Napredno programiranje i programski jezici

09 Java

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23-24/Z
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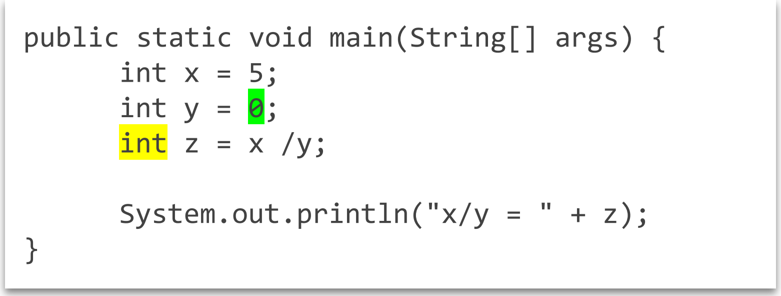
```
public static void main(String[] args) {
      int x = 5;
      int y = 1;
      int z = x /y;

      System.out.println("x/y = " + z);
}
```

```
public static void main(String[] args) {
      int x = 5;
      int y = 2;
      int z = x /y;

      System.out.println("x/y = " + z);
}
```

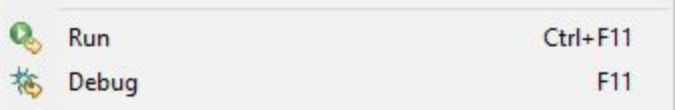
```
x/y = 5
```

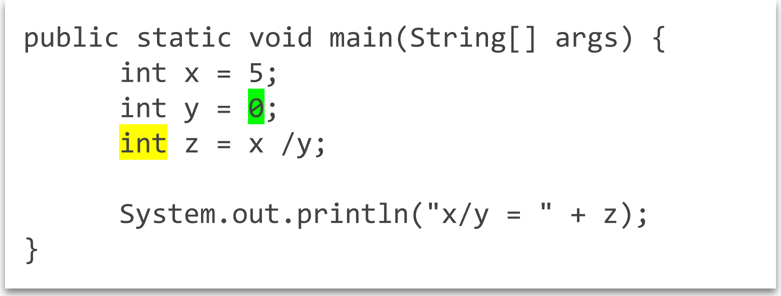
```
x/y = 2
```

```
public static void main(String[] args) {
      int x = 5;
      int y = 0;
      int z = x /y;

      System.out.println("x/y = " + z);
}
```



```
public static void main(String[] args) {
      int x = 5;
      int y = 0;
      int z = x /y;

      System.out.println("x/y = " + z);
}
```





```java
public static void main(String[] args) {
      int x = 5;
      int y = 0;
      int z = x /y;

      System.out.println("x/y = " + z);
}
```

