

Testing Results

1. R1

The screenshot shows an IDE interface with the R1Tests.java file open. The code imports various JUnit and Spring framework annotations and classes. Below the code editor is a 'Run' section with a 'R1Tests' configuration. The results show 5 tests passed in 395ms. The terminal output indicates the tests were run from a Java Virtual Machine and shows some internal log messages.

```
package uk.ac.ed.acp.cw2.systemCW2;

import com.fasterxml.jackson.databind.ObjectMapper;
import org.junit.jupiter.api.BeforeEach;
import org.junit.jupiter.api.Test;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.autoconfigure.web.servlet.MockMvcMvc;
import org.springframework.boot.test.context.SpringBootTest;
import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Primary;
import org.springframework.http.MediaType;
import org.springframework.test.web.servlet.MockMvc;
import org.springframework.web.client.RestTemplate;
import uk.ac.ed.acp.cw2.data.*;
import uk.ac.ed.acp.cw2.service.DataFetchServiceImplementation;

import java.util.ArrayList;
import static org.mockito.ArgumentMatchers.anyString;
import static org.mockito.ArgumentMatchers.eq;
import static org.mockito.Mockito.mock;
import static org.mockito.Mockito.when;

public class R1Tests {

    @Test
    void P1Test() {
        // Test implementation
    }

    @Test
    void P2Test() {
        // Test implementation
    }

    @Test
    void P3Test() {
        // Test implementation
    }

    @Test
    void P4Test() {
        // Test implementation
    }

    @Test
    void P5Test() {
        // Test implementation
    }
}
```

Run: R1Tests
5 tests passed 5 tests total, 395 ms
15:46:03.936 [main] INFO org.springframework.boot.test.context.SpringBootTestBootstrapper

2. R2

The screenshot shows an IDE interface with the R2Tests.java file open. The code is identical to R1Tests.java. Below the code editor is a 'Run' section with a 'R2Tests' configuration. The results show 5 tests passed in 3 sec 986ms. The terminal output shows the tests were run from a Java Virtual Machine and includes some internal log messages.

```
package uk.ac.ed.acp.cw2.systemCW2;

import com.fasterxml.jackson.databind.ObjectMapper;
import org.junit.jupiter.api.BeforeEach;
import org.junit.jupiter.api.Test;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.autoconfigure.web.servlet.MockMvcMvc;
import org.springframework.boot.test.context.SpringBootTest;
import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Primary;
import org.springframework.http.MediaType;
import org.springframework.test.web.servlet.MockMvc;
import org.springframework.web.client.RestTemplate;
import uk.ac.ed.acp.cw2.data.*;
import uk.ac.ed.acp.cw2.service.DataFetchServiceImplementation;

import java.io.File;
import java.util.ArrayList;
import static org.mockito.ArgumentMatchers.anyString;
import static org.mockito.ArgumentMatchers.eq;
import static org.mockito.Mockito.mock;
```

Run: R2Tests
5 tests passed 5 tests total, 3 sec 986 ms
15:48:25.885 [main] INFO org.springframework.boot.test.context.SpringBootTestBootstrapper

3. R3

The screenshot shows an IDE interface with the following details:

- File:** R3Tests.java
- Imports:** The code includes imports for com.fasterxml.jackson.databind.ObjectMapper, org.junit.jupiter.api.BeforeEach, org.junit.jupiter.api.Test, org.springframework.beans.factory.annotation.Autowired, org.springframework.boot.test.autoconfigure.web.servlet.MockMvcMvc, org.springframework.boot.test.context.SpringBootTest, org.springframework.context.annotation.Bean, org.springframework.context.annotation.Primary, org.springframework.http.MediaType, org.springframework.test.web.servlet.MockMvc; uk.ac.ed.acp.cw2.data.*; uk.ac.ed.acp.cw2.service.DataFetchServiceImplementation; java.util.ArrayList; static org.mockito.ArgumentMatchers.anyString; static org.mockito.ArgumentMatchers.eq; Mockito.mock; static org.mockito.Mockito.when;
- Run:** R3Tests
- Test Results:** 4 tests passed (4 tests total, 183ms). The tests are P1Test(), P2Test(), P3Test(), and P4Test().
- Output:** Log output showing INFO org.springframework.boot.test.context.SpringBootTestBootstrapper and a decorative separator consisting of various symbols.
- Bottom Status Bar:** Shows the file path (s2487866 > src > test > java > uk > ac > ed > acp > cw2 > systemCW2 > R3Tests), encoding (UTF-8), and code style settings (3:8 LF, 4 spaces).