This document provides a comprehensive guide on testing the Ergast Developer API for 2018 racers' data using Cucumber for behavior-driven testing and Rest-Assured for API testing.

Test Scenario

Feature: Testing Ergast Developer API for 2018 racers data

Scenario: Verify the API response for 2018 racers data

Given the Ergast Developer API endpoint for 2018 racers data is "http://ergast.com/api/f1/2018/circuits.json"

When a GET request is made

Then the response status code should be 200

And the response body should not be empty

Test Implementation

```xml
<!-- https://mvnrepository.com/artifact/io.rest-assured/rest-assured-common -->
<dependency>
    <groupId>io.rest-assured</groupId>
    <artifactId>rest-assured-common</artifactId>
    <version>5.3.0</version>
</dependency>

<!-- https://mvnrepository.com/artifact/io.rest-assured/rest-assured-all -->
<dependency>
    <groupId>io.rest-assured</groupId>
    <artifactId>rest-assured-all</artifactId>
    <version>5.3.0</version>
    <scope>test</scope>
</dependency>

<!-- https://mvnrepository.com/artifact/io.rest-assured/json-path -->
<dependency>
    <groupId>io.rest-assured</groupId>
    <artifactId>json-path</artifactId>
    <version>5.3.0</version>
    <scope>test</scope>
</dependency>

<!-- https://mvnrepository.com/artifact/org.json/json -->
<dependency>
    <groupId>org.json</groupId>
    <artifactId>json</artifactId>
    <version>20180813</version>
</dependency>

<!-- https://mvnrepository.com/artifact/org.hamcrest/hamcrest -->
<dependency>
    <groupId>org.hamcrest</groupId>
    <artifactId>hamcrest</artifactId>
    <version>2.2</version>
    <scope>test</scope>
</dependency>

<!-- https://mvnrepository.com/artifact/com.fasterxml.jackson.core/jackson-databind -->
<dependency>
    <groupId>com.fasterxml.jackson.core</groupId>
    <artifactId>jackson-databind</artifactId>
    <version>2.15.2</version>
</dependency>
```

```gherkin
@APITest
Feature: Testing Ergast Developer API for 2018 racers data

  Scenario: Verify the API response for 2018 racers data
    Given the Ergast Developer API endpoint for 2018 racers data is "http://ergast.com/api/f1/2018/circuits.json"
    When a GET request is made
    Then the response status code should be 200
    And the response body should not be empty
```

```java
package runners;
import io.cucumber.junit.Cucumber;

@RunWith(Cucumber.class)
@CucumberOptions(
    features = "resource",
    tags = "@APITest",
    glue = "stepdefinition",
    plugin = {"pretty", "html:target/cucumber-reports"}
)
public class TestRunner {
}
```

```java
package stepdefinition;
import io.cucumber.java.en.Given;
import io.cucumber.java.en.When;
import io.cucumber.java.en.Then;
import io.restassured.RestAssured;
import io.restassured.response.Response;
import org.junit.Assert;
public class APITestDefs {
    private Response response;

        @Given("the Ergast Developer API endpoint for 2018 racers data is {string}")
        public void setApiEndpoint(String apiEndpoint) {
            RestAssured.baseURI = apiEndpoint;
        }

        @When("a GET request is made")
        public void makeGetRequest() {
            response = RestAssured.get();
        }

        @Then("the response status code should be {int}")
        public void verifyStatusCode(int expectedStatusCode) {
            int actualStatusCode = response.getStatusCode();
            Assert.assertEquals("Unexpected status code", expectedStatusCode, actualStatusCode);
        }

        @Then("the response body should not be empty")
        public void verifyResponseBodyNotEmpty() {
            String responseBody = response.getBody().asString();
            Assert.assertTrue("Response body is empty", !responseBody.isEmpty());
        }
    }
```

```
@APITest
Scenario: Verify the API response for 2018 racers data
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
  Given the Ergast Developer API endpoint for 2018 racers data is "http://ergast.com/api/f1/2018/circu
  When a GET request is made
  Then the response status code should be 200
  And the response body should not be empty

┌─────────────────────────────────────────────────────────────────────────────┐
│ Share your Cucumber Report with your team at https://reports.cucumber.io      │
│ Activate publishing with one of the following:                                │
│                                                                               │
│ src/test/resources/cucumber.properties:          cucumber.publish.enabled=true│
│ src/test/resources/junit-platform.properties:    cucumber.publish.enabled=true│
│ Environment variable:                            CUCUMBER_PUBLISH_ENABLED=true │
│ JUnit:                                           @CucumberOptions(publish = true)│
│                                                                               │
│ More information at https://cucumber.io/docs/cucumber/environment-variables/  │
│                                                                               │
│ Disable this message with one of the following:                               │
│                                                                               │
│ src/test/resources/cucumber.properties:          cucumber.publish.quiet=true  │
│ src/test/resources/junit-platform.properties:    cucumber.publish.quiet=true  │
└─────────────────────────────────────────────────────────────────────────────┘
```