IT 314 Software Engineering

Lab.7

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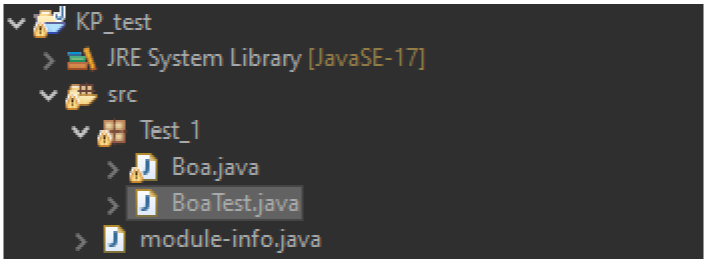
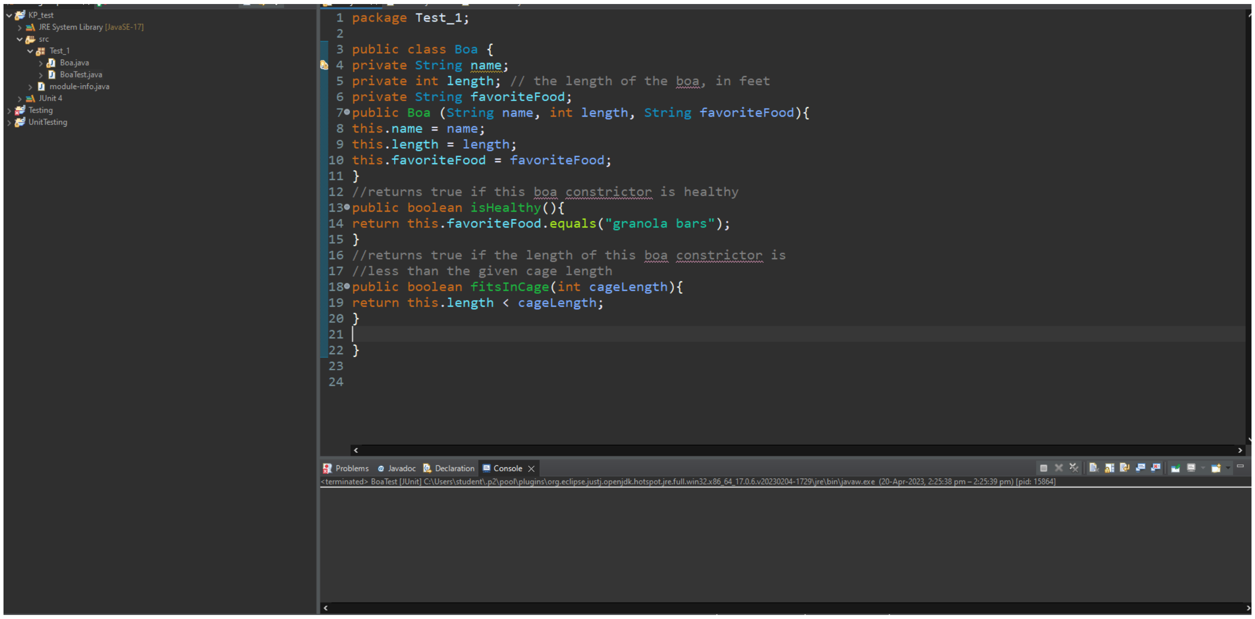
Date: Apr 20, 2023

