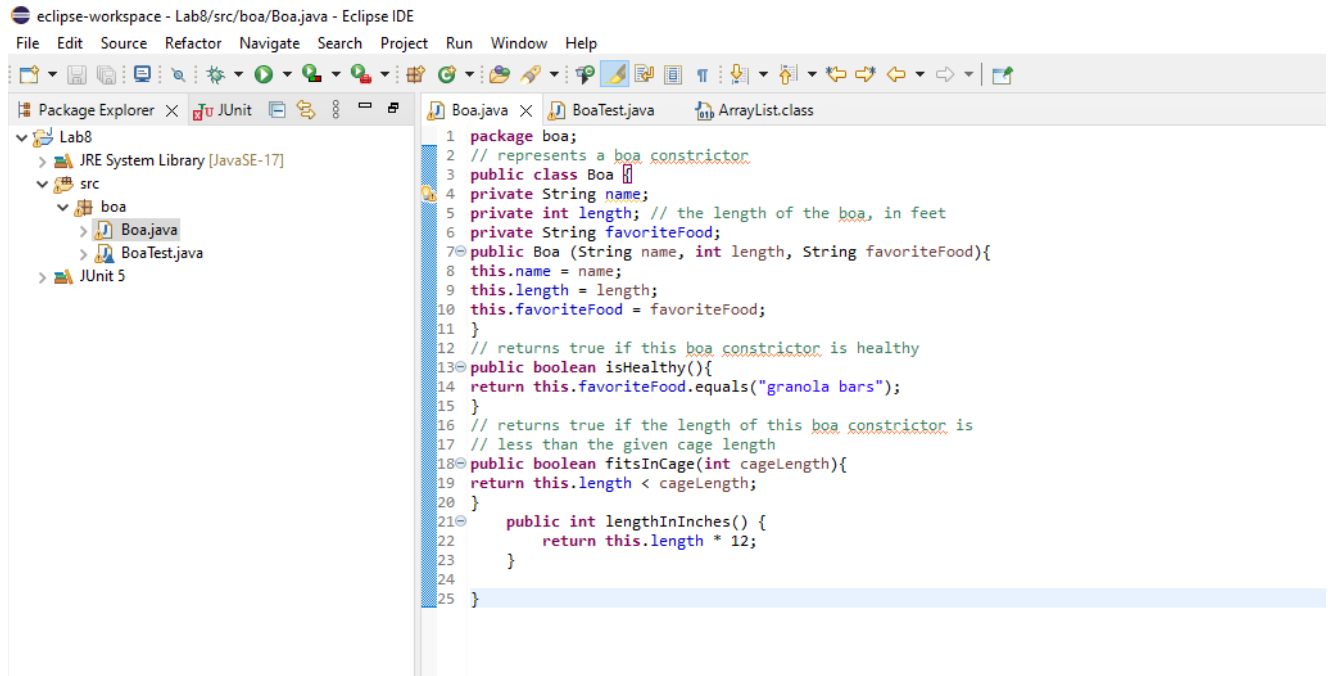


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Creating a class boa

```
package boa;
// represents a boa constructor
public class Boa {
    private String name;
    private int length; // the length of the boa, in feet
    private String favoriteFood;
    public Boa (String name, int length, String favoriteFood){
        this.name = name;
        this.length = length;
        this.favoriteFood = favoriteFood;
    }
    // returns true if this boa constructor is healthy
    public boolean isHealthy(){
        return this.favoriteFood.equals("granola bars");
    }
    // returns true if the length of this boa constructor is
    // less than the given cage length
    public boolean fitsInCage(int cageLength){
        return this.length < cageLength;
    }
    public int lengthInInches() {
        return this.length * 12;
    }
}
```



Writing some unit test cases

```
package boa;
import static org.junit.jupiter.api.Assertions.*;
import org.junit.Before;
import org.junit.jupiter.api.Test;
class BoaTest {
    private static final int length = 0;
    private Boa jen;
    private Boa ken;
    @Before
    public void setUp() throws Exception {
        jen = new Boa("Jennifer", 2, "grapes");
        ken = new Boa ("Kenneth", 3, "granola bars");
    }

    @Test
    public void testIsHealthy() {
        assertFalse(jen.isHealthy());
        assertTrue(ken.isHealthy());
    }

    @Test
    public void testfitsInCage() {
        assertFalse(jen.fitsInCage(1));
    }
}
```

```

        assertTrue(jen.fitsInCage(2));
        assertTrue(jen.fitsInCage(3));
        assertFalse(ken.fitsInCage(2));
        assertTrue(ken.fitsInCage(3));
        assertTrue(ken.fitsInCage(4));
    }

    @Test
    public void testLengthInInches() {
        Boa bigBoa = new Boa("Biggie", 12, "mice");
        assertEquals(144, bigBoa.lengthInInches());
    }
}

