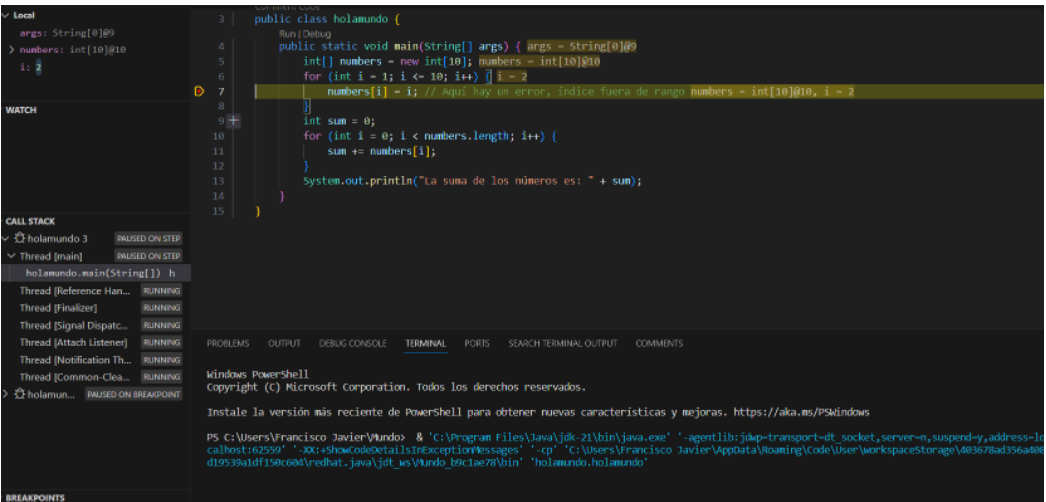
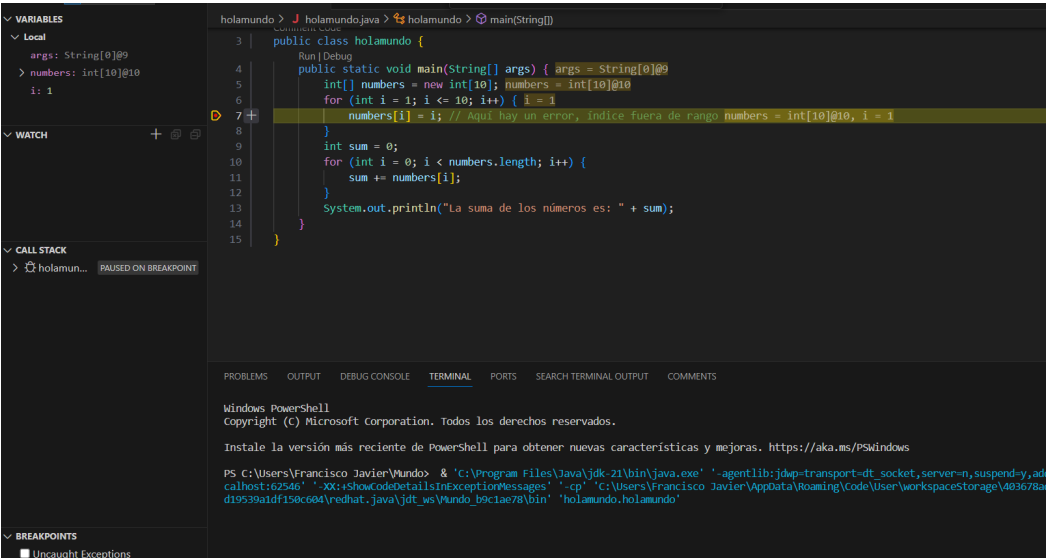


ACTIVIDAD DE PROACTIVAD 3: BÚSQUEDA DE ERRORES EN CÓDIGOS CON VSC.

