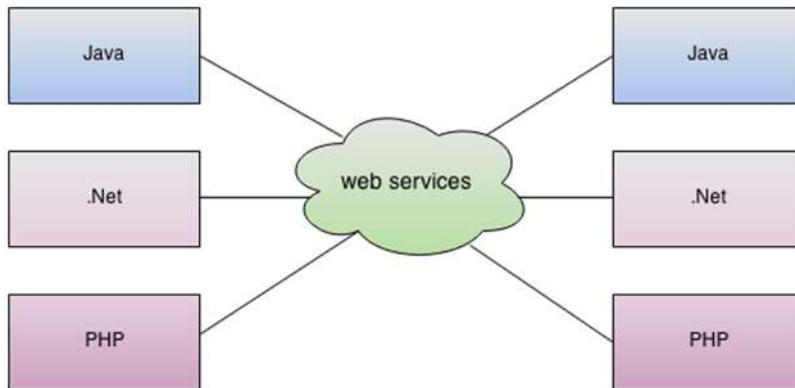


Webservices:

A web service is any piece of software that makes itself available over the internet and uses a standardized messaging system.

A **Web Service** is can be defined by following ways:

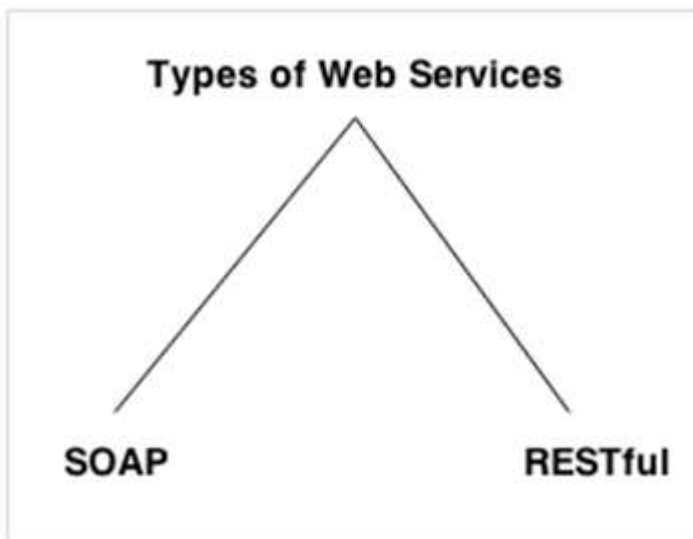
- It is a client-server application or application component for communication.
- The method of communication between two devices over the network.
- It is a software system for the interoperable machine to machine communication.
- It is a collection of standards or protocols for exchanging information between two devices or application.



Types of Web Services

There are mainly two types of web services.

1. SOAP web services.
2. RESTful web services.



Web Service Components

There are three major web service components.

1. SOAP
2. WSDL
3. UDDI

SOAP

SOAP is an acronym for Simple Object Access Protocol.

SOAP is a XML-based protocol for accessing web services.

SOAP is XML based, so it is platform independent and language independent. In other words, it can be used with Java, .Net or PHP language on any platform.

WSDL

WSDL is an acronym for Web Services Description Language.

WSDL is a xml document containing information about web services such as method name, method parameter and how to access it.

WSDL is pronounced as wiz-dull.

UDDI

UDDI is an acronym for Universal Description, Discovery and Integration.

Rest Vs Soap

No.	SOAP	REST
1)	SOAP is a protocol .	REST is an architectural style .
2)	SOAP stands for Simple Object Access Protocol .	REST stands for REpresentational State Transfer .
3)	SOAP can't use REST because it is a protocol.	REST can use SOAP web services because it is a concept and can use any protocol like HTTP, SOAP.
6)	SOAP defines standards to be strictly followed.	REST does not define too much standards like SOAP.
7)	SOAP requires more bandwidth and resource than REST.	REST requires less bandwidth and resource than SOAP.
9)	SOAP permits XML data format only.	REST permits different data format such as Plain text, HTML, XML, JSON etc.
10)	SOAP is less preferred than REST.	REST more preferred than SOAP.

Introduction:

What is Postman?