1. Create new Project



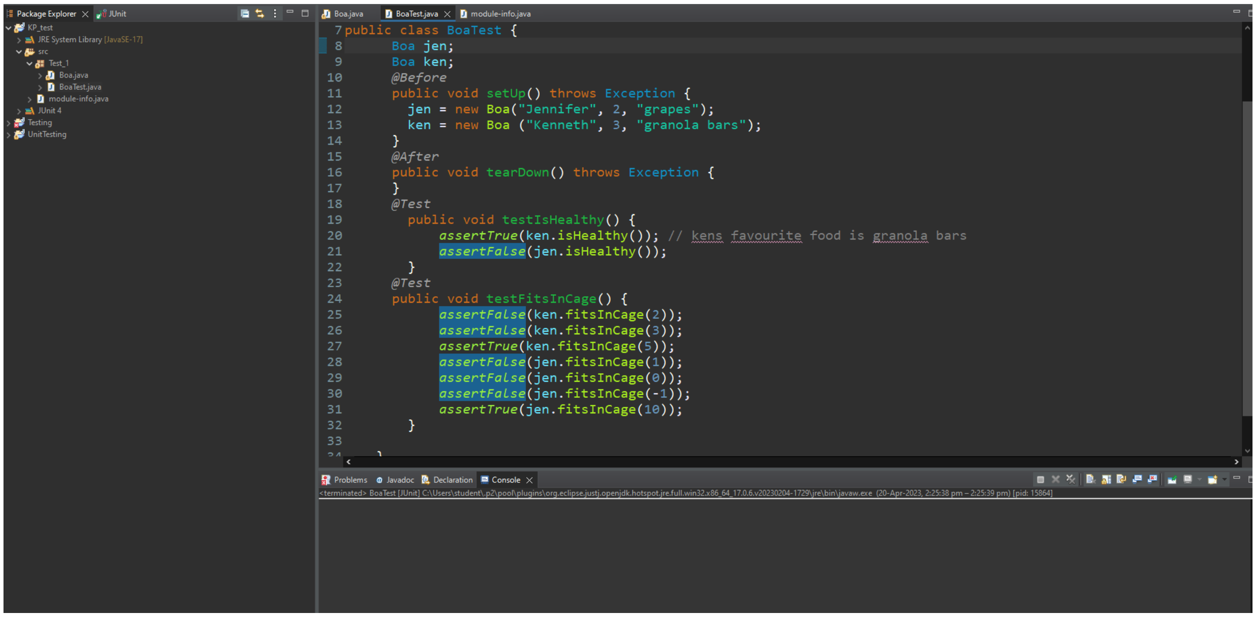
2. Create Boa Class & add methods



```java
package Test_1;

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 constrictor is healthy
public boolean isHealthy(){
return this.favoriteFood.equals("granola bars");
}
//returns true if the length of this boa constrictor is
//less than the given cage length
public boolean fitsInCage(int cageLength){
return this.length < cageLength;
}

}
```

```
<terminated> BoaTest [JUnit] C:\Users\student\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe  (20-Apr-2023, 2:25:38 pm – 2:25:39 pm) [pid: 15864]
```

