Labprograms.java × **StudentDetails.java** ×

Source History

```
5  package com.mycompany.labprograms;
6  import java.util.Scanner;
7  class Student {
8  String name;
9  int mark1, mark2, mark3;
10 void displayDetails() {
11 double average = (mark1 + mark2 + mark3) / 3.0;
12 char grade = average >= 90 ? 'A' : average >= 80 ? 'B' : average >= 70 ? 'C' : average >=
13 60 ? 'D' : 'F';
14 System.out.println("Name: " + name + ", Average: " + average + ", Grade: " + grade);
15 }
16 }
17 public class StudentDetails {
18 public static void main(String[] args) {
20 Scanner scanner = new Scanner(System.in);
21 Student student = new Student();
22 System.out.print("Enter name: ");
23 student.name = scanner.nextLine();
24 System.out.print("Enter 3 marks: ");
25 student.mark1 = scanner.nextInt();
26 student.mark2 = scanner.nextInt();
27 student.mark3 = scanner.nextInt();
28 student.displayDetails();
29 scanner.close();
30 }
31 }
```

Output - Run (StudentDetails) ×

```
Enter name: kavi
Enter 3 marks: 90 80 99
Name: kavi, Average: 89.66666666666667, Grade: B
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
```

Main.java

Run

Output

Clear

```
// Online Java Compiler
// Use this editor to write, compile and run your Java code online
import java.util.Scanner;
class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
System.out.print("Enter the first string: ");
String str1 = scanner.nextLine();
System.out.print("Enter the second string: ");
String str2 = scanner.nextLine();
System.out.println("\nChoose a string operation:");
System.out.println("1. Find Length");
System.out.println("2. Convert to Uppercase");
System.out.println("3. Convert to Lowercase");
System.out.println("4. Concatenate Strings");
System.out.println("5. Check if Substring Exists");
System.out.println("6. Check if String is Empty");
System.out.println("7. Exit");
while(true) {
System.out.print("\nEnter your choice: ");
int choice = scanner.nextInt();
scanner.nextLine();
switch (choice) {
case 1:
System.out.println("1. Length of first string: " + str1.length());
System.out.println("1. Length of second string: " + str2.length());
break;
case 2:
System.out.println("2. First string in uppercase: " + str1.toUpperCase());
System.out.println("2. Second string in uppercase: " + str2.toUpperCase());
break;
case 3:
System.out.println("3. First string in lowercase: " + str1.toLowerCase());
System.out.println("3. Second string in lowercase: " + str2.toLowerCase());
break;
case 4:
System.out.println("4. Concatenated string: " + str1.concat(str2));
break;
case 5:
System.out.print("5. Enter a substring to check in the first string: ");
String substring = scanner.nextLine();
if (str1.contains(substring)) {
System.out.println("5. Substring exists in the first string.");
} else {
System.out.println("5. Substring does not exist in the first string.");
}
break;
case 6:
System.out.println("6. Is the first string empty? " + str1.isEmpty());
System.out.println("6. Is the second string empty? " + str2.isEmpty());
break;
case 7:
System.out.println("7. Exiting the program !");
break;
default:
System.out.println("Invalid choice. Please try again.");
```

```
Enter the first string: hello
Enter the second string: world

Choose a string operation:
1. Find Length
2. Convert to Uppercase
3. Convert to Lowercase
4. Concatenate Strings
5. Check if Substring Exists
6. Check if String is Empty
7. Exit

Enter your choice: 1
1. Length of first string: 5
1. Length of second string: 5

Enter your choice: 3
3. First string in lowercase: hello
3. Second string in lowercase: world

Enter your choice:
```

Main.java

Run

Output

Clear

```
// Online Java Compiler
// Use this editor to write, compile and run
    your Java code online
abstract class Shape {
public abstract double calculateArea();
}
class Circle extends Shape {
private double radius;
public Circle(double radius) {
this.radius = radius;
}
@Override
public double calculateArea() {
return 3.14 * radius * radius;
}
}
class Rectangle extends Shape {
private double length, width;
public Rectangle(double length, double width) {
this.length = length;
this.width = width;
}
@Override
public double calculateArea() {
return length * width;
}
}
class Square extends Shape {
private double side;
public Square(double side) {
this.side = side;
}
@Override
public double calculateArea() {
return side * side;
}
}
class Main {
    public static void main(String[] args) {
        Shape circle = new Circle(2);
Shape rectangle = new Rectangle(4, 6);
Shape square = new Square(4);
System.out.println("Circle Area: " + circle
    .calculateArea());
System.out.println("Rectangle Area: " +
    rectangle.calculateArea());
System.out.println("Square Area: " + square
    .calculateArea());
    }
}
```

```
Circle Area: 12.56
Rectangle Area: 24.0
Square Area: 16.0

=== Code Execution Successful ===
```