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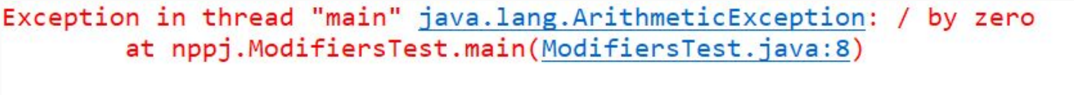
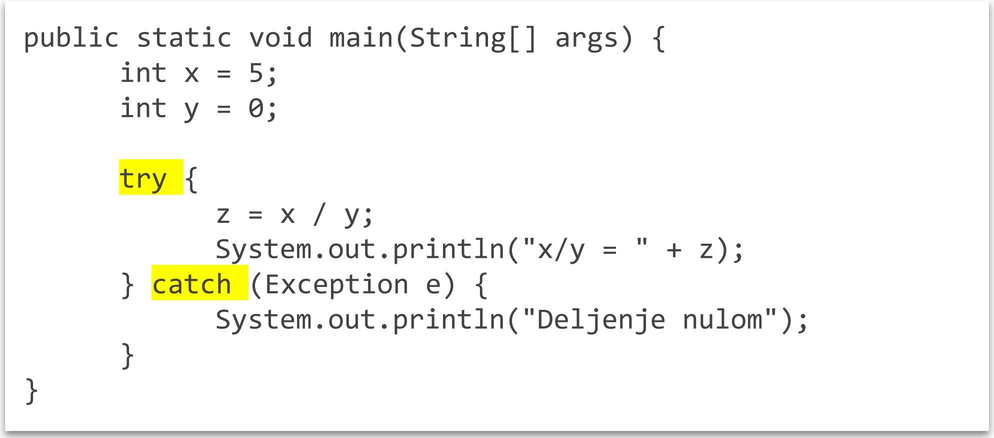
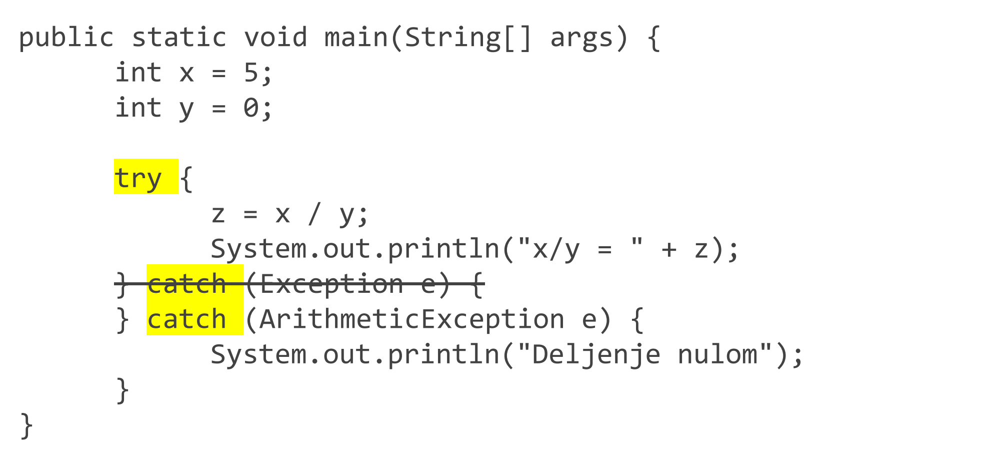


```
Exception in thread "main" java.lang.ArithmeticException: / by zero
	at nppj.ModifiersTest.main(ModifiersTest.java:8)
```

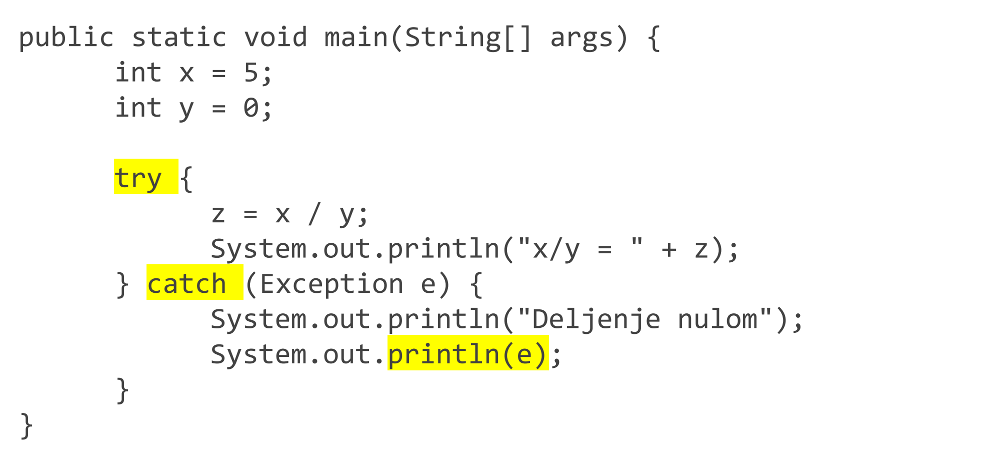


```java
public static void main(String[] args) {
      int x = 5;
      int y = 0;

      try {
            z = x / y;
            System.out.println("x/y = " + z);
      } catch (Exception e) {
            System.out.println("Deljenje nulom");
      }
}
```

```java
BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
```



```
public static void main(String[] args) {
      int x = 5;
      int y = 0;

      try {
            z = x / y;
            System.out.println("x/y = " + z);
      ~~} catch (Exception e) {~~
      } catch (ArithmeticException e) {
            System.out.println("Deljenje nulom");
      }
}
```



```
public static void main(String[] args) {
      int x = 5;
      int y = 0;

      try {
            z = x / y;
            System.out.println("x/y = " + z);
      } catch (Exception e) {
            System.out.println("Deljenje nulom");
            System.out.println(e);
      }
}
```

```
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      for (int i = 0; i < x.length; i++) {
            int z = x[i];
            System.out.println(z);
      }
}
```

```
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      for (int i = 0; i < x.length; i++) {
            int z = x[i - 1];
            System.out.println(z);
      }
}
```

```
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      try {
            for (int i = 0; i < x.length; i++) {
                  int z = x[i-1];
                  System.out.println(z);
            }
      } catch (Exception e) {
            System.out.println(e);
      }
}
```

```
java.lang.ArrayIndexOutOfBoundsException: Index -1 out of bounds for length 5
```