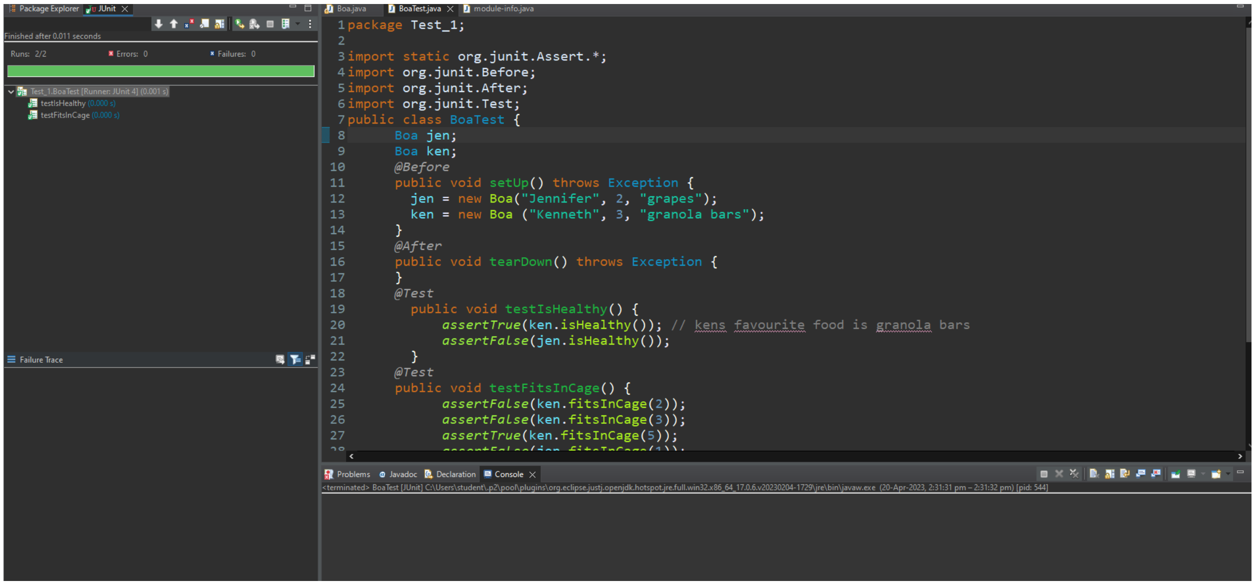
3. Create & Write Junit Test Case File



```java
public class BoaTest {
        Boa jen;
        Boa ken;
        @Before
        public void setUp() throws Exception {
            jen = new Boa("Jennifer", 2, "grapes");
            ken = new Boa ("Kenneth", 3, "granola bars");
        }
        @After
        public void tearDown() throws Exception {
        }
        @Test
            public void testIsHealthy() {
                assertTrue(ken.isHealthy()); // kens favourite food is granola bars
                assertFalse(jen.isHealthy());
            }
        @Test
        public void testFitsInCage() {
                assertFalse(ken.fitsInCage(2));
                assertFalse(ken.fitsInCage(3));
                assertTrue(ken.fitsInCage(5));
                assertFalse(jen.fitsInCage(1));
                assertFalse(jen.fitsInCage(0));
                assertFalse(jen.fitsInCage(-1));
                assertTrue(jen.fitsInCage(10));
            }

    }
```

```
<terminated> BoaTest [JUnit] C:\Users\student\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe  (20-Apr-2023, 2:25:38 pm – 2:25:39 pm) [pid: 15864]
```

4. Run Cases

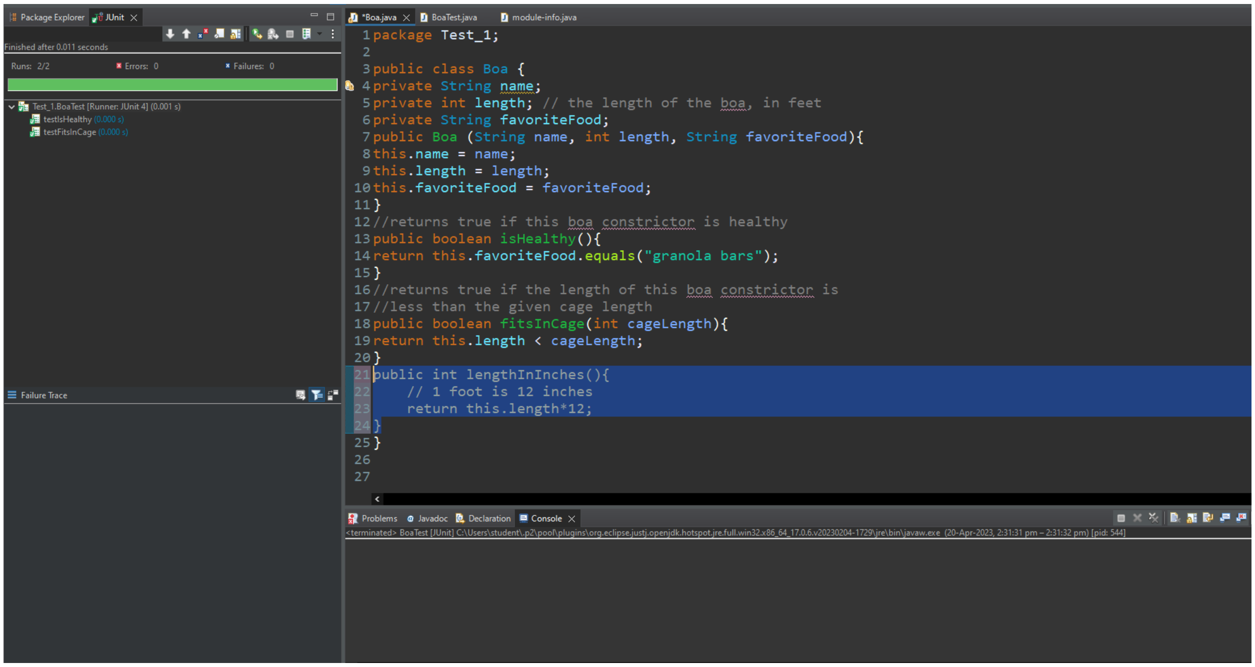


```
Finished after 0.011 seconds

Runs:  2/2          Errors:  0          Failures:  0

Test_1.BoaTest [Runner: JUnit 4] (0.001 s)
    testIsHealthy (0.000 s)
    testFitsInCage (0.000 s)
```

```java
package Test_1;

import static org.junit.Assert.*;
import org.junit.Before;
import org.junit.After;
import org.junit.Test;
public class BoaTest {
        Boa jen;
        Boa ken;
        @Before
        public void setUp() throws Exception {
            jen = new Boa("Jennifer", 2, "grapes");
            ken = new Boa ("Kenneth", 3, "granola bars");
        }
        @After
        public void tearDown() throws Exception {
        }
        @Test
            public void testIsHealthy() {
                assertTrue(ken.isHealthy()); // kens favourite food is granola bars
                assertFalse(jen.isHealthy());
            }
        @Test
        public void testFitsInCage() {
                assertFalse(ken.fitsInCage(2));
                assertFalse(ken.fitsInCage(3));
                assertTrue(ken.fitsInCage(5));
                assertFalse(jen.fitsInCage(1));
```

```
<terminated> BoaTest [JUnit] C:\Users\student\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe  (20-Apr-2023, 2:31:31 pm – 2:31:32 pm) [pid: 544]
```