1. EJERCICIO 1. VSC.



Local

args: String[0]@9

numbers: int[10]@10

i: 7

WATCH

CALL STACK

holamundo 3 PAUSED ON STEP

Thread [main] PAUSED ON STEP

holamundo.main(String[]) h

Thread [Reference Han... RUNNING

Thread [Finalizer] RUNNING

Thread [Signal Dispatc... RUNNING

Thread [Attach Listener] RUNNING

Thread [Notification Th... RUNNING

Thread [Common-Clea... RUNNING

holamun... PAUSED ON BREAKPOINT

holamundo > J holamundo.java > F holamundo > main(String[])

3 | public class holamundo {

4 | Run | Debug

5 | public static void main(String[] args) { args = String[0]@9

6 | int[] numbers = new int[10]; numbers = int[10]@10

7 | for (int i = 1; i <= 10; i++) { i = 3

8 | numbers[i] = i; // Aquí hay un error, índice fuera de rango numbers = int[10]@10, i = 3

9 | }

10 | int sum = 0;

11 | for (int i = 0; i < numbers.length; i++) {

12 | sum += numbers[i];

13 | }

14 | System.out.println("La suma de los números es: " + sum);

15 | }

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

SEARCH TERMINAL OUTPUT

COMMENTS

Windows PowerShell

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Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. <https://aka.ms/PSWindows>

PS C:\Users\Francisco Javier Vundo> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=10.0.0.1:8257' -XX:showCodeDetailsInExceptionMessages' -cp 'C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\403678ad356a408d19539a1df150c604\redhat_java\jdt_ws\Vundo_b9c1ae78\bin' 'holamundo.holamundo'

BREAKPOINTS

Uncaught Exceptions

Local

args: String[0]@9

numbers: int[10]@10

i: 4

WATCH

CALL STACK

holamundo 3 PAUSED ON STEP

Thread [main] PAUSED ON STEP

holamundo.main(String[]) h

Thread [Reference Han... RUNNING

Thread [Finalizer] RUNNING

Thread [Signal Dispatc... RUNNING

Thread [Attach Listener] RUNNING

Thread [Notification Th... RUNNING

Thread [Common-Clea... RUNNING

holamun... PAUSED ON BREAKPOINT

holamun... PAUSED ON BREAKPOINT

holamundo > J holamundo.java > F holamundo > main(String[])

3 | public class holamundo {

4 | Run | Debug

5 | public static void main(String[] args) { args = String[0]@9

6 | int[] numbers = new int[10]; numbers = int[10]@10

7 | for (int i = 1; i <= 10; i++) { i = 4

8 | numbers[i] = i; // Aquí hay un error, índice fuera de rango numbers = int[10]@10, i = 4

9 | }

10 | int sum = 0;

11 | for (int i = 0; i < numbers.length; i++) {

12 | sum += numbers[i];

13 | }

14 | System.out.println("La suma de los números es: " + sum);

15 | }

PROBLEMS

OUTPUT

DEBUG CONSOLE

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COMMENTS

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Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. <https://aka.ms/PSWindows>

PS C:\Users\Francisco Javier Vundo> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=10.0.0.1:8257' -XX:showCodeDetailsInExceptionMessages' -cp 'C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\403678ad356a408d19539a1df150c604\redhat_java\jdt_ws\Vundo_b9c1ae78\bin' 'holamundo.holamundo'

BREAKPOINTS

Local

args: String[0]@9

numbers: int[10]@10

i: 5

WATCH

CALL STACK

holamundo 3 PAUSED ON STEP

Thread [main] PAUSED ON STEP

holamundo.main(String[]) h

Thread [Reference Han... RUNNING

Thread [Finalizer] RUNNING

Thread [Signal Dispatc... RUNNING

Thread [Attach Listener] RUNNING

Thread [Notification Th... RUNNING

Thread [Common-Clea... RUNNING

holamun... PAUSED ON BREAKPOINT

holamun... PAUSED ON BREAKPOINT

holamun... PAUSED ON BREAKPOINT

holamundo > J holamundo.java > F holamundo > main(String[])

3 | public class holamundo {

4 | Run | Debug

5 | public static void main(String[] args) { args = String[0]@9

6 | int[] numbers = new int[10]; numbers = int[10]@10

7 | for (int i = 1; i <= 10; i++) { i = 5

8 | numbers[i] = i; // Aquí hay un error, índice fuera de rango numbers = int[10]@10, i = 5