Realni scenariji - ako nam neko prosleđuje indeks ili granicu za petlju kao parametar metode, ako baratamo indeksima,...

```
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      try {
            for (int i = 0; i < x.length; i++) {
                  int z = x[i + 1] / x[i];
                  System.out.println(z);
            }
      } catch (Exception e) {
            System.out.println(e);
      }
}
```

```
java.lang.ArithmeticException: / by zero
```

```
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      try {
            for (int i = 0; i < x.length; i++) {
                  int z = x[i + 1] / x[i];
                  System.out.println(z);
            }
      } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println(e);
      } catch (ArithmeticException e) {
            System.out.println(e);
      }
}
```

?

```java
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      try {
            for (int i = 0; i < x.length; i++) {
                  int z = x[i + 1] / x[i];
                  System.out.println(z);
            }
      } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println(e);
      } catch (ArithmeticException e) {
            System.out.println(e);
      }
}
```

```
java.lang.ArithmeticException: / by zero
```

```java
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      try {
            for (int i = 0; i < x.length; i++) {
                  int z = x[i + 1] / x[i];
                  System.out.println(z);
            }
      } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println(e);
      } catch (ArithmeticException e) {
            System.out.println(e);
      } catch (Exception e) {
            System.out.println(e);
      }
}
```

```
java.lang.ArithmeticException: / by zero
```

```
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      try {
            for (int i = 0; i < x.length; i++) {
                  int z = x[i + 1] / x[i];
                  System.out.println(z);
            }
      } catch (Exception e) {
            System.out.println(e);
      } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println(e);
      } catch (ArithmeticException e) {
            System.out.println(e);
      ~~} catch (Exception e) {~~
            ~~System.out.println(e);~~
      ~~}~~
}
```

```
Unreachable catch block for ArithmeticException. It is already handled by the catch block
for Exception
```

```
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      try {
            for (int i = 0; i < x.length; i++) {
                  int z = x[i + 1] / x[i];
                  System.out.println(z);
            }
      } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println(e);
      } catch (ArithmeticException e) {
            System.out.println(e);
      }
}
```

try → for

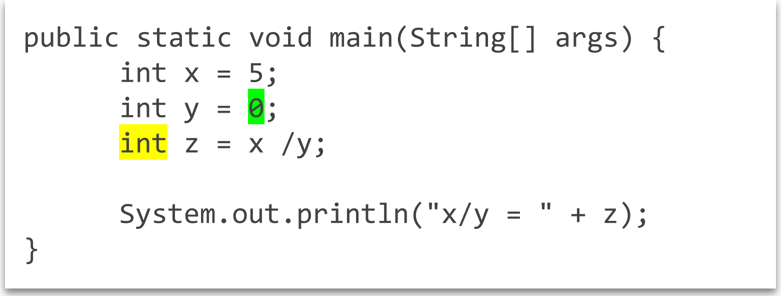
```
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      for (int i = 0; i < x.length; i++) {
            try {
                  int z = x[i + 1] / x[i];
                  System.out.println(z);
            } catch (ArrayIndexOutOfBoundsException e) {
                  System.out.println(e);
            } catch (ArithmeticException e) {
                  System.out.println(e);
            }
      }
}
```