API client and it is used to develop, test, share and document APIs

Download and install postman

<https://www.getpostman.com/>

Download windows app, there is also chrome extension (we will talk later)

Understanding POSTMAN UI (User interface) :

Dialog box – we will learn

File, edit, and help

History of all requests can be found here

Main window – builder window

View – toggle window (side by side) to see request and response side by side

How to create First API Request and Run in Postman:

1. How to create an API request
2. How to run the request
3. How to analyze response

What is COLLECTION

Create and Manage

- What is COLLECTION
Group of API requests that can be stored and saved in logical arrangement
Forms the basis for advanced operations in POSTMAN
- How to create Collection
- How to create folders inside collection
- How to arrange requests inside collection

How to run COLLECTION:

- How to run a collection
- How to analyse the result

Variables:

1. What are variables in POSTMAN : elements (data store) that can take different values
2. Why to use variables: to reuse values at multiple places, avoid repetition, to avoid re-work when value changes
3. How to create variables: to avoid re-work when value changes
4. How to refer variables
5. Global variables
6. Console logs

How to set and get variables through scripts

1. How to get variables through scripts
2. How to set variables through scripts

```
console.log("Hello World...")
```

```
let urlVar = pm.variables.get("url");
```

```
console.log("variables" + urlVar);
```

```
pm.variables.set("name", "Avyukth");
```

```
console.log(pm.variables.get("name"))
```

```
let globalVar = pm.globals.get("Env");
```

```
console.log("global Var " + globalVar);
```

How to create Environment:

1. what is environment
2. How to create environment
3. how to use Environment
4. how to delete environment

Environment is key value pair

Example: Post request

How to use Script Snippets:

1. How to create quick scripts using Snippets

How to create First Test:

1. What are Tests in Postman
2. How to create tests at Request level
3. How to create tests at FOLDER level
4. How to create tests at COLLECTION level

Postman tests are javascript code that is executed after receiving the response

How to Debug:

1. How to debug with Postman Console
2. How to open Postman Console window
3. Information shown on Postman Console window

4. Clear logs
5. Console.log()
6. Console.info()
7. Console.warn()
8. Console.error()
9. App debug Logs: Developer > DevTools

How to run from Command line (Newman):

How to run postman requests/tests from command line

1. Install node.js
2. Install newman
3. Export collection and run from command line

Newman is a command line collection runner for postman

Open command prompt and verify the below commands

- Node -v
- Npm -v (node package module)
- Npm install -g newman - in command prompt

Step1. Install node.js

Check if node and npm are installed

Step 3: Install Newman

Npm install -g newman

Step 4: Export collection as json file

Step 5: On cmd goto location of collection json file

Step 6: Run command

Newman run collectionfilename.json

Newman run -h (shows the all commands)

How to run from Jenkins

How to create and manage WORKSPACES:

1. What is a workspace
2. How to create and manage workspace
3. How to share collections in workspaces
4. How to remove a collections from workspace

Workspace is an area where you can group, organize and manage your collections Postman 6.0

Data Driven testing:

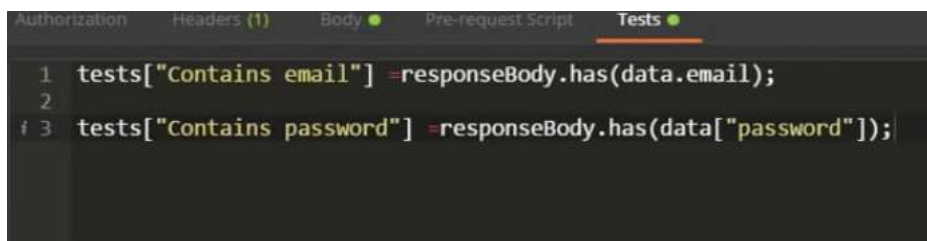
Data Driven Testing - How to use csv and json data files

Today we will learn:

1. How to get data from csv file
2. How to get data from json file
3. How to Run data driven API Requests
4. How to Run data driven Tests

Useful TIPS

Data variables can be used wherever environment variables can be used except in pre-request and test scripts



```
1 tests["Contains email"] =responseBody.has(data.email);
2
3 tests["Contains password"] =responseBody.has(data["password"]);
```

Run Collections from remote using url:

1. How to get Collection URL
2. How to run Collection remotely (from anywhere) using collection url

Step 1 : Get your collection url

Step 2 : Get Newman and run with command
`newman run "url"`

How to run Soap Requests:

1. How to add SOAP request in Postman
2. Run and Validate

Step 1 : Get Soap request url or WSDL url add to request url

Step 2 : Set method as POST

Step 3 : Set body as raw and set text/xml

Step 4 : Provide request data in body

Step 5 : Run and validate

I

Wizdler add on for chrome