9 | }

10 | int sum = 0;

11 | for (int i = 0; i < numbers.length; i++) {

12 | sum += numbers[i];

13 | }

14 | System.out.println("La suma de los números es: " + sum);

15 | }

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

SEARCH TERMINAL OUTPUT

COMMENTS

Windows PowerShell

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PS C:\Users\Francisco Javier Vundo> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=10.0.0.1:8257' -XX:showCodeDetailsInExceptionMessages' -cp 'C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\403678ad356a408d19539a1df150c604\redhat_java\jdt_ws\Vundo_b9c1ae78\bin' 'holamundo.holamundo'

BREAKPOINTS

Local

args: String[0]@9

> numbers: int[10]@10

i: 6

WATCH

CALL STACK

holamundo 3 PAUSED ON STEP

Thread [main] PAUSED ON STEP

holamundo.main(String[]) h

Thread [Reference Han... RUNNING

Thread [Finalizer] RUNNING

Thread [Signal Dispatc... RUNNING

Thread [Attach Listener] RUNNING

Thread [Notification Th... RUNNING

Thread [Common-Clea... RUNNING

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

BREAKPOINTS

Uncaught Exceptions

holamundo > J holamundo.java > holamundo > main(String[])

3 public class holamundo {

4 Run | Debug

5 public static void main(String[] args) { args = String[0]@9

6 int[] numbers = new int[10]; numbers = int[10]@10

7 for (int i = 1; i <= 10; i++) { i = 6

8 numbers[i] = i; // Aquí hay un error, índice fuera de rango numbers = int[10]@10, i = 6

9 }

10 int sum = 0;

11 for (int i = 0; i < numbers.length; i++) {

12 sum += numbers[i];

13 }

14 System.out.println("La suma de los números es: " + sum);

15 }

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH TERMINAL OUTPUT COMMENTS

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PS C:\Users\Francisco Javier Vundo > & "C:\Program Files\Java\jdk-21\bin\java.exe" "-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=lo calhost:62583" "-XX:+ShowCodeDetailsInExceptionMessages" "-cp" "C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\403678ad356a408 d19539a1df150c604\redhat-.java\jdt_ws\Vundo_b9c1ae78\bin" "holamundo.holamundo"

Local

args: String[0]@9

> numbers: int[10]@10

i: 8

WATCH

CALL STACK

holamundo 3 PAUSED ON STEP

Thread [main] PAUSED ON STEP

holamundo.main(String[]) h

Thread [Reference Han... RUNNING

Thread [Finalizer] RUNNING

Thread [Signal Dispatc... RUNNING

Thread [Attach Listener] RUNNING

Thread [Notification Th... RUNNING

Thread [Common-Clea... RUNNING

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

BREAKPOINTS

Uncaught Exceptions

Caught Exceptions

holamundo.java holamundo

holamundo > J holamundo.java > holamundo > main(String[])

3 public class holamundo {

4 Run | Debug

5 public static void main(String[] args) { args = String[0]@9

6 int[] numbers = new int[10]; numbers = int[10]@10

7 for (int i = 1; i <= 10; i++) { i = 8

8 numbers[i] = i; // Aquí hay un error, índice fuera de rango numbers = int[10]@10, i = 8

9 }

10 int sum = 0;

11 for (int i = 0; i < numbers.length; i++) {

12 sum += numbers[i];

13 }

14 System.out.println("La suma de los números es: " + sum);

15 }

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH TERMINAL OUTPUT COMMENTS

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PS C:\Users\Francisco Javier Vundo > & "C:\Program Files\Java\jdk-21\bin\java.exe" "-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=lo calhost:62604" "-XX:+ShowCodeDetailsInExceptionMessages" "-cp" "C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\403678ad356a408 d19539a1df150c604\redhat-.java\jdt_ws\Vundo_b9c1ae78\bin" "holamundo.holamundo"

