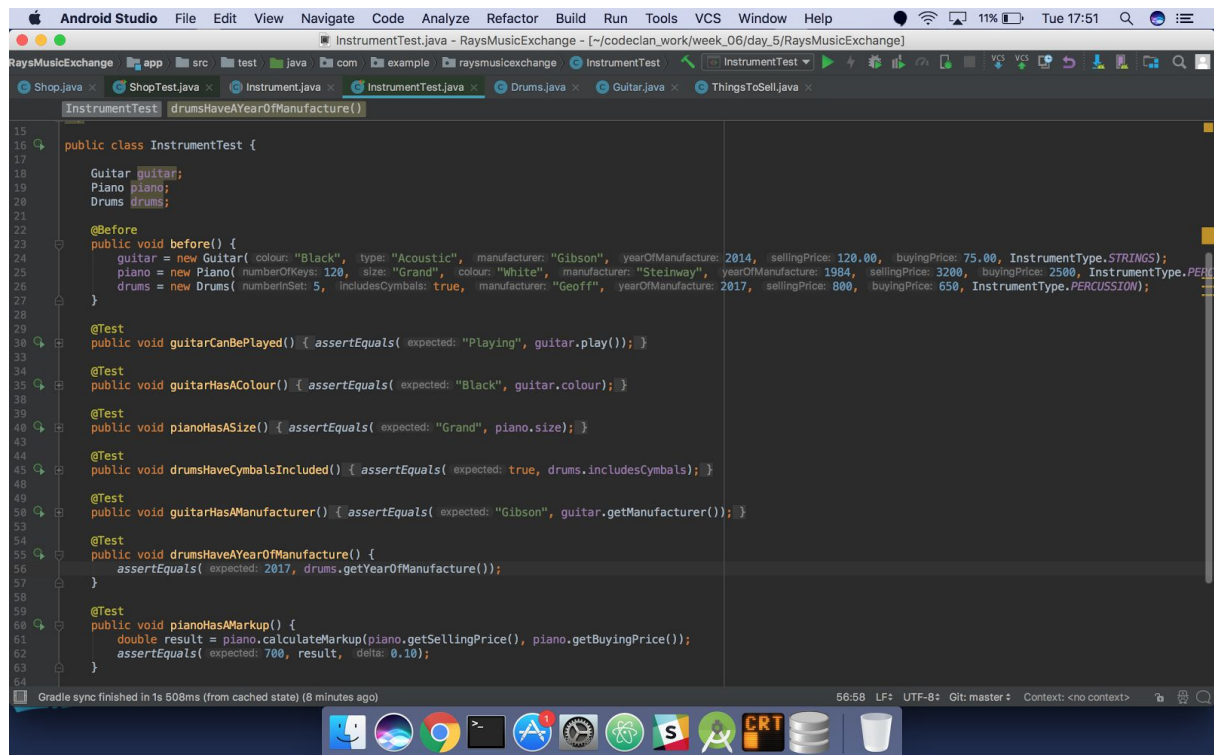


## Evidence for project unit P

### Rob Williams - Cohort E16

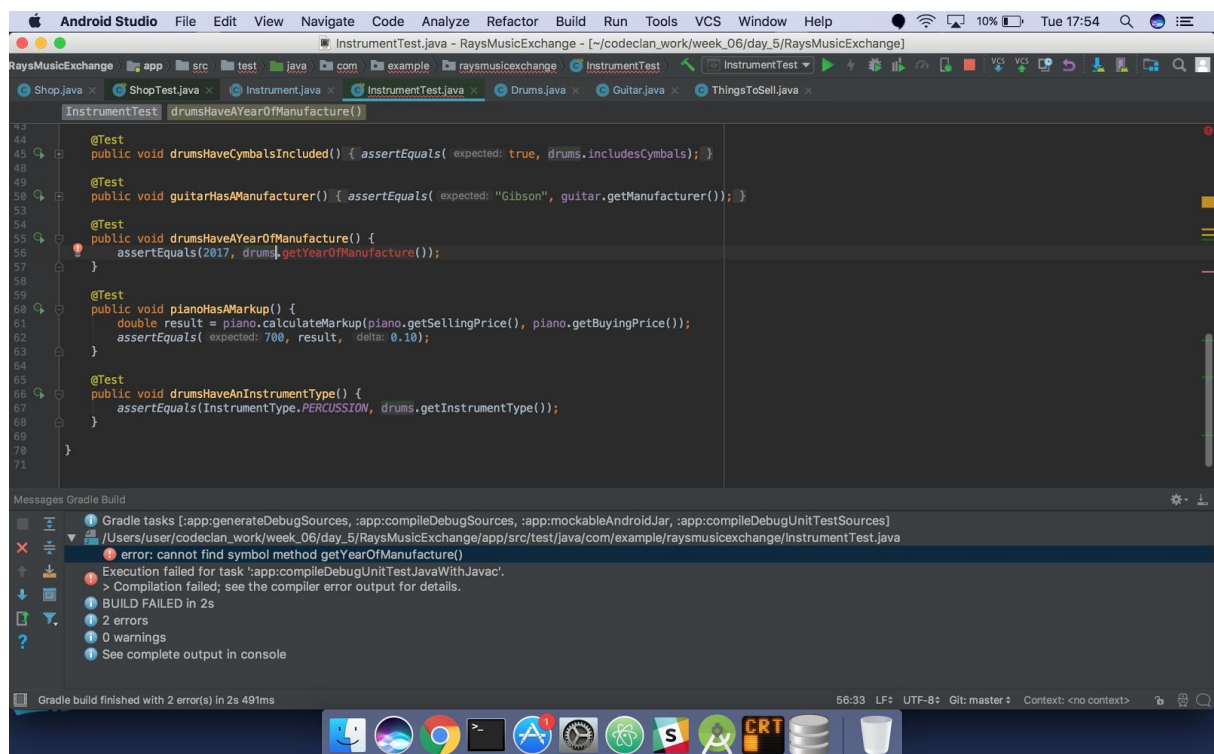
#### Week 10 - Reference P 18

**Demonstrate testing in your program** - The first screenshot here is an example of my test code in the Java music store homework.



```
15 public class InstrumentTest {
16
17     Guitar guitar;
18     Piano piano;
19     Drums drums;
20
21     @Before
22     public void before() {
23         guitar = new Guitar( colour: "Black", type: "Acoustic", manufacturer: "Gibson", yearOfManufacture: 2014, sellingPrice: 120.00, buyingPrice: 75.00, InstrumentType.STRING);
24         piano = new Piano( numberOfKeys: 120, size: "Grand", colour: "White", manufacturer: "Steinway", yearOfManufacture: 1984, sellingPrice: 3200, buyingPrice: 2500, InstrumentType.PERCUSSION);
25         drums = new Drums( numberInSet: 5, includesCymbals: true, manufacturer: "Geoff", yearOfManufacture: 2017, sellingPrice: 800, buyingPrice: 650, InstrumentType.PERCUSSION);
26     }
27
28     @Test
29     public void guitarCanBePlayed() { assertEquals( expected: "Playing", guitar.play()); }
30
31     @Test
32     public void guitarHasAColour() { assertEquals( expected: "Black", guitar.colour); }
33
34     @Test
35     public void pianoHasASize() { assertEquals( expected: "Grand", piano.size); }
36
37     @Test
38     public void drumsHaveCymbalsIncluded() { assertEquals( expected: true, drums.includesCymbals); }
39
40     @Test
41     public void guitarHasAManufacturer() { assertEquals( expected: "Gibson", guitar.getManufacturer()); }
42
43     @Test
44     public void drumsHaveAYearOfManufacture() {
45         assertEquals( expected: 2017, drums.getYearOfManufacture());
46     }
