
# Automation Testing

TECHNOLOGY

# XML Handling and Utilities for Parsing XML and JSON Responses




simplilearn

# A Day in the Life of an Automation Test Engineer

Thomas has been assigned to test a project in XML and JSON format.

To achieve the above goal, he must learn the basics of XML and JSON, the structure of these files, parsing, and native logging. Also, he must use his prior knowledge of REST assured.

# Learning Objectives

By the end of this lesson, you will be able to:

- Understand the basics of XML and JSON
- Read, write, and convert XML and JSON files
- Parse XML and JSON payload and get responses
- Perform native logging of REST Assured

# What Is XML?

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XML stands for extensible markup language.

It has the following features:

- Self-descriptive
- Storage and transportation of data
- No predefined tags

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# XML Data Types

Like any other language, XML also has data types, such as:

- String
- Date or time
- Numeric
- Miscellaneous

Contains characters, sentences, tab characters, and carriage returns


# XML Data Types

Schema for defining a string tag:

```
<xs:element name="player" type="xs:string"/>
```

Example of string declaration:

```
<player>John Walker</player>
```

# XML Data Types

Like any other language, XML also has data types, such as:

- String
- Date or time
- Numeric
- Miscellaneous

Contains date and time in YYYY-MM-DDThh:mm:ss format

# XML Data Types

Schema for defining a date time tag:

```
<xs:element name="startdate" type="xs:dateTime"/>
```

Example of date time declaration:

```
<startdate>2022-08-08T09:00:00</startdate>
```

# XML Data Types

Like any other language, XML also has data types, such as:

- String
- Date or time
- Numeric
- Miscellaneous

Contains decimal and integers numerical values of all types

# XML Data Types

Schema for defining an integer tag:

```
<xs:element name="cost" type="xs:integer"/>
```



Example of integer declaration:

```
<cost>989</cost>
```

# XML Data Types

Like any other language, XML also has data types, such as:

- String
- Date or time
- Numeric
- Miscellaneous

Contains booleans, hexbinary, float, and doubles


# XML Data Types

Schema for defining a boolean tag:

```
v<xs:attribute name="disabled" type="xs:boolean"/>
```

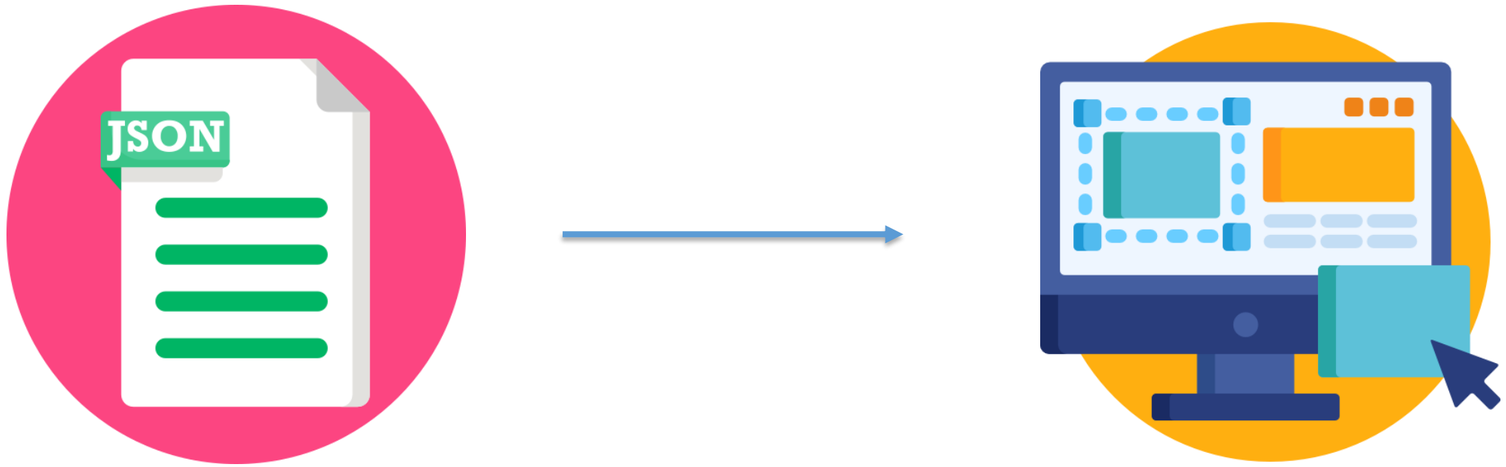
Example of boolean declaration:

```
<price disabled="false">999</price>
```