```

```

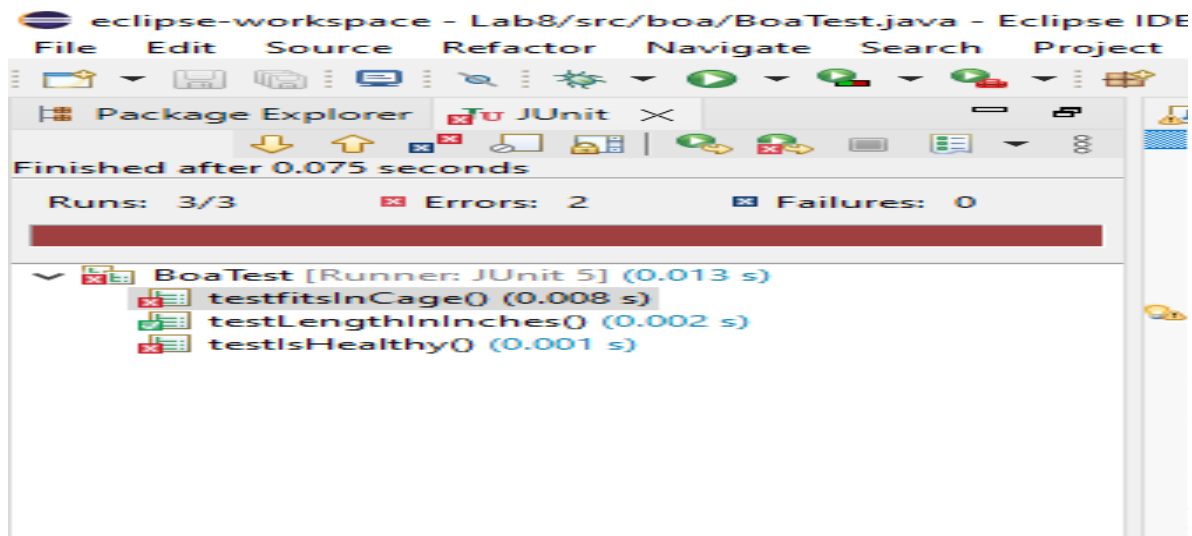
eclipse-workspace - Lab8/src/boa/BoaTest.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer x JUnit
  Lab8
    > JRE System Library [JavaSE-17]
    > src
      > boa
        > Boa.java
        > BoaTest.java
      > JUnit 5

BoaTest.java
1 package boa;
2
3 import static org.junit.jupiter.api.Assertions.*;
4
5 import org.junit.Before;
6 import org.junit.jupiter.api.Test;
7
8 class BoaTest {
9
10     private static final int Length = 0;
11     private Boa jen;
12     private Boa ken;
13
14
15     @Before
16     public void setUp() throws Exception {
17         jen = new Boa("Jennifer", 2, "grapes");
18         ken = new Boa ("Kenneth", 3, "granola bars");
19     }
20
21     @Test
22     public void testIsHealthy() {
23         assertFalse(jen.isHealthy());
24         assertTrue(ken.isHealthy());
25     }
26
27
28     @Test
29     public void testfitsInCage() {
30         assertFalse(jen.fitsInCage(1));
31         assertTrue(jen.fitsInCage(2));
32         assertTrue(jen.fitsInCage(3));
33         assertFalse(ken.fitsInCage(2));
34         assertTrue(ken.fitsInCage(3));
35         assertTrue(ken.fitsInCage(4));
36     }
37
38     @Test
39     public void testLengthInInches() {
40         Boa bigBoa = new Boa("Biggie", 12, "mice");
41         assertEquals(144, bigBoa.lengthInInches());
42     }
43
44
45
46

```

Running the test cases



In here two of our three test cases failed.
Let us modify the test cases

testfitsInCage()

@Test

```
public void testFitsInCage_1() {  
    int cage = 2;  
    boolean output = jen.fitsInCage(cage);  
    assertEquals(output,false);  
}
```

@Test

```
public void testFitsInCage_2() {  
    int cage = 1;  
    boolean output = ken.fitsInCage(cage);  
    assertEquals(output,false);  
}
```

@Test

```
public void testFitsInCage_3() {  
    int cage = 10;  
    boolean output = ken.fitsInCage(cage);  
    assertEquals(output,true);  
}
```

@Test

```
public void testFitsInCage_4() {
```

```

int cage = 3;
boolean output = ken.fitsInCage(cage);
assertEquals(output,false);
}

```

testIsHealthy()

```

@Test
public void testIsHealthy_1() {
    boolean output = ken.isHealthy();
    assertEquals(output,true);
}

@Test
public void testIsHealthy_2() {
    boolean output = jen.isHealthy();
    assertEquals(output,false);
}

```

new method to Boa class that produces length in inches