Main.java

Run

Output

Clear

```java
// Online Java Compiler
// Use this editor to write, compile and run your Java code online
import java.util.Scanner;
interface Calculator {
double add(double a, double b);
double subtract(double a, double b);
double multiply(double a, double b);
double divide(double a, double b);
}
class SimpleCalculator implements Calculator {
@Override
public double add(double a, double b) {
return a + b;
}
@Override
public double subtract(double a, double b) {
return a - b;
}
@Override
public double multiply(double a, double b) {
return a * b;
}
@Override
public double divide(double a, double b) {
if (b == 0) {
System.out.println("Error: Division by zero is not allowed!");
return Double.NaN;
}
return a / b;
}
}
class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
Calculator calculator = new SimpleCalculator();
System.out.print("Enter the first number: ");
double num1 = scanner.nextDouble();
System.out.print("Enter the second number: ");
double num2 = scanner.nextDouble();
System.out.println("\nResults:");
System.out.println("Addition: " + calculator.add(num1, num2));
System.out.println("Subtraction: " + calculator.subtract(num1, num2));
System.out.println("Multiplication: " + calculator.multiply(num1, num2));
System.out.println("Division: " + calculator.divide(num1, num2));
scanner.close();
    }
}
```

```
Enter the first number: 10
Enter the second number: 25

Results:
Addition: 35.0
Subtraction: -15.0
Multiplication: 250.0
Division: 0.4

=== Code Execution Successful ===
```

```
 */
package math_operations;
class Calculator {
public int add(int a, int b) {
return a + b;
}
public int subtract(int a, int b) {
return a - b;
}
public int multiply(int a, int b) {
return a * b;
}
public double divide(int a, int b) {
if (b != 0) {
return a / b;
} else {
System.out.println("Cannot divide by zero!");
return Double.NaN;
}
}
}
class MathUtils {
public double calculateSquareRoot(double num) {
if (num >= 0) {
return Math.sqrt(num);
} else {
System.out.println("Cannot calculate square root of a negative number!");
return Double.NaN;
}
}
}
public class MathOperationsApp {
public static void main(String[] args) {
math_operations.Calculator calculator = new math_operations.Calculator();
math_operations.MathUtils mathUtils = new math_operations.MathUtils();
System.out.println("Addition: " + calculator.add(5, 3));
System.out.println("Subtraction: " + calculator.subtract(8, 4));
System.out.println("Multiplication: " + calculator.multiply(2, 6));
System.out.println("Division: " + calculator.divide(10, 2));
System.out.println("Square Root of 25: " + mathUtils.calculateSquareRoot(25));
System.out.println("Square Root of -9: " + mathUtils.calculateSquareRoot(-9));
}
}
```

Output - Run (MathOperationsApp)

```
Nothing to compile - all classes are up to date.

--- exec:3.5.1:exec (default-cli) @ labprograms ---
Addition: 8
Subtraction: 4
Multiplication: 12
Division: 5.0
Square Root of 25: 5.0
Cannot calculate square root of a negative number!
Square Root of -9: NaN
------------------------------------------------------------------------
BUILD SUCCESS
------------------------------------------------------------------------
Total time:  2.651 s
Finished at: 2026-02-17T10:34:25+05:30
------------------------------------------------------------------------
```

Main.java

Run

Output

Clear

```java
// Online Java Compiler
// Use this editor to write, compile and run
    your Java code online
import java.util.Scanner;
class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner (System
            .in);
System.out.print("Enter first num: ");
int num1 = scanner.nextInt();
System.out.print("Enter second num: ");
int num2 = scanner.nextInt();
System.out.println("\nResults: “);
try {
System.out.println("Addition: " + (num1 + num2
    ));
System.out.println("Subtraction: " + (num1 -
    num2));
System.out.println("Multiplication: " + (num1 *
    num2));
System.out.println("Division: " + (num1 / num2
    ));
} catch (ArithmeticException e) {
System.out.println("Error: " +e.getMessage());
} finally {
System.out.println("\nExecution Completed!");
}
    }
}
```

```
Enter first num: 100
Enter second num: 0

Results:
Addition: 100
Subtraction: 100
Multiplication: 0
ERROR!
Error: / by zero

Execution Completed!

=== Code Execution Successful ===
```