# What Is JSON?

JavaScript Object Notation or JSON is an open standard that supports data structures, such as objects and arrays.

Sending data to the web page from a server



# Why JSON?

These are the reasons to use JSON:

Less verbose

Faster

Readable

Structured data

# Difference Between XML and JSON

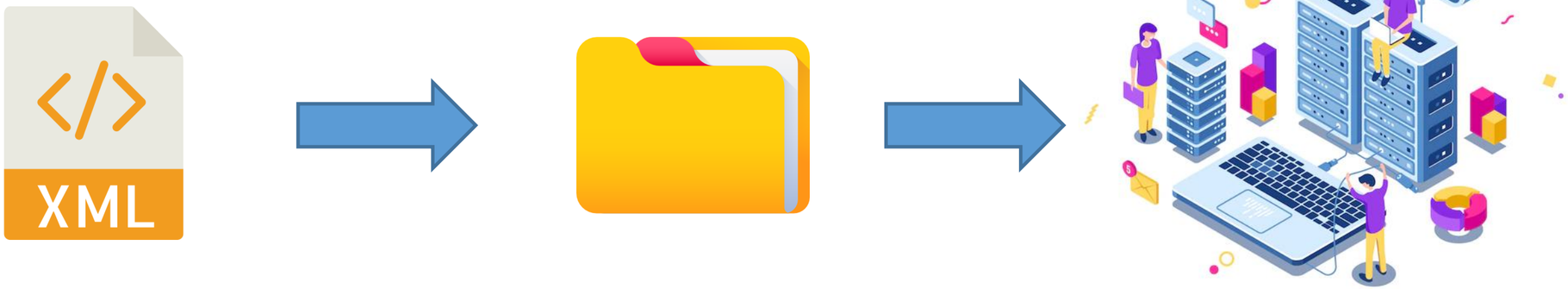
The differences between XML and JSON are as follows:

| XML | JSON |
| --- | --- |
| Complex to learn | Easy to learn |
| More complex to read and write | Simple to read and write |
| Document-oriented | Data-oriented |
| Highly secured | Less secure |
| Ability to provide the display capability | No ability to provide display capabilities |

# Send XML Payload in REST Assured

Payload is the body of request and response.

To send XML payload in REST assured:




XML Payload

Save in location

Send to server

# Send XML Payload in REST Assured

An example of an XML file:

Save it as payload.xml

```
<?xml version="1.0" encoding="UTF-8"?>
- <letter>
              <to>John</to>
             <from>Kyra</from>
</letter>
```