?

```
public static void main(String[] args) {
      int[] x = new int[]{0, 1, 2, 3, 4};

      for (int i = 0; i < x.length; i++) {
            try {
                  int z = x[i + 1] / x[i];
                  System.out.println(z);
            } catch (ArrayIndexOutOfBoundsException e) {
                  System.out.println(e);
            } catch (ArithmeticException e) {
                  System.out.println(e);
            }
      }
}
```

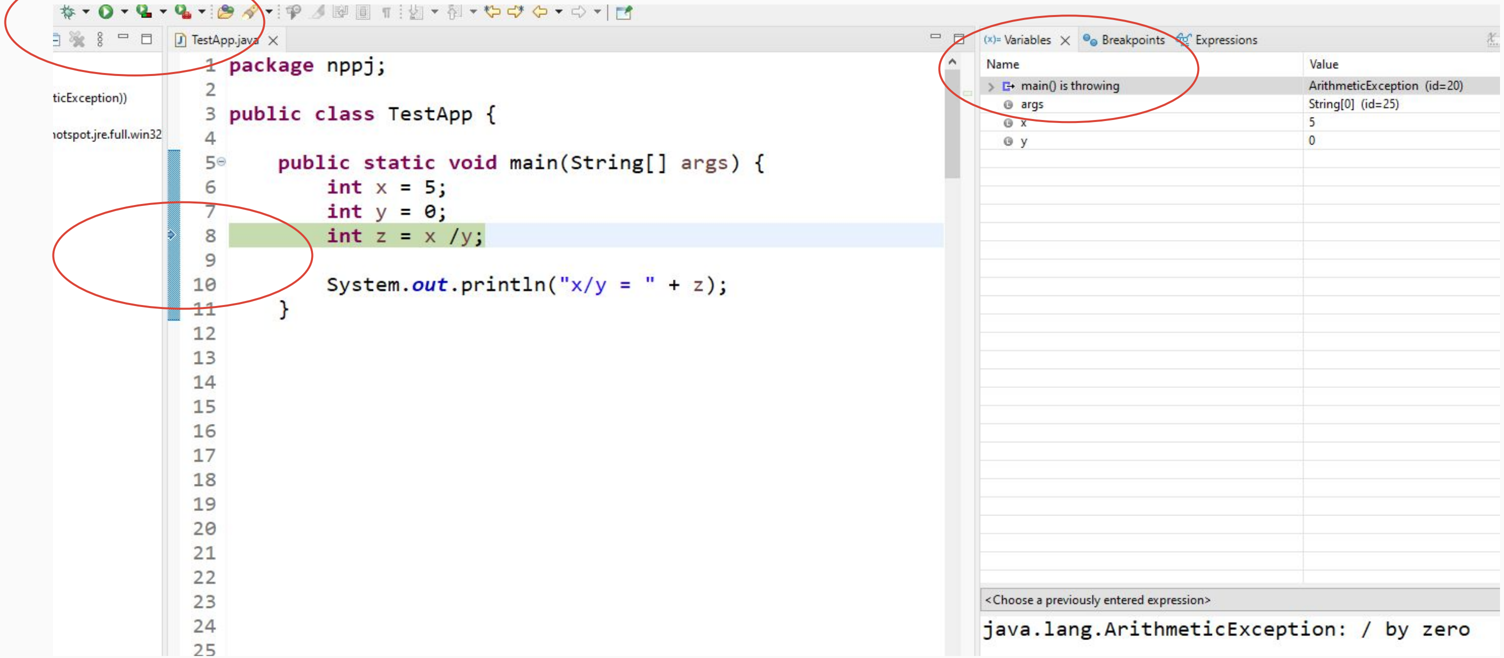
?

```
java.lang.ArithmeticException: / by zero
2
1
1
java.lang.ArrayIndexOutOfBoundsException: Index 5 out of bounds for length 5
```



```
public static void main(String[] args) {
      int x = 5;
      int y = 0;
      int z = x /y;

      System.out.println("x/y = " + z);
}
```