47
48     @Test
49     public void pianoHasAMarkup() {
50         double result = piano.calculateMarkup(piano.getSellingPrice(), piano.getBuyingPrice());
51         assertEquals( expected: 700, result, delta: 0.10);
52     }
53 }
```

The second screenshot shows the drumsHaveAYearOfManufacture() test failing as the code has not been written.



```
44 @Test
45 public void drumsHaveCymbalsIncluded() { assertEquals( expected: true, drums.includesCymbals); }
46
47 @Test
48 public void guitarHasAManufacturer() { assertEquals( expected: "Gibson", guitar.getManufacturer()); }
49
50 @Test
51 public void drumsHaveAYearOfManufacture() {
52     assertEquals(2017, drums.getYearOfManufacture());
53 }
54
55 @Test
56 public void pianoHasAMarkup() {
57     double result = piano.calculateMarkup(piano.getSellingPrice(), piano.getBuyingPrice());
58     assertEquals( expected: 700, result, delta: 0.10);
59 }
60
61 @Test
62 public void drumsHaveAnInstrumentType() {
63     assertEquals(InstrumentType.PERCUSSION, drums.getInstrumentType());
64 }
65 }
```

Messages Gradle Build

- Gradle tasks [:app:generateDebugSources, :app:compileDebugSources, :app:mockableAndroidJar, :app:compileDebugUnitTestSources]
- error: cannot find symbol method getYearOfManufacture()
- Execution failed for task ':app:compileDebugUnitTestJavaWithJavac'.
- > Compilation failed; see the compiler error output for details.
- BUILD FAILED in 2s
- 2 errors
- 0 warnings
- See complete output in console

Gradle build finished with 2 error(s) in 2s 491ms

Below is the code in the Instrument class, from which Drum inherits, to make the test pass.

```
public int getYearOfManufacture() {  
    return yearOfManufacture;  
}
```

The final screenshot shows the test passing.

