(1)

⇒

```
Public Class Student
{
    String name;
    int RollNO;
    String subject;
    int marks;

    Public Student (String name, int RollNO, String Subject,
                                        int marks)
    {
        Super ( );
        this name = name;
        this RollNO = RollNO;
        this Subject = Subject;
        this Marks = marks;
    }

    Public String toString( )
    {
        return " String [ name = " + name + ", RollNO:"
+ RollNO", Sub + Sub : " , Marks : " + marks "]",

    }
}
```

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⇒ NameComparator :

```
# import java.util.Comparator;
public abstract class NameComparator implements
                Comparator<Student>
{
    public int compare(Student S1, Student S2)
    {
        return S1.Name.CompareToIgnoreCase
                (S2.name);
    }
}
```

⇒ MarksComparator.

```
# import java.util.Comparator;
public abstract class MarksComparator implements
                Comparator<Student>
{
    public int Compare(Student S1, Student S2)
    {
        return (int)(S1.marks - S2.marks);
    }
}
```

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```
#  import java.util.Arrays;
   Public Class StudentMain
   {

     Private Static Student[] StudentArrayCreation()
   {
       Student P1 = new Student ("Reema", 1, "Maths", 50),
       Student P2 = new Student ("Raam", 2, "History", 85),
       Student P3 = new Student ("Anjali", 5, "Science", 75),
       Student P4 = new Student ("Diksha", 14, "Hindi", 90),
       Student [] arr = { P1, P2, P3, P4 },
           return arr;
   }

Private Static void main NameComparator call(Student
                                        [] arr)
{
    System.out.println( "Name");
    Arrays.Sort (arr, new NameComparator()),

    For (Student S : arr)
    {
       System.out.println (S + "  ");
    }

    System.out.println( );
}.
```

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```
Private Static void MarksComparatorCall(Student
                                        [] arr)
{
   System.out.println("Marks");
   Arrays.Sort(arr);

   for(Student s: arr)
   {
      System.out.println(s + " ");
   }
   System.out.println();
}

Public Static void main(String[] args)
{
   Student[] arr = StudentArrayCreation();

      nameComparatorCall(arr);
      MarksComparatorCall(arr);

   }
}
```

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⇒
```
Public class Rectangle
{
    Private int length;
    Private int breadth;

    Public int getLength()
    {
        return length;
    }
    public void SetLength(int length)
    {
        if (length < 10 || length > 50)
        {
            System.out.println("Enter length between
                                10 to 50");
        }

        this.length = length;
    }

    Public int getBreadth()
    {
        return breath;
    }
    public void SetBreadth(int breadth)
    {
        if (b < 5 || b > 20)
```

```
{
    System.out.println("enter breadth between 5 & 20");
}

this.breadth = breadth;
}

Public Rectangle(int length, int breadth)
{
    SetLength(Length);
    Set Breadth (breadth);
}

@Override
Public String toString()
{
    return "Rectangle [length = " + getLength() + ",

        Breadth = " + getBreadth() + "]" + "[area = " +

            getLength() * getBreadth() + "]";

}

}
```

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```
Import java.util.Scanner;
Public class RectangleAreaMain
{
    Public Static void main(String[] args)
    {
        callRectangle();
    }

Private Static void callRectangle()
{
    @Suppersswarnigs ("resource")
    Scanner sc = new scanner(System.in);

    System.out.println("Enter length of the rectangle:");

    int length = sc.nextInt();

System.out.println("Enter Breadth of the Rectangle:");

    int breadth = sc.nextInt();

Rectangle R1 = new Rectangle(length, breadth);

System.out.println(R1);

}
}
```

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