Assignment-1

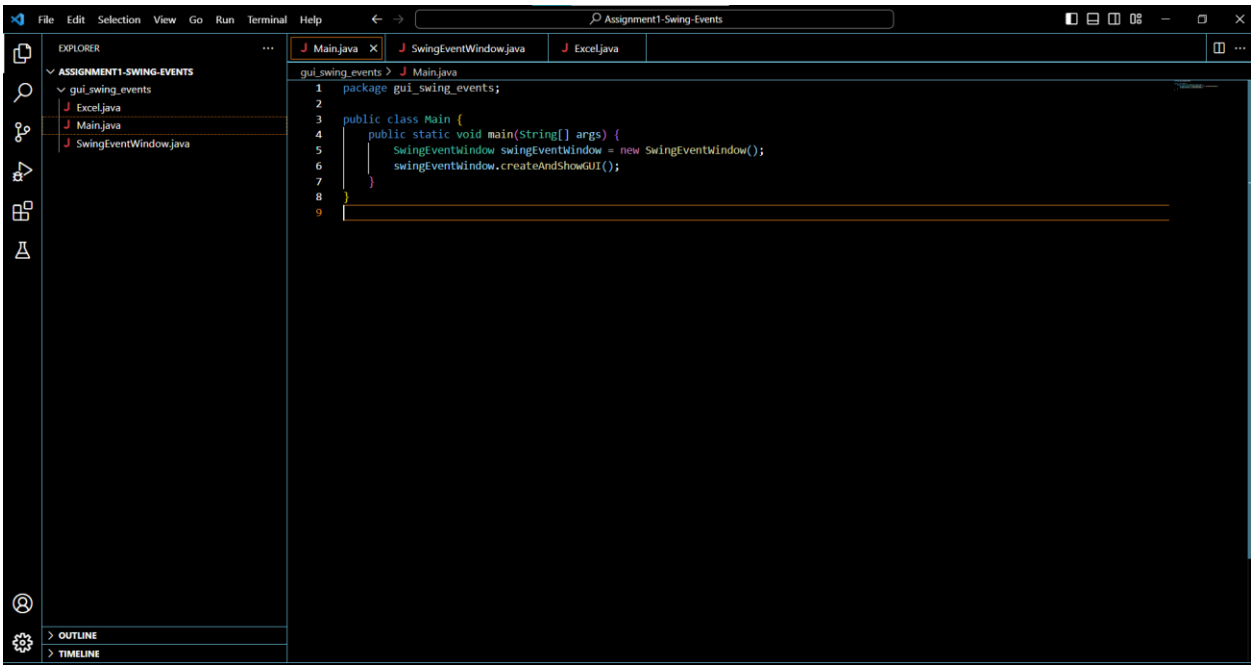
Jashanpreet Kaur

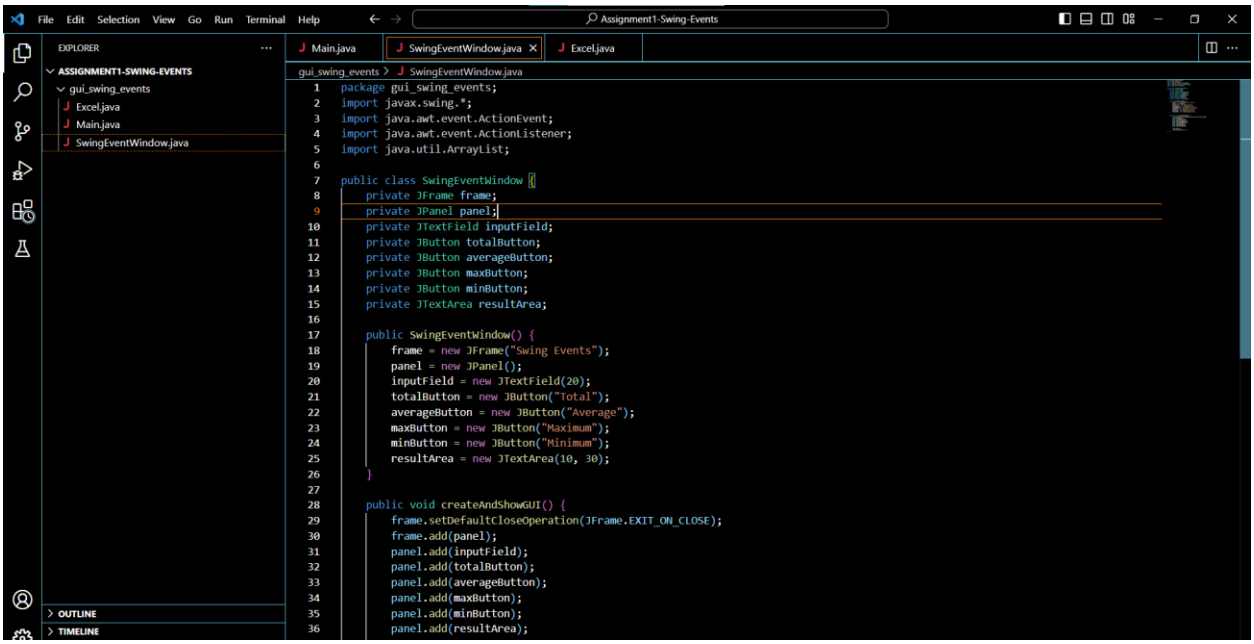
200540816

Georgian College

Advanced Object-Oriented Programming-Java

CODE-


File Edit Selection View Go Run Terminal Help
Assignment1-Swing-Events
EXPLORER
ASSIGNMENT1-SWING-EVENTS
gui_swing_events
Excel.java
Main.java
SwingEventWindow.java
Main.java
SwingEventWindow.java
Excel.java
gui_swing_events > Main.java
1 package gui_swing_events;
2
3 public class Main {
4 public static void main(String[] args) {
5 SwingEventWindow swingEventWindow = new SwingEventWindow();
6 swingEventWindow.createAndShowGUI();
7 }
8 }
9
OUTLINE
TIMELINE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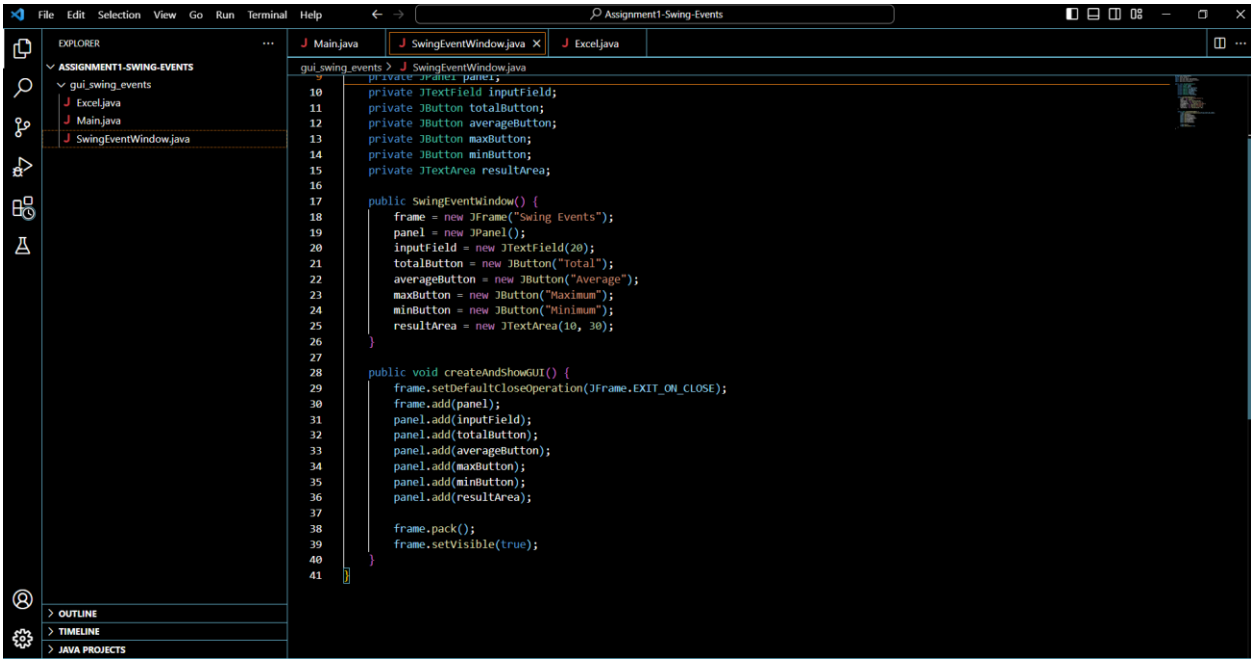
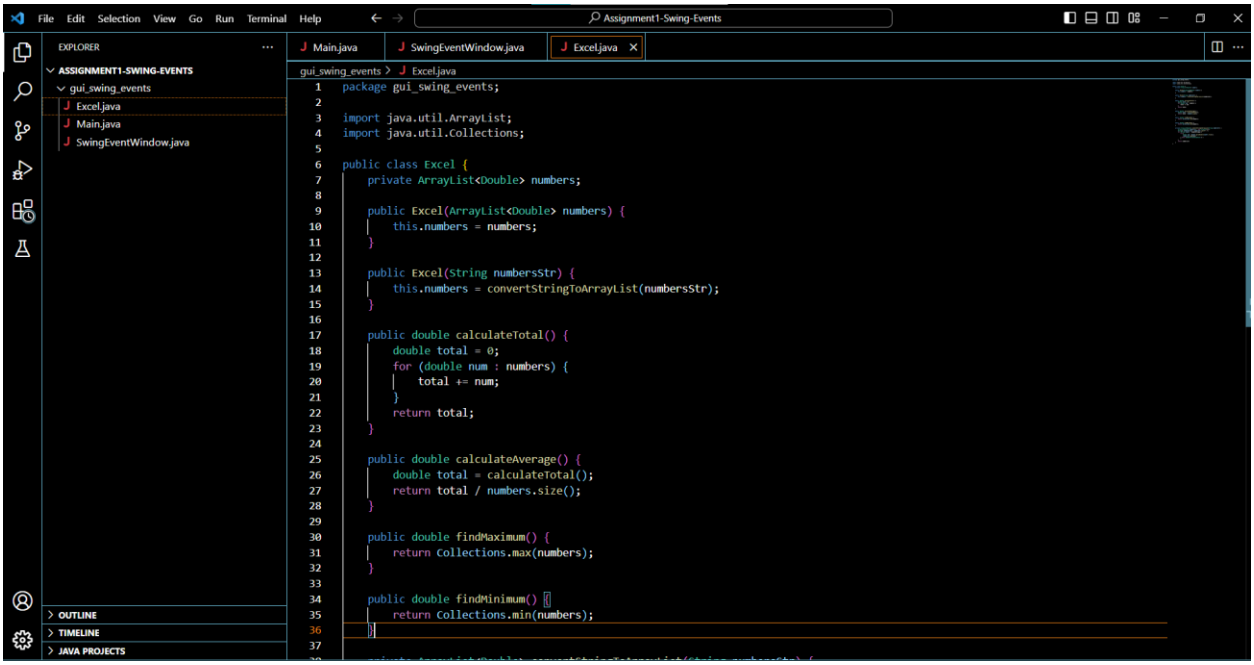
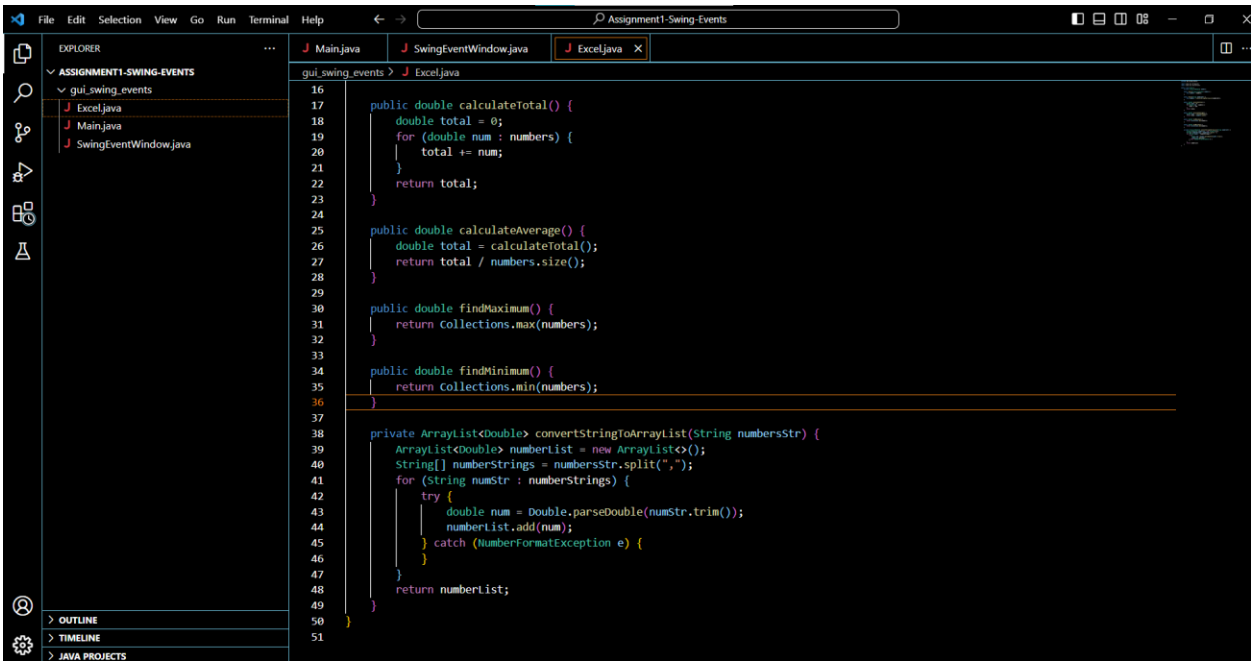
gui_swing_events > SwingEventWindow.java
1 package gui_swing_events;