Main.java

Run

Output

Clear

```java
// Online Java Compiler
// Use this editor to write, compile and run
    your Java code online
import java.util.*;
class Main {
    public static void main(String[] args) {
        Stack<Integer> stack = new Stack<>();
Scanner scanner = new Scanner(System.in);
System.out.println("\nStack Operations:");
System.out.println("1. Push");
System.out.println("2. Pop");
System.out.println("3. Peek");
System.out.println("4. Display Stack");
System.out.println("5. Exit");
while (true) {
System.out.print("\nEnter your choice: ");
int choice = scanner.nextInt();
switch (choice) {
case 1:
System.out.print("Enter a number to push: ");
int num = scanner.nextInt();
stack.push(num);
System.out.println(num + " pushed onto the
    stack.");
break;
case 2:
if (!stack.isEmpty()) {
int pop = stack.pop();
System.out.println("Popped element: " + pop);
} else {
System.out.println("Stack is empty. Nothing to
    pop.");
}
break;
case 3:
if (!stack.isEmpty()) {
System.out.println("Top element: " + stack.peek
    ());
} else {
System.out.println("Stack is empty.");
}
break;
case 4:
    System.out.println("Current Stack: " +
        stack);
break;
case 5:
System.out.println("Exiting program...");
return;
default:
System.out.println("Invalid choice! Please
    enter a valid option.");
}
scanner.close();
}
    }
}
```

```
Stack Operations:
1. Push
2. Pop
3. Peek
4. Display Stack
5. Exit

Enter your choice: 1
Enter a number to push: 56
56 pushed onto the stack.

Enter your choice: ERROR!
Exception in thread "main" java.lang
.IllegalStateException: Scanner closed
at java.base/java.util.Scanner.ensureOpen(Scanner
    .java:1158)
at java.base/java.util.Scanner.next(Scanner.java
    :1581)
at java.base/java.util.Scanner.nextInt(Scanner
    .java:2267)
at java.base/java.util.Scanner.nextInt(Scanner
    .java:2221)
at Main.main(Main.java:16)

=== Code Exited With Errors ===
```

Main.java

Run

Output

Clear

```java
// Online Java Compiler
// Use this editor to write, compile and run your Java code online
import java.util.*;
class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
List<Integer> arrayList = new ArrayList<>();
List<Integer> linkedList = new LinkedList<>();
System.out.println("\nChoose an operation:");
System.out.println("1. Add an element");
System.out.println("2. Remove an element");
System.out.println("3. Display lists");
System.out.println("4. Exit");
while (true) {
System.out.print("\nEnter your choice: ");
int choice = scanner.nextInt();
switch (choice) {
case 1:
System.out.print("Enter number to add: ");
int num = scanner.nextInt();
arrayList.add(num);
linkedList.add(num);
System.out.println(num + " added to both lists.");
break;
case 2:
if (arrayList.isEmpty() || linkedList.isEmpty()) {
System.out.println("Lists are empty! Nothing to remove.");
} else {
System.out.print("Enter number to remove: ");
int removeNum = scanner.nextInt();
arrayList.remove(Integer.valueOf(removeNum));
linkedList.remove(Integer.valueOf(removeNum));
System.out.println(removeNum + " removed from both lists.");
}
break;
case 3:
    System.out.println("ArrayList: " + arrayList);
System.out.println("LinkedList: " + linkedList);
break;
case 4:
System.out.println("Exiting...");
scanner.close();
return;
default:
System.out.println("Invalid choice! Try again.");
}
}
    }
}
```

```
Choose an operation:
1. Add an element
2. Remove an element
3. Display lists
4. Exit

Enter your choice: 1
Enter number to add: 54
54 added to both lists.

Enter your choice: 4
Exiting...

=== Code Execution Successful ===
```

Main.java

Run

Output

Clear

```java
// Online Java Compiler
// Use this editor to write, compile and run
    your Java code online
import java.util.*;
class Main {
    public static void main(String[] args) {
HashMap<Integer, String> hashMap = new HashMap
    <>();
hashMap.put(1, "Red");
hashMap.put(2, "Green");
hashMap.put(3, "Blue");
System.out.println("HashMap Elements: ");
for (Integer key : hashMap.keySet()) {
System.out.println("Key: " + key + ", Value: " +
    hashMap.get(key));
}
Hashtable<Integer, String> hashtable = new
    Hashtable<>();
hashtable.put(1, "Aji");
hashtable.put(2, "Azeen");
hashtable.put(3, "Banu");
System.out.println("\nHashtable Elements: ");
for (Integer key : hashtable.keySet()) {
System.out.println("Key: " + key + ", Value: " +
    hashtable.get(key));
}
    }
}
```

```
HashMap Elements:
Key: 1, Value: Red
Key: 2, Value: Green
Key: 3, Value: Blue

Hashtable Elements:
Key: 3, Value: Banu
Key: 2, Value: Azeen
Key: 1, Value: Aji

=== Code Execution Successful ===
```

Main.java

Run

```java
// Online Java Compiler
// Use this editor to write, compile and run your Java code online
import java.util.*;
class Main {
    public static void main(String[] args) {
        Calendar calendar = Calendar.getInstance();
System.out.println("Current Date and Time: " + calendar.getTime());
Scanner scanner = new Scanner(System.in);
System.out.print("Enter the number of days to add: ");
int daysToAdd = scanner.nextInt();
calendar.add(Calendar.DAY_OF_MONTH, daysToAdd);
Date updatedDate = calendar.getTime();
System.out.println("Updated Date: " + updatedDate);
scanner.close();
    }
}
```

Output

Clear

```
Current Date and Time: Tue Feb 17 04:26:53 GMT 2026
Enter the number of days to add: 6
Updated Date: Mon Feb 23 04:26:53 GMT 2026

=== Code Execution Successful ===
```