Local

args: String[0]@9

> numbers: int[10]@10

i: 7

WATCH

CALL STACK

holamundo 3 PAUSED ON STEP

Thread [main] PAUSED ON STEP

holamundo.main(String[]) h

Thread [Reference Han... RUNNING

Thread [Finalizer] RUNNING

Thread [Signal Dispatc... RUNNING

Thread [Attach Listener] RUNNING

Thread [Notification Th... RUNNING

Thread [Common-Clea... RUNNING

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

> holamun... PAUSED ON BREAKPOINT

BREAKPOINTS

holamundo > J holamundo.java > holamundo > main(String[])

3 public class holamundo {

4 Run | Debug

5 public static void main(String[] args) { args = String[0]@9

6 int[] numbers = new int[10]; numbers = int[10]@10

7 for (int i = 1; i <= 10; i++) { i = 7

8 numbers[i] = i; // Aquí hay un error, índice fuera de rango numbers = int[10]@10, i = 7

9 }

10 int sum = 0;

11 for (int i = 0; i < numbers.length; i++) {

12 sum += numbers[i];

13 }

14 System.out.println("La suma de los números es: " + sum);

15 }

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH TERMINAL OUTPUT COMMENTS

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PS C:\Users\Francisco Javier Vundo > & "C:\Program Files\Java\jdk-21\bin\java.exe" "-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=lo calhost:62595" "-XX:+ShowCodeDetailsInExceptionMessages" "-cp" "C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\403678ad356a408 d19539a1df150c604\redhat-.java\jdt_ws\Vundo_b9c1ae78\bin" "holamundo.holamundo"

VARIABLES

Local

args: String[0]@9
numbers: int[10]@10
i: 9

WATCH

CALL STACK

holamundo.3 PAUSED ON STEP
Thread [main] PAUSED ON STEP
holamundo.main(String[]) h
Thread [Reference Han... RUNNING
Thread [Finalizer] RUNNING
Thread [Signal Dispatc... RUNNING
Thread [Attach Listener] RUNNING
Thread [Notification Th... RUNNING
Thread [Common-Clea... RUNNING

holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT

BREAKPOINTS

Uncaught Exceptions
Caught Exceptions

```
holamundo > J holamundo.java > holamundo > main(String[])  
public class holamundo {  
    Run | Debug  
    public static void main(String[] args) { args = String[0]@9  
        int[] numbers = new int[10]; numbers = int[10]@10  
        for (int i = 1; i <= 10; i++) { i = 9  
            numbers[i] = i; // Aquí hay un error, índice fuera de rango numbers = int[10]@10, i = 9  
        }  
        int sum = 0;  
        for (int i = 0; i < numbers.length; i++) {  
            sum += numbers[i];  
        }  
        System.out.println("La suma de los números es: " + sum);  
    }  
}
```

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS SEARCH TERMINAL OUTPUT COMMENTS

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PS C:\Users\Francisco Javier\Vundo> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=10.0.0.1:62610' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\40367ad356a408d19539a1df150c604\redhat-java\jdt_ws\Vundo_b9c1ae78\bin' 'holamundo.holamundo'

VARIABLES

Local

args: String[0]@9
numbers: int[10]@10
i: 10

WATCH

CALL STACK

holamundo.3 PAUSED ON STEP
Thread [main] PAUSED ON STEP
holamundo.main(String[]) h
Thread [Reference Han... RUNNING
Thread [Finalizer] RUNNING
Thread [Signal Dispatc... RUNNING
Thread [Attach Listener] RUNNING
Thread [Notification Th... RUNNING
Thread [Common-Clea... RUNNING

holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT

BREAKPOINTS

Uncaught Exceptions
Caught Exceptions

```
holamundo > J holamundo.java > holamundo > main(String[])  
public class holamundo {  
    Run | Debug  
    public static void main(String[] args) { args = String[0]@9  
        int[] numbers = new int[10]; numbers = int[10]@10  
        for (int i = 1; i <= 10; i++) { i = 10  
            numbers[i] = i; // Aquí hay un error, índice fuera de rango numbers = int[10]@10, i = 10  
        }  
        int sum = 0;  
        for (int i = 0; i < numbers.length; i++) {  
            sum += numbers[i];  
        }  
        System.out.println("La suma de los números es: " + sum);  
    }  
}
```