2 import javax.swing.*;
3 import java.awt.event.ActionEvent;
4 import java.awt.event.ActionListener;
5 import java.util.ArrayList;
6
7 public class SwingEventWindow {
8 private JFrame frame;
9 private JPanel panel;
10 private JTextField inputField;
11 private JButton totalButton;
12 private JButton averageButton;
13 private JButton maxButton;
14 private JButton minButton;
15 private JTextArea resultArea;
16
17 public SwingEventWindow() {
18 frame = new JFrame("Swing Events");
19 panel = new JPanel();
20 inputField = new JTextField(20);
21 totalButton = new JButton("Total");
22 averageButton = new JButton("Average");
23 maxButton = new JButton("Maximum");
24 minButton = new JButton("Minimum");
25 resultArea = new JTextArea(10, 30);
26 }
27
28 public void createAndShowGUI() {
29 frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
30 frame.add(panel);
31 panel.add(inputField);
32 panel.add(totalButton);
33 panel.add(averageButton);
34 panel.add(maxButton);
35 panel.add(minButton);
36 panel.add(resultArea);
OUTLINE
TIMELINE




```java
    private JFrame frame;
    private JPanel panel;
    private JTextField inputField;
    private JButton totalButton;
    private JButton averageButton;
    private JButton maxButton;
    private JButton minButton;
    private JTextArea resultArea;

    public SwingEventWindow() {
        frame = new JFrame("Swing Events");
        panel = new JPanel();
        inputField = new JTextField(20);
        totalButton = new JButton("Total");
        averageButton = new JButton("Average");
        maxButton = new JButton("Maximum");
        minButton = new JButton("Minimum");
        resultArea = new JTextArea(10, 30);
    }

    public void createAndShowGUI() {
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.add(panel);