# Send XML Payload in REST Assured

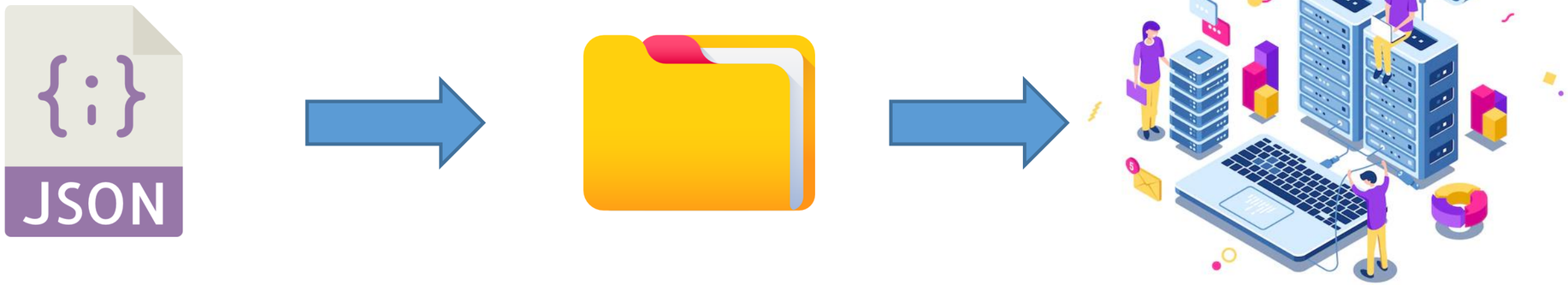
An example of a Java code:

Use the following code in Java code block:

```
File xmlDataFile = newFile("src/test/resources/Payloads/payload.xml");
RestAssured
      .given()
            .baseUri("https://xyz.com/page")
            .contentType(ContentType.XML)
            .body(xmlDataFile)
```

# Send JSON Payload in REST Assured

To send JSON payload in REST assured:




Create the JSON payload

Save in the location

Send payload to server

# Send XML Payload In REST Assured

An example of a JSON file:

Save it as payload.json

```
{ "student_details": [
        {
              "name": "John",
              "class": "5th"
        }
        ]
}
```

# Send XML Payload In REST Assured

An example of a Java code:

Use the following code in Java code block:

```
File jsonDataFile = newFile("src/test/resources/Payloads/payload.json");
RestAssured
      .given()
            .baseUri("https://xyz.com/page")
            .contentType(ContentType.JSON)
            .body(jsonDataFile)
```

# Parsing XML Response in REST Assured

A website provides data in an XML format that is used for parsing.

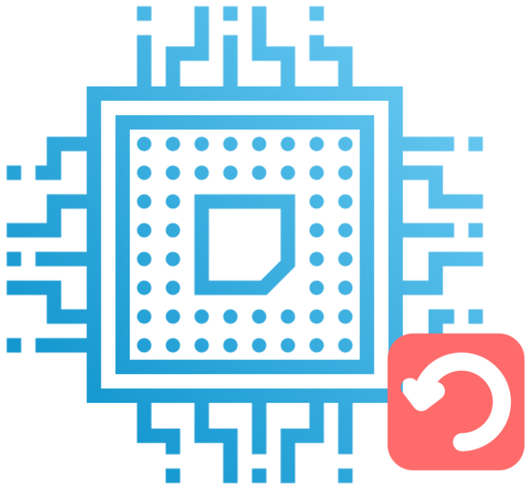

Any website or page

Data in XML format

Parse response

# Parsing XML Response in REST Assured

The steps to parse response in XML are:



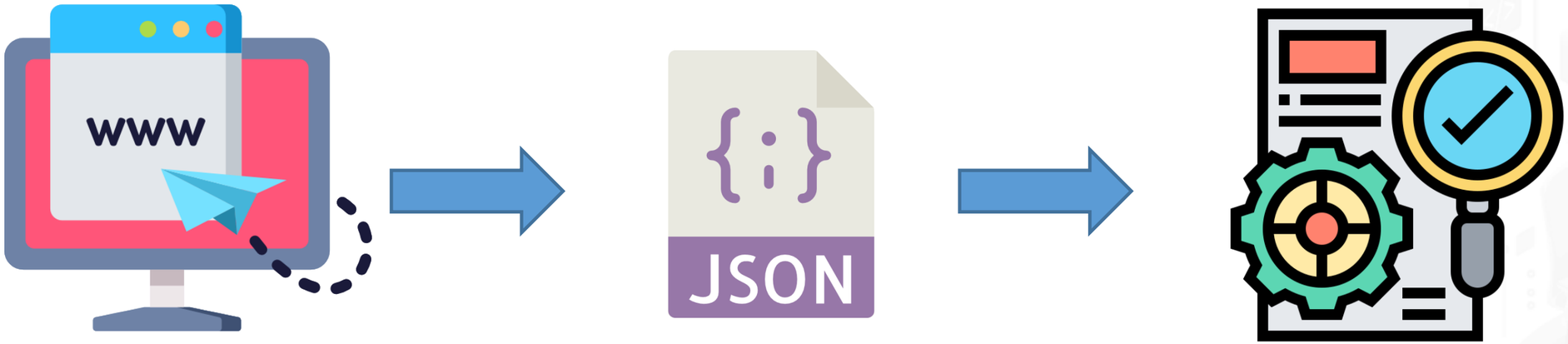
01 Use the get() method in when()