F11



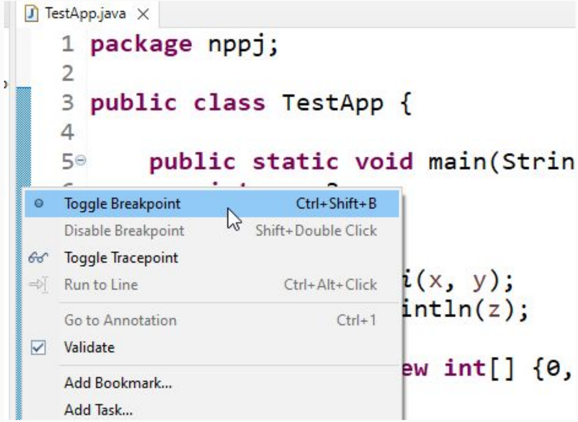
```java
package nppj;

public class TestApp {

    public static void main(String[] args) {
        int x = 5;
        int y = 0;
        int z = x /y;

        System.out.println("x/y = " + z);
    }
```

Name	Value
main() is throwing	ArithmeticException (id=20)
args	String[0] (id=25)
x	5
y	0

<Choose a previously entered expression>

```
java.lang.ArithmeticException: / by zero
```

```
public static void main(String[] args) {
      int x = 3;
      int y = 5;

      int z = Saberi(x, y);
      System.out.println(z);

      int[] niz = new int[] {0, 1, 2, 3, 4};

      int sum = 0;
      for (int i = 0; i < niz.length; i++) {
            sum += niz[i];
      }
      System.out.println(sum);
}

private static int saberi(int x, int y) {
      return x + y;
}
```



TestApp.java

```
package nppj;

public class TestApp {

    public static void main(Strin
                             i(x, y);
                             intln(z);

                             ew int[] {0,
```

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Add Bookmark...
Add Task...

