A Little Bit of Unit Testing

September 19, 2024

Most Useful Function

```
assertEquals(expected, actual)
```

how it works

```
if expected and actual are the same
   test passes
else
   test fails
```

- ▶ function defined for several different types
- ▶ expected, actual must be same type
- ▶ typical actual: call function to test

Example

```
assertEquals(expected, actual)
```

```
void testSum() {
    assertEquals(10, LameMath.sum(2,8));
    assertEquals(-10, LameMath.sum(-2,-8));
    assertEquals(-6, LameMath.sum(2,-8));
    assertEquals(0, LameMath.sum(0,0));
}
```

For True/False Values

```
assertTrue(some boolean condition)
assertFalse(some boolean condition)
```

Example

```java
void testIsEven() {
    assertTrue(LameMath.isEven(2));
    assertTrue(LameMath.isEven(42));
    assertTrue(LameMath.isEven(-16));
    assertFalse(LameMath.isEven(-1));
    assertFalse(LameMath.isEven(11));
}
```

JUnit in Eclipse

To Add JUnit to Project

▶ Right click on a class (⌘-click on a Mac)

▶ File → New → JUnit Test Case

▶ Be sure "New JUnit Jupiter test" is selected

▶ Click "Next"

▶ Check off functions you want tested, then click "Finish"

To Run the Tests

▶ Right click on the test class (⌘-click on a Mac)

▶ Run → Run as → JUnit Test