5. Create new method in boa class called “lengthInInches()”

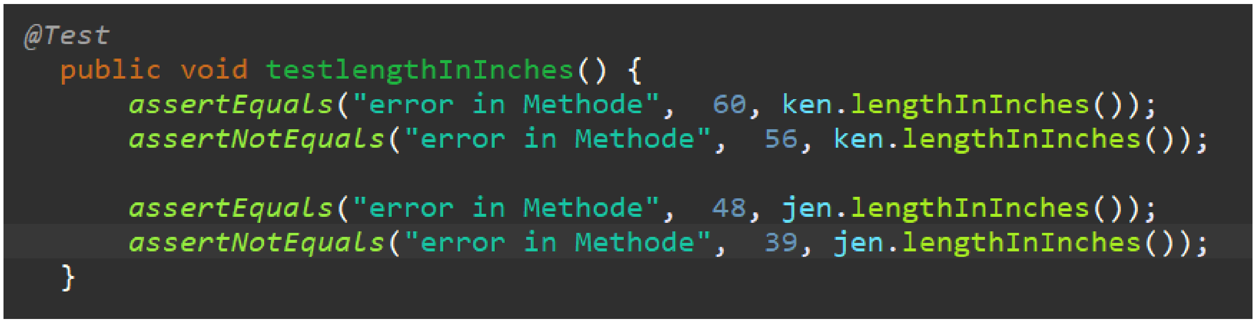


```
Finished after 0.011 seconds
Runs: 2/2          Errors: 0          Failures: 0
Test_1.BoaTest [Runner: JUnit 4] (0.001 s)
    testIsHealthy (0.000 s)
    testFitsInCage (0.000 s)
```

```java
package Test_1;

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 constrictor is healthy
public boolean isHealthy(){
return this.favoriteFood.equals("granola bars");
}
//returns true if the length of this boa constrictor is
//less than the given cage length
public boolean fitsInCage(int cageLength){
return this.length < cageLength;
}
public int lengthInInches(){
    // 1 foot is 12 inches
    return this.length*12;
}
}
```