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS SEARCH TERMINAL OUTPUT COMMENTS

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PS C:\Users\Francisco Javier\Vundo> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=10.0.0.1:62610' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\40367ad356a408d19539a1df150c604\redhat-java\jdt_ws\Vundo_b9c1ae78\bin' 'holamundo.holamundo'

VARIABLES

Local

e: ArrayIndexOutOfBoundsException@18
this: Thread@1

WATCH

CALL STACK

holamundo.3 PAUSED ON STEP
Thread [main] PAUSED ON STEP
Thread.dispatchUncaughtException
Thread [Reference Han... RUNNING
Thread [Finalizer] RUNNING
Thread [Signal Dispatc... RUNNING
Thread [Attach Listener] RUNNING
Thread [Notification Th... RUNNING
Thread [Common-Clea... RUNNING

holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT

BREAKPOINTS

Uncaught Exceptions
Caught Exceptions

```
2898 }  
2899  
2891  
2892 void uncaughtExceptionHandler(UncaughtExceptionHandler ueh) {  
2893     uncaughtExceptionHandler = ueh;  
2894 }  
2895  
2896 /**  
2897  * Dispatch an uncaught exception to the handler. This method is  
2898  * called when a thread terminates with an exception.  
2899  */  
2900 void dispatchUncaughtException(Throwable e) { e = ArrayIndexOutOfBoundsException@18  
2901     getUncaughtExceptionHandler().uncaughtException(this, e); e = ArrayIndexOutOfBoundsException@18  
2902 }  
2903  
2904 /**  
2905  * Holder class for constants.  
2906  */  
2907 @SuppressWarnings("removal")  
2908 private static class Constants {  
2909     // Thread group for virtual threads.  
2910     static final ThreadGroup VTHREAD_GROUP;  
2911  
2912     // AccessControlContext that doesn't support any permissions.  
2913 }
```

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS SEARCH TERMINAL OUTPUT COMMENTS

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Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. <https://aka.ms/PSWindows>

PS C:\Users\Francisco Javier\Vundo> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=10.0.0.1:62699' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\40367ad356a408d19539a1df150c604\redhat-java\jdt_ws\Vundo_b9c1ae78\bin' 'holamundo.holamundo'

Conociendo el error a priori que esta en la línea 7, ya que en el bucle for inicial se inicializa desde 1 y en el bucle for de abajo se inicializa en 0, tienen que inicializarse ambos en 0, para poder asignar los valores del 1 al 10, el array es de 10, de 0 a 10, y para eso modificaremos:

```
numbers[i] = i+1;
```

```
holamundo > J holamundo.java > holamundo
Comment Code
3 + public class holamundo {
    Run | Debug
4     public static void main(String[] args) { args = String[0]@9
5         int[] numbers = new int[10]; numbers = int[10]@10
6         for (int i = 0; i <= 10; i++) { i = 1
7         numbers[i] = i+1; numbers = int[10]@10, i = 1
8         }
9         int sum = 0;
10        for (int i = 0; i < numbers.length; i++) {
11            sum += numbers[i];
12        }
13        System.out.println("La suma de los números es: " + sum);
14    }
15 }
```

VARIABLES

Local

args: String[0]@9
> numbers: int[10]@10
i: 1

WATCH

CALL STACK

holamun... PAUSED ON BREAKPOINT
Thread [m... PAUSED ON BREAKPOINT
holamundo.main(String[]) h
Thread [Reference Han... RUNNING
Thread [Finalizer] RUNNING
Thread [Signal Dispatc... RUNNING
Thread [Attach Listener] RUNNING
Thread [Notification Th... RUNNING
Thread [Common-Clea... RUNNING

holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT
holamun... PAUSED ON BREAKPOINT

BREAKPOINTS

Uncaught Exceptions
Caught Exceptions

holamundo > J holamundo.java > holamundo > main(String[])

