

FileEditSelectionViewGoRunTerminalHelp

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recursion dp.java 1 X

Run and Debug

Run and Debug

To customize Run and Debug, [open a folder](#) and create a launch.json file.

BREAKPOINTS

Uncaught Except...
Caught Exceptions

PROBLEMS 2DEBUG CONSOLETERMINALPORTS

TERMINAL

PS C:\Users\raghu> & 'C:\Users\raghu\AppData\Local\Programs\Eclipse Adoptium\jdk-21.0.8.9-hotspot\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:56302' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\raghu\AppData\Local\Temp\vscodesws_f71aa\jdt_ws\jdt.ls-java-project\bin' 'RecursionDP'
Factorial(5): 120
Fibonacci(7): 13
PS C:\Users\raghu>

```
C: > java programs > J recursion dp.java > ...
1  import java.util.HashMap;
2
3  class RecursionDP {
4      static HashMap<Integer, Integer> memo = new HashMap<>();
5
6      // Factorial with memoization
7      static int factorial(int n) {
8          if (n <= 1) return 1;
9          if (memo.containsKey(n)) return memo.get(n);
10         int result = n * factorial(n - 1);
11         memo.put(n, result);
12         return result;
13     }
14
15     // Fibonacci with bottom-up DP
16     static int fibonacci(int n) {
17         if (n <= 1) return n;
18         int[] dp = new int[n + 1];
19         dp[0] = 0; dp[1] = 1;
20         for (int i = 2; i <= n; i++) dp[i] = dp[i - 1] + dp[i - 2];
21         return dp[n];
22     }
23
24     Run main | Debug main | Run | Debug
25     public static void main(String[] args) {
26         System.out.println("Factorial(5): " + factorial(n:5));
27         System.out.println("Fibonacci(7): " + fibonacci(n:7));
28     }
```

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Welcome

BitLogic.java 1 X

▶ □ ... RUN AND DEBUG ...

C: > java programs > BitLogic.java > ...

```
1 class BitLogic {
2     static boolean isEven(int n) {
3         return (n & 1) == 0;
4     }
5
6     Run main | Debug main | Run | Debug
7     public static void main(String[] args) {
8         System.out.println("4 is even? " + isEven(n:4));
9         System.out.println("7 is even? " + isEven(n:7));
10    }
```

Run and Debug

To customize Run and Debug, [open a folder](#) and create a launch.json file.

