

```
Import java.util.ArrayList;
```

```
Import java.util.Scanner;
```

```
Public class StudentGrades {
```

```
    Public static void main(String[] args) {
```

```
        // Create an ArrayList to store grades
```

```
        ArrayList<Double> grades = new ArrayList<>();
```

```
        Scanner scanner = new Scanner(System.in);
```

```
        System.out.println("Enter student grades (type 'done' to finish):");
```

```
        // Loop to collect grades from the teacher
```

```
        While (true) {
```

```
            String input = scanner.nextLine();
```

```
            If (input.equalsIgnoreCase("done")) {
```

```
                Break;
```

```
            }
```

```
            Try {
```

```
                Double grade = Double.parseDouble(input);
```

```
                If (grade < 0 || grade > 100) {
```

```
                    System.out.println("Grade must be between 0 and 100. Please try again.");
```

```
                } else {
```

```
                    Grades.add(grade);
```

```
    }  
    } catch (NumberFormatException e) {  
        System.out.println("Invalid input. Please enter a valid number or 'done' to finish.");  
    }  
}
```

```
// Check if there are any grades to process
```

```
If (grades.isEmpty()) {  
    System.out.println("No grades entered. Program will exit.");  
    Return;  
}
```

```
// Compute average, highest, and lowest scores
```

```
Double total = 0;  
Double highest = grades.get(0);  
Double lowest = grades.get(0);
```

```
For (double grade : grades) {
```

```
    Total += grade;
```

```
    If (grade > highest) {
```

```
        Highest = grade;
```

```
    }
```

```
    If (grade < lowest) {
```

```
        Lowest = grade;
```

```
    }
```

```
}
```

```
Double average = total / grades.size();
```

```
// Display results
```

```
System.out.println("\nSummary of Grades:");
```

```
System.out.printf("Average Grade: %.2f\n", average);
```

```
System.out.printf("Highest Grade: %.2f\n", highest);
```

```
System.out.printf("Lowest Grade: %.2f\n", lowest);
```

```
Scanner.close();
```

```
}
```

```
}
```