3 public class holamundo {
4 Run | Debug
5 public static void main(String[] args) { args = String[0]@9
6 int[] numbers = new int[10]; numbers = int[10]@10
7 for (int i = 0; i <= 10; i++) { i = 1
8 numbers[i] = i+1; numbers = int[10]@10, i = 1
9 }
10 int sum = 0;
11 for (int i = 0; i < numbers.length; i++) {
12 sum += numbers[i];
13 }
14 System.out.println("La suma de los números es: " + sum);
15 }
16 }

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

SEARCH TERMINAL OUTPUT

COMMENTS

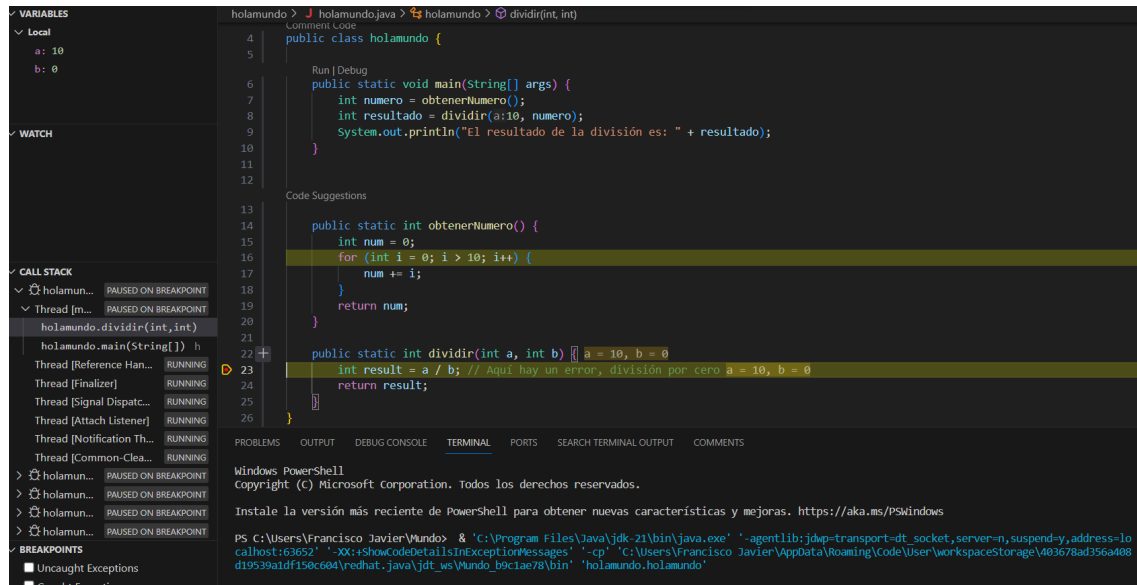
Windows PowerShell
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Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. <https://aka.ms/PSW> indows

PS C:\Users\Francisco Javier\Mundo> & 'C:\Program Files\Java\jdk-21\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=:62571' -XX:+ShowCodeDetailsInExceptionMessages '-cp' 'C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\483678ad3d19539a1df158c684\redhat_java\jdt_ws\Mundo_b9c1ae78\bin' 'holamundo.holamundo'
Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 10 out of bounds for length 10
at holamundo.holamundo.main(holamundo.java:7)
PS C:\Users\Francisco Javier\Mundo> c; cd 'C:\Users\Francisco Javier\Mundo'; & 'C:\Program Files\Java\jdk-21\bin\java.exe' '-agentlib:jdwp=transport=dt_socket,server=n,suspend=y,address=:62791' -XX:+ShowCodeDetailsInExceptionMessages '-cp' 'C:\Users\Francisco Javier\AppData\Roaming\Code\User\workspaceStorage\483678ad3d19539a1df158c684\redhat_java\jdt_ws\Mundo_b9c1ae78\bin' 'holamundo.holamundo'

2. EJERCICIO 2. VSC.

1. Muestra captura de pantalla con el debugger parado en la línea del error y en la del código no accesible.



3. Corrige la sección de código para que devuelva el número 10.