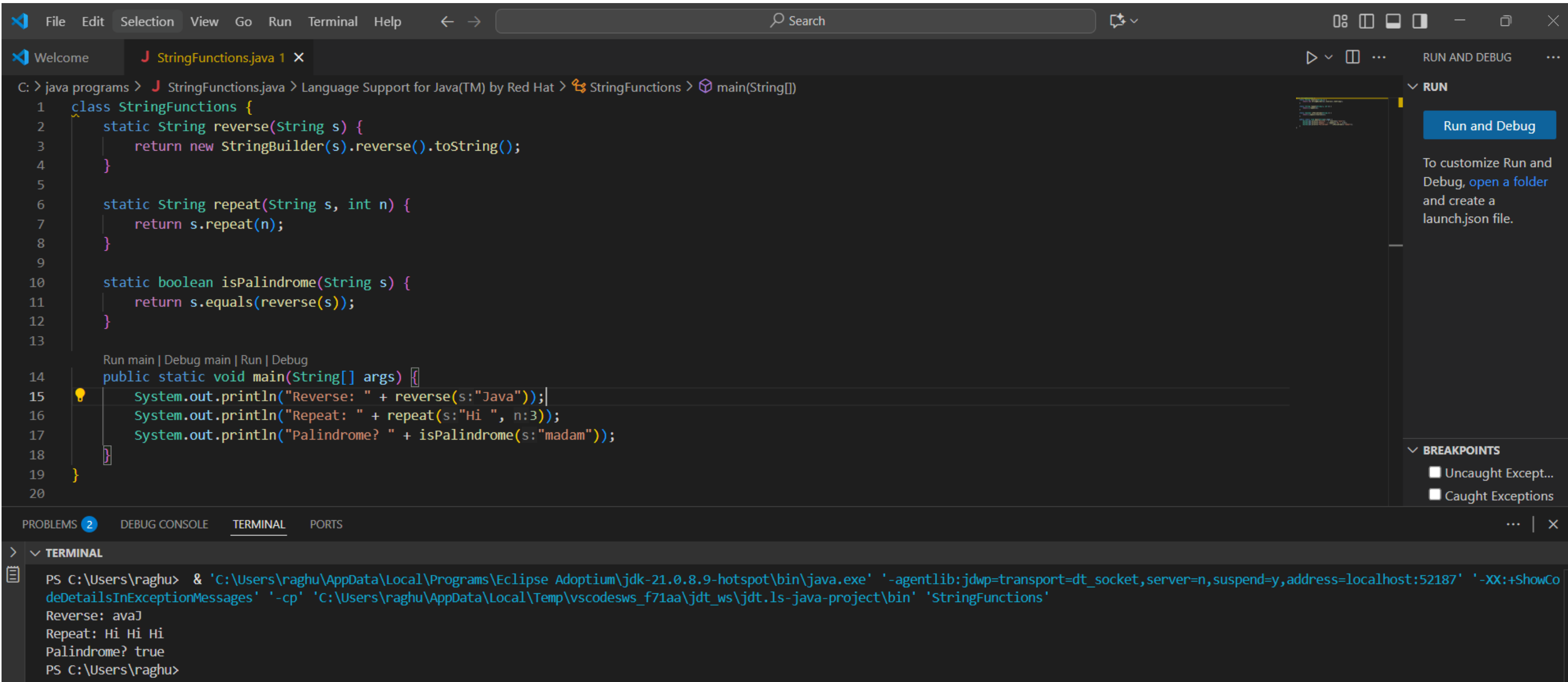
BREAKPOINTS

☐ Uncaught Except...
☐ Caught Exceptions

PROBLEMS 3DEBUG CONSOLETERMINALPORTS

▼ TERMINAL

```
PS C:\Users\raghu> & 'C:\Users\raghu\AppData\Local\Programs\Eclipse Adoptium\jdk-21.0.8.9-hotspot\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:55921' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\raghu\AppData\Local\Temp\vscodesws_f71aa\jdt_ws\jdt.ls-java-project\bin' 'BitLogic'
4 is even? true
7 is even? false
PS C:\Users\raghu>
```



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Run and Debug

import.java 1 X

C: > java programs > import.java > ...
1 import java.util.Arrays;
2
3 class ArrayFunctions {
4 static int sumArray(int[] arr) {
5 int sum = 0;
6 for (int num : arr) sum += num;
7 return sum;
8 }
9
10 static int[] mergeArrays(int[] a, int[] b) {
11 int[] merged = new int[a.length + b.length];
12 System.arraycopy(a, srcPos:0, merged, destPos:0, a.length);
13 System.arraycopy(b, srcPos:0, merged, a.length, b.length);
14 return merged;
15 }
16
17 static int findMax(int[] arr) {
18 int max = arr[0];
19 for (int num : arr) if (num > max) max = num;
20 return max;
21 }
22
23 Run main | Debug main | Run | Debug
24 public static void main(String[] args) {
25 int[] arr1 = {1, 2, 3}, arr2 = {4, 5, 6};
26
27 System.out.println("Sum: " + sumArray(arr1));
28 System.out.println("Merged: " + Arrays.toString(mergeArrays(arr1, arr2)));
29 System.out.println("Max: " + findMax(arr2));
30 }
31 }

Run and Debug

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BREAKPOINTS
☐ Uncaught Except...
☐ Caught Exceptions

PROBLEMS 2DEBUG CONSOLETERMINALPORTS

TERMINAL
PS C:\Users\raghu> & 'C:\Users\raghu\AppData\Local\Programs\Eclipse Adoptium\jdk-21.0.8.9-hotspot\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:52712' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\raghu\AppData\Local\Temp\vscodesws_f71aa\jdt_ws\jdt.ls-java-project\bin' 'ArrayFunctions'
Sum: 6
Merged: [1, 2, 3, 4, 5, 6]
Max: 6
PS C:\Users\raghu>

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Run and Debug

WelcomeArithmeticFunctions.java 1 X

C: > java programs > ArithmeticFunctions.java > Language Support for Java(TM) by Red Hat > ArithmeticFunctions

```
1 class ArithmeticFunctions {
2     static int sum(int a, int b) {
3         return a + b;
4     }
5
6     static int square(int n) {
7         return n * n;
8     }
9
10    static int rectangleArea(int length, int width) {
11        return length * width;
12    }
13
14    static double average(int a, int b, int c) {
15        return (a + b + c) / 3.0;
16    }
17
18    public static void main(String[] args) {
19        System.out.println("Sum: " + sum(a:5, b:3));
20        System.out.println("Square: " + square(n:4));
21        System.out.println("Rectangle Area: " + rectangleArea(length:5, width:2));
22        System.out.println("Average: " + average(a:3, b:6, c:9));
23    }
24 }
```

Run main | Debug main | Run | Debug

PROBLEMS 1DEBUG CONSOLETERMINALPORTS

TERMINAL

PS C:\Users\raghu> & 'C:\Users\raghu\AppData\Local\Programs\Eclipse Adoptium\jdk-21.0.8.9-hotspot\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:59319' '-XX:+ShowCo
deDetailsInExceptionMessages' '-cp' 'C:\Users\raghu\AppData\Local\Temp\vscodesws_f71aa\jdt_ws\jdt.ls-java-project\bin' 'ArithmeticFunctions'
Sum: 8
Square: 16
Rectangle Area: 10
Average: 6.0
PS C:\Users\raghu>

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BasicFunctions.java 1 X

RUN AND DEBUG

C: > java programs > BasicFunctions.java > Java > BasicFunctions > main(String[] args)

```
1  class BasicFunctions {
3      static String getHello() {
5          }
6
7      // With input, returns personalized message
8      static String getGreeting(String name) {
9          return "Hello, " + name + "!";
10     }
11
12     Run main | Debug main | Run | Debug
13     public static void main(String[] args) {
14         System.out.println(getHello());
15         System.out.println(getGreeting(name:"Raghavendra"));
16     }
17 }
```

RUN

Run and Debug

To customize Run and Debug, [open a folder](#) and create a launch.json file.

BREAKPOINTS

☐ Uncaught Except...

☐ Caught Exceptions

PROBLEMS 1

DEBUG CONSOLE

TERMINAL

PORTS

TERMINAL

PS C:\Users\raghu> & 'C:\Users\raghu\AppData\Local\Programs\Eclipse Adoptium\jdk-21.0.8.9-hotspot\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=localhost:49682' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\raghu\AppData\Local\Temp\vscodesws_f71aa\jdt_ws\jdt.ls-java-project\bin' 'BasicFunctions'

Hello, World!

Hello, Raghavendra!

PS C:\Users\raghu>