        panel.add(inputField);
        panel.add(totalButton);
        panel.add(averageButton);
        panel.add(maxButton);
        panel.add(minButton);
        panel.add(resultArea);

        frame.pack();
        frame.setVisible(true);
    }
}
```




```java
package gui_swing_events;

import java.util.ArrayList;
import java.util.Collections;

public class Excel {
    private ArrayList<Double> numbers;

    public Excel(ArrayList<Double> numbers) {
        this.numbers = numbers;
    }

    public Excel(String numbersStr) {
        this.numbers = convertStringToArrayList(numbersStr);
    }

    public double calculateTotal() {
        double total = 0;
        for (double num : numbers) {
            total += num;
        }
        return total;
    }

    public double calculateAverage() {
        double total = calculateTotal();
        return total / numbers.size();
    }

    public double findMaximum() {
        return Collections.max(numbers);
    }

    public double findMinimum() {
        return Collections.min(numbers);
    }
```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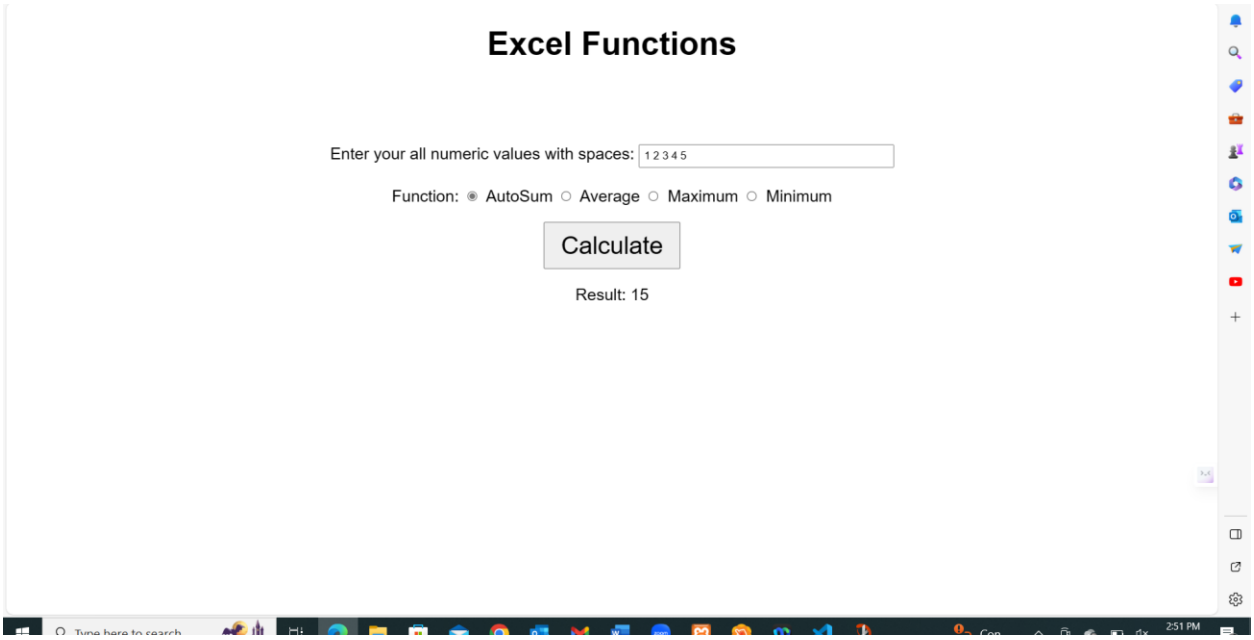
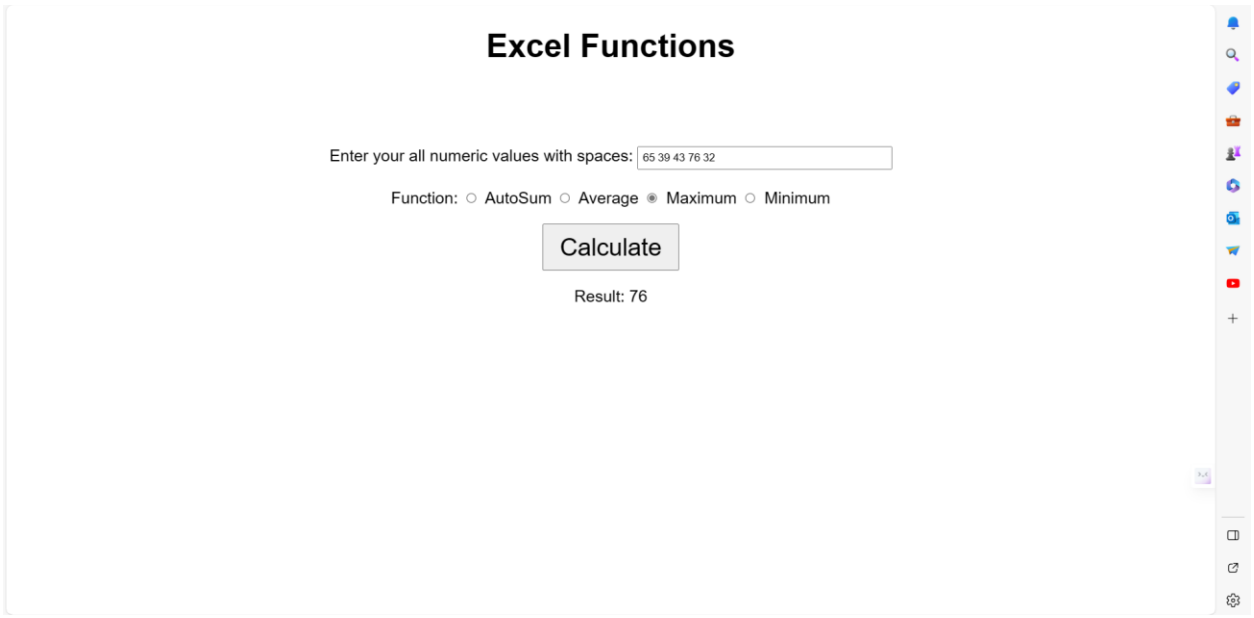
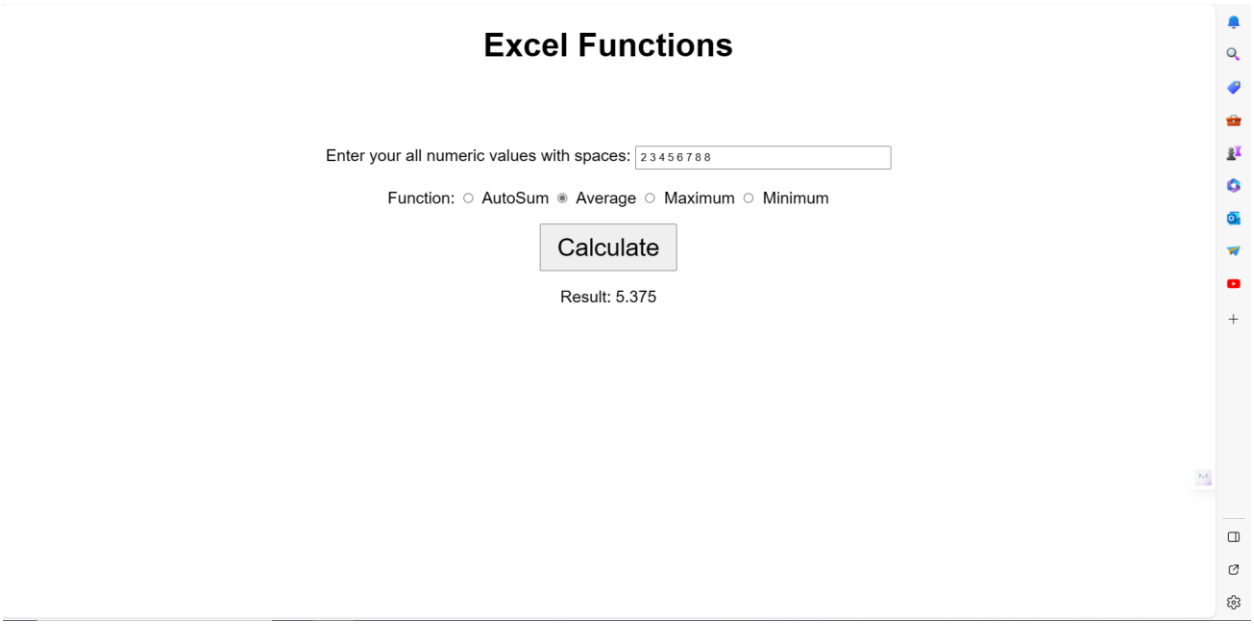
gui_swing_events > Excel.java
OUTLINE
TIMELINE
JAVA PROJECTS
16
17 public double calculateTotal() {
18 double total = 0;
19 for (double num : numbers) {
20 total += num;
21 }
22 return total;
23 }
24
25 public double calculateAverage() {
26 double total = calculateTotal();
27 return total / numbers.size();
28 }
29
30 public double findMaximum() {
31 return Collections.max(numbers);
32 }
33
34 public double findMinimum() {
35 return Collections.min(numbers);
36 }
37
38 private ArrayList<Double> convertStringToArrayList(String numbersStr) {
39 ArrayList<Double> numberList = new ArrayList<>();
40 String[] numberStrings = numbersStr.split(",");
41 for (String numStr : numberStrings) {
42 try {
43 double num = Double.parseDouble(numStr.trim());
44 numberList.add(num);
45 } catch (NumberFormatException e) {
46 }
47 }
48 return numberList;
49 }
50 }
51

OUTPUT-


Excel Functions
Enter your all numeric values with spaces: 12345
Function: AutoSum Average Maximum Minimum
Calculate
Result: 15


Excel Functions
Enter your all numeric values with spaces: 65 39 43 76 32
Function: AutoSum Average Maximum Minimum
Calculate
Result: 76


Excel Functions
Enter your all numeric values with spaces: 2 3 4 5 6 7 8 8
Function: AutoSum Average Maximum Minimum
Calculate
Result: 5.375

Excel Functions

Enter your all numeric values with spaces: 23456788

Function: ○ AutoSum ○ Average ○ Maximum ◉ Minimum

Calculate

Result: 2