02 In the then() method, use body() with codes, such as - length or greaterThan()

03 Print in the console

# Parsing JSON Response in REST Assured

A website provides data in a JSON format that is used for parsing.




Any website or page

Data in JSON format

Parse response

# Parsing JSON Response in REST Assured

The steps to parse response in JSON are:

01

Use the location with get() method in when()

02

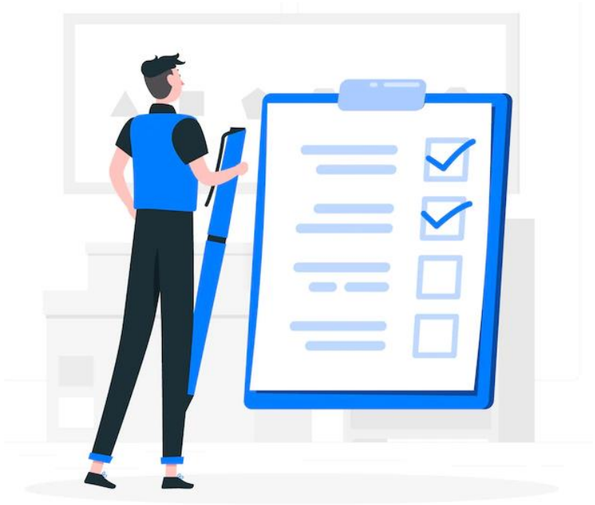
In then() method, use body() with codes, such - as greaterThan()

03

Print in the console

# Native Logging of REST Assured

To debug the software failures, logging is performed.



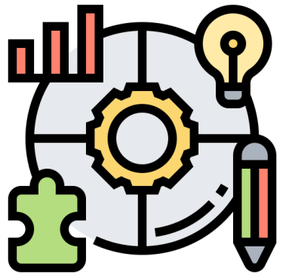
- Normal logging
- Conditional logging

# Methods for Logging in REST Assured

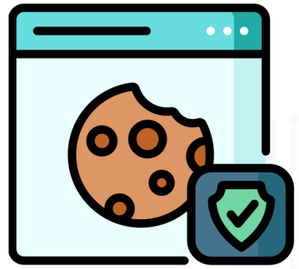
Various logging methods that are used along with log() are:

all()

body()

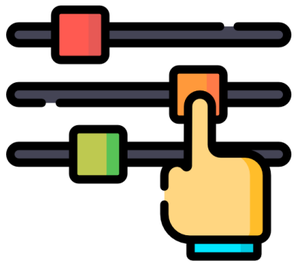


method()



cookies()

header()



params()


uri()

# Logging of REST Assured Example

An example of the log() method before making a request and after getting a response:

```
@Test
Void testLogging() {
      RestAssured.given()
      .when()
      .log().body()
      .get("xyz.com/xyz")

      .then()
      .log().body()
      }
```

# Key Takeaways

- XML is a markup language and can be used to show data.
- JSON is a key and pair format data used to send data from a server to websites.
- A user must install Maven dependencies for parsing and validating methods.
- Logging before making request and after getting response is essential.