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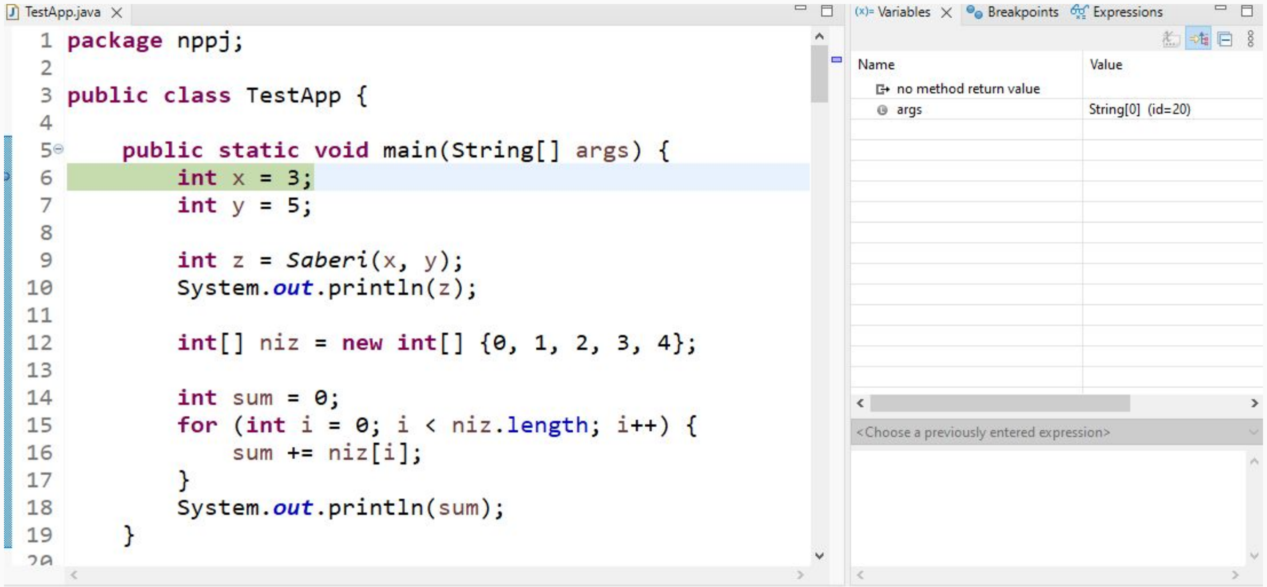
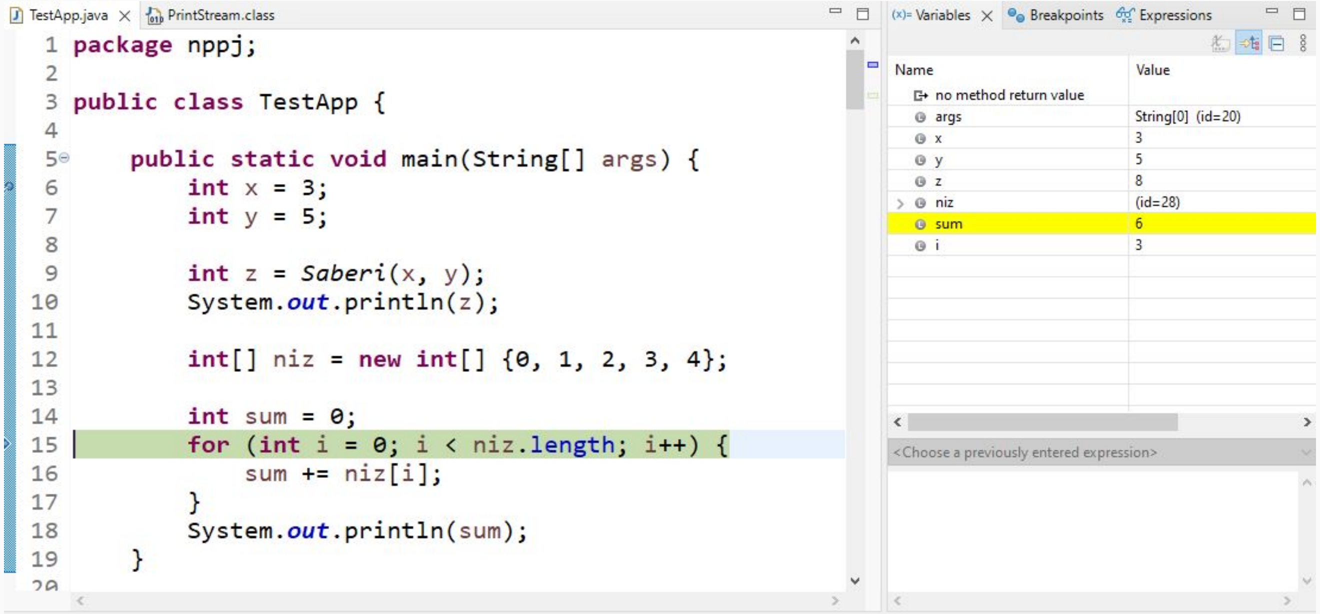


```
package nppj;

public class TestApp {

    public static void main(String[] args) {
        int x = 3;
        int y = 5;

        int z = Saberi(x, y);
        System.out.println(z);

        int[] niz = new int[] {0, 1, 2, 3, 4};

        int sum = 0;
        for (int i = 0; i < niz.length; i++) {
            sum += niz[i];
        }
        System.out.println(sum);
    }
```

