JAVA LAB PROGRAMS

1A.

```
 import java.util.Scanner;
class linears{
   public static void main(String args[]){
      int i, num, item, array[];
      Scanner sc = new Scanner(System.in);
      System.out.println("Enter number of elements:");
      num = sc.nextInt();
      array = new int[num];
      System.out.println("Enter " + num + " integers");
      for (i = 0; i < num; i++)
        array[i] = sc.nextInt();
      System.out.println("Enter the search value:");
      item = sc.nextInt();
      for (i = 0; i < num; i++){
         if (array[i] == item){
           System.out.println(item+" is present at location "+(i+1));
           break;
         }
      }
      if (i == num)
        System.out.println(item + " is not present in the array.");
   }
}
```

1B.

```
import java.io.*;
public class sortingName{
          public static void main(String[] args)
          throws IOException{
                    BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
                    System.out.println("Enter the number of names: ");
                    int n = Integer.parseInt(br.readLine());
                    String names[] = new String[n];
                    System.out.println();
                    for(int i=1; i<=n ; i++) {
                              System.out.println("Enter name "+ i +" :");
                              names[i-1] = br.readLine();
                    }
                    System.out.println("Names in Ascending order ");
                    System.out.println();
```

```
		for(int j=0; j<names.length; j++) {
			for (int i=j+1; j<names.length; i++) {
				if(names[i].compareToIgnoreCase(names[j])<0) {
					String temp = names[j];
					names[j] = names[i];
					names[i] = temp;
				}
			}
			System.out.println(names[j]);
		}
	}
}
```

7.
```
import java.lang.Exception;
import java.lang.*;
import java.io.DataInputStream;

public class myException extends Exception {
	myException(String message){
		Super(message);
	}
}
public class userDef{
	public static void main(String[] args) {
		int age;
		DataInputStream ds = new DataInputStream(System.in);
		try {
			System.out.println("Enter the age (above 18 and below 25) :");
			age = Integer.parseInt(ds.readLine());
			if(age<18 || age<25) {
				throw new myException("Number out of range!!");
			}
			System.out.println("the number is "+age);
		}
		catch(myException e) {
			System.out.println("Caught my exception");
			System.out.println(e.getMessage());
		}
		catch(Exception e) {
			System.out.println(e);
		}
	}
}
```

8.
```
import java.applet.*;
import java.awt.*;
import java.awt.event.*;
public class mouseEvents extends applet implements MouseListener, MouseMotionListener {
	String msg = " ";
	int x=0, y=0;
	public void init() {
		addMouseListener(this);
		addMouseMotionListener(this);
	}
	public void mouseClicked(MouseEvent m) {
		x=10;
		y=10;
		msg="Mouse Clicked";
		repaint();
	}

	public void mouseEntered(MouseEvent m) {
		x=10;
		y=10;
		msg="Mouse Entered";
		repaint();
	}

	public void mouseExited(MouseEvent m) {
		x=10;
		y=10;
		msg="Mouse Exited";
		repaint();
	}

	public void mousePressed(MouseEvent m) {
		x=m.getX();
		y=m.getY();
		msg="DOWN";
		repaint();
	}

	public void mouseReleased(MouseEvent m) {
		x=m.getX();
		y=m.getY();
		msg="UP";
		repaint();
	}
```

```
        public void mouseDragged(MouseEvent m) {
                x=m.getX();
                y=m.getY();
                msg="*";
                showStatus("Mouse Dragged at "+ x + " & "+ y +":");
                repaint();
        }
        public void mouseMoved(MouseEvent m) {
                showStatus("Mouse is Moving at "+ m.getX() + " & "+ m.getY());
        }
        public void paint(Graphics g) {
                g.drawString(msg,x,y);
        }
}
```

4A.

```
import java.util.Scanner;

public class strclass {
   static int num1, num2;
   static int add( int a, int b) {
        return a+b;
   }
   static int sub(int a, int b) {
        return a-b;
   }
   static int mul(int a, int b) {
        return a*b;
   }
   static int div(int a, int b) {
        return a/b;
   }
   static int modulus(int a, int b) {
        return a%b;
   }
   static int increment(int a) {
        return ++a;
   }
   static int decrement(int a) {
        return --a;
   }
   public static void main(String args[]) {
        Scanner input = new Scanner(System.in);
        System.out.println("Enter two numbers:");
```

```
        num1=input.nextInt();
        num2=input.nextInt();
        System.out.println("\nThe two numbers are: "+ num1 + "," + num2 +"\n Addition: " + add(num1, num2)+ "\nSubtraction: "+ sub(num1,num2)+"\nMultiplication: "+ mul(num1,num2)+ "\n Division: "+div(num1, num2)+"\n Modulus: " +modulus(num1, num2)+ "\nIncrement of 1st num: "+ increment(num1)+ "\n Decrement of 2nd num: "+ decrement(num2));
   }
   }
```

4B.
```
import java.io.*;
public class clsarray {

        public static void main(String[] args) throws IOException {
                // TODO Auto-generated method stub
                BufferedReader br = new BufferedReader (new InputStreamReader(System.in));
                int i,n;
                int a[]=new int[100];
                System.out.println("Enter the value of n");
                n=Integer.parseInt(br.readLine());
                System.out.println("Enter the values");
                for(i=0;i<n;i++)
                {
                        a[i]=Integer.parseInt(br.readLine());
                }
                System.out.println("The values are");
                for(i=0;i<n;i++)
                {
                        System.out.println(a[i]);
                }
        }

}
```

2A.
```
class Car{
        public Car() {
                System.out.println("Class Car");
        }
        public void VehicleType() {
                System.out.println("Vehicle Type: Car");
        }
}
class Maruthi extends Car{
        public Maruthi() {
                System.out.println("Class Maruthi");
```

```
	}
	public void speed() {
		System.out.println("Max: 90kmph");
	}
	public void brand() {
		System.out.println("Brand: MARUTHI SUZUKI");
	}
}
class Maruthi800 extends Maruthi{
	public Maruthi800() {
		System.out.println("CLASS MARUTHI 800");
	}
	public void speed() {
		System.out.println("Max: 60kmph");
	}
	public static void main(String[] args) {
		Maruthi800 obj = new Maruthi800();
		obj.VehicleType();
		obj.speed();
		obj.brand();
	}
}
```