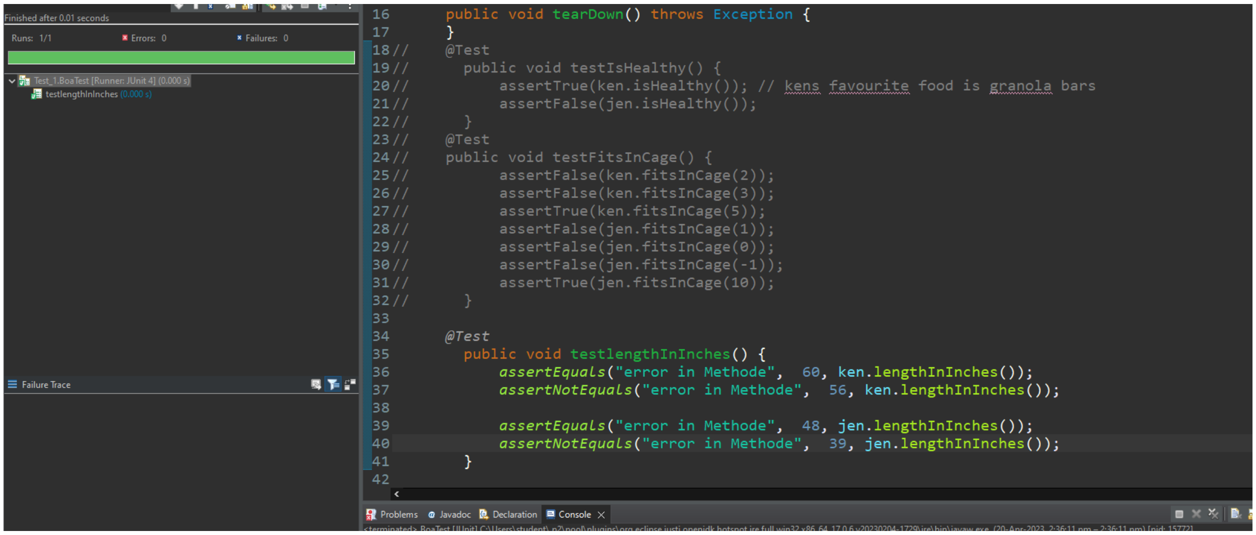
```
<terminated> BoaTest [JUnit] C:\Users\student\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe  (20-Apr-2023, 2:31:31 pm – 2:31:32 pm) [pid: 544]
```

6. Write Tests for that file



```java
@Test
  public void testlengthInInches() {
      assertEquals("error in Methode",  60, ken.lengthInInches());
      assertNotEquals("error in Methode",  56, ken.lengthInInches());

      assertEquals("error in Methode",  48, jen.lengthInInches());
      assertNotEquals("error in Methode",  39, jen.lengthInInches());
  }
```

7. Run cases



Finished after 0.01 seconds

Runs: 1/1 ✖ Errors: 0 ✖ Failures: 0

Test_1.BoaTest [Runner: JUnit 4] (0.000 s)
testlengthInInches (0.000 s)

```
      public void tearDown() throws Exception {
      }
//    @Test
//      public void testIsHealthy() {
//          assertTrue(ken.isHealthy()); // kens favourite food is granola bars
//          assertFalse(jen.isHealthy());
//      }
//    @Test
//    public void testFitsInCage() {
//          assertFalse(ken.fitsInCage(2));
//          assertFalse(ken.fitsInCage(3));
//          assertTrue(ken.fitsInCage(5));
//          assertFalse(jen.fitsInCage(1));
//          assertFalse(jen.fitsInCage(0));
//          assertFalse(jen.fitsInCage(-1));
//          assertTrue(jen.fitsInCage(10));
//      }

      @Test
        public void testlengthInInches() {
            assertEquals("error in Methode",  60, ken.lengthInInches());
            assertNotEquals("error in Methode",  56, ken.lengthInInches());

            assertEquals("error in Methode",  48, jen.lengthInInches());
            assertNotEquals("error in Methode",  39, jen.lengthInInches());
        }

```

```
<terminated> BoaTest [JUnit] C:\Users\student\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe (20-Apr-2023, 2:36:11 pm – 2:36:11 pm) [pid: 15772]
```