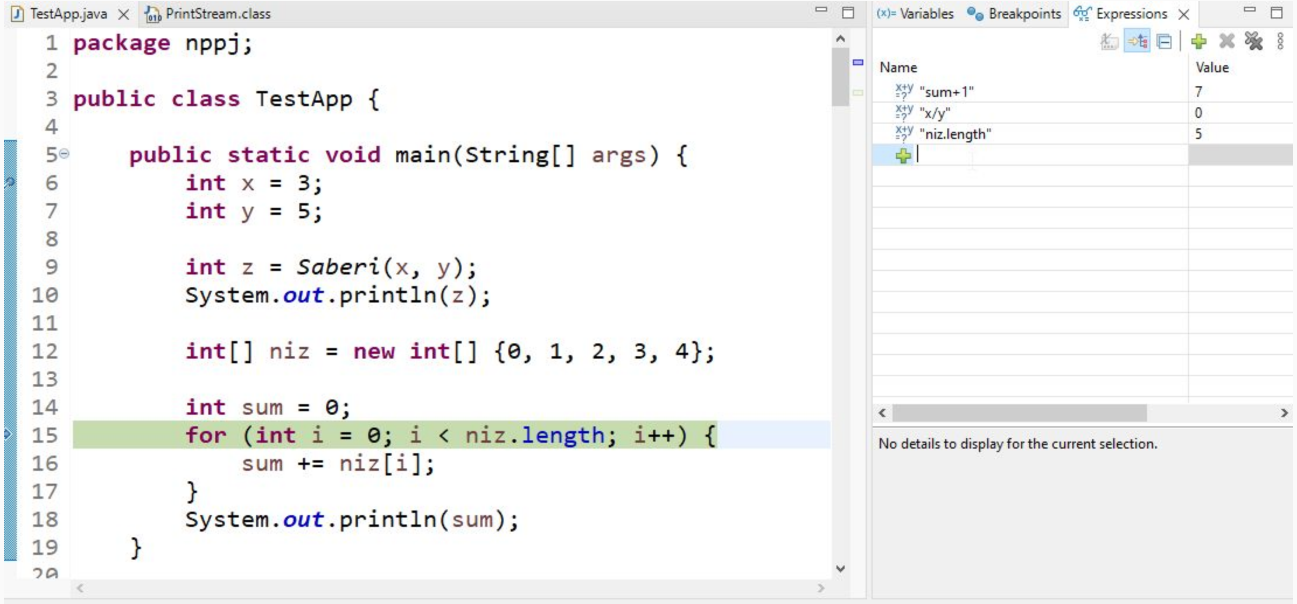
Name	Value
no method return value	
args	String[0] (id=20)

F11 / F6 / F5



```java
package nppj;

public class TestApp {

    public static void main(String[] args) {
        int x = 3;
        int y = 5;

        int z = Saberi(x, y);
        System.out.println(z);

        int[] niz = new int[] {0, 1, 2, 3, 4};

        int sum = 0;
        for (int i = 0; i < niz.length; i++) {
            sum += niz[i];
        }
        System.out.println(sum);
    }
```

Name	Value
no method return value	
args	String[0] (id=20)
x	3
y	5
z	8
niz	(id=28)
sum	6
i	3



```java
package nppj;

public class TestApp {

    public static void main(String[] args) {
        int x = 3;
        int y = 5;

        int z = Saberi(x, y);
        System.out.println(z);

        int[] niz = new int[] {0, 1, 2, 3, 4};

        int sum = 0;
        for (int i = 0; i < niz.length; i++) {
            sum += niz[i];
        }
        System.out.println(sum);
    }
```

Name	Value
"sum+1"	7
"x/y"	0
"niz.length"	5

No details to display for the current selection.

ZADATAK

(neobavezno)

Isprobati sve iz prezentacije.
Pogledati dokumentaciju za String.

Proveriti šta se dešava u C++ ako probamo deljenje sa 0.

Pokušati debug.

Pogledati šta je Singleton design pattern i zašto bismo poželeli da ga koristimo.