadth = breadth;
    }
    public double calculateArea(){
        return length*breadth;
    }
    public int getLength(){
        return this.length;
    }
    public int getBreadth(){
        return this.breadth;
    }
}

class Circle extends Shape{
    private int radius;
    Circle(String shapeName, int radius){
        super(shapeName);
        this.radius = radius;
    }
    public double calculateArea(){
```

```
        return Math.PI*Math.pow(radius,2);
    }
    public int getRadius(){
        return this.radius;
    }
}
public class Main
{
        public static void main(String[] args) {
            Scanner sc = new Scanner(System.in);
                System.out.println("1. Rectangle\n2. Square\n3. Circle\nArea Calculator --- Choose
your shape");
                int op = sc.nextInt();sc.nextLine();
                switch(op){
                    case 1:
                        System.out.println("Enter length and breadth:");
                        int length = sc.nextInt();sc.nextLine();
                        int breadth = sc.nextInt();sc.nextLine();
                        Shape r = new Rectangle("Rectangle", length, breadth);
                        System.out.printf("Area of Rectangle is:%.2f", r.calculateArea());
                        break;
                    case 2:
                        System.out.println("Enter side:");
                        int side = sc.nextInt();sc.nextLine();
                        Shape s = new Square("Square", side);
                        System.out.printf("Area of Square is:%.2f", s.calculateArea());
                        break;
                    case 3:
                        System.out.println("Enter Radius:");
                        int radius = sc.nextInt();sc.nextLine();
                        Shape c = new Circle("Circle", radius);
```

```
                    System.out.printf("Area of Circle is:%.2f", c.calculateArea());
                    break;
                }
            }
}
```

OUTPUT:

1. Rectangle

2. Square

3. Circle

Area Calculator --- Choose your shape

1

Enter length and breadth:

100

40

Area of Rectangle is:4000.00

1. Rectangle

2. Square

3. Circle

Area Calculator --- Choose your shape

2

Enter side:

20

Area of Square is:400.00