# Rest Assured - Assertions and Methods with Complex JSON

## Overview

This document shows how to use Rest Assured to validate a complex JSON response using assertions and helper methods such as `then()`, `extract()`, `body()`, and JsonPath.

## Sample Complex JSON Response

{  
 "status": "success",  
 "user": {  
 "id": 501,  
 "name": "Alice Smith",  
 "email": "alice.smith@example.com",  
 "isActive": true,  
 "address": {  
 "street": "123 Elm Street",  
 "city": "Los Angeles",  
 "zipcode": "90001"  
 },  
 "orders": [  
 {  
 "orderId": 1001,  
 "orderDate": "2024-01-10",  
 "items": [  
 {"productId": "A100", "productName": "Laptop", "price": 999.99},  
 {"productId": "A101", "productName": "Mouse", "price": 25.49}  
 ]  
 },  
 {  
 "orderId": 1002,  
 "orderDate": "2024-03-15",  
 "items": [  
 {"productId": "B200", "productName": "Keyboard", "price": 45.00}  
 ]  
 }  
 ]  
 }  
}

## Using Rest Assured with Assertions

import io.restassured.RestAssured;  
import static io.restassured.RestAssured.\*;  
import static org.hamcrest.Matchers.\*;  
import org.testng.annotations.Test;  
  
public class RestAssuredAssertionsTest {  
  
 @Test  
 public void validateComplexJson() {  
 RestAssured.baseURI = "https://api.example.com";  
  
 given()  
 .when()  
 .get("/user/details")  
 .then()  
 .statusCode(200)  
 .body("status", equalTo("success"))  
 .body("user.name", equalTo("Alice Smith"))  
 .body("user.isActive", is(true))  
 .body("user.address.city", equalTo("Los Angeles"))  
 .body("user.orders.size()", equalTo(2))  
 .body("user.orders[0].items[0].productName", equalTo("Laptop"))  
 .body("user.orders[1].items[0].price", equalTo(45.00f));  
 }  
}

## Extract Data and Assert Using JsonPath

Response response = given().when().get("/user/details");  
JsonPath jsonPath = response.jsonPath();  
  
String name = jsonPath.getString("user.name");  
assert name.equals("Alice Smith");  
  
float price = jsonPath.getFloat("user.orders[0].items[0].price");  
assert price == 999.99f;

## Summary of Useful Methods

|  |  |
| --- | --- |
| Method | Purpose |
| given() | Set up request specification |
| when() | Send HTTP request |
| then() | Start response validation chain |
| body() | Assert values in JSON response |
| statusCode() | Assert HTTP status code |
| extract() | Extract values for reuse |
| jsonPath() | Parse and extract using path expressions |