**Web Service:** It is a method of communication b/w two applications or electronic devices over the www. It is collection of operations.

**Types of web service:**

**i) Soap(simple object access protocol)**

If we communicate web services by **soap** protocol is call “soap web services”.

It accepts soap protocol messages.

It uses XML as underline language

**ii) Representational State Transfer (REST)**

It expects data in rest Style and response back in rest style.

It uses Json language

**SOAP**

It is a protocol for sending and receiving messages b/w applications without confronting interoperability issue.

**Structure Of Soap:**

Soap Envelope

Soap Header

Soap Body

Soap Fault

To Check Web services:

* **We need Contarcat its WSDL**

**WSDL( Web Services Description Language):**

It Describe web services, it has what all operations it support etc..

**SOAP UI TOOL:**

* Down load soap ui tool and install it
* Click on Soap in home page
* Create New project
* And Browse for WSDL file (or get URL)
* Click Ok

**Creating Test Suite:**

* Right Click On Project and select new test suite
* Give test suite name
* Right click on test suite
* Select test suite and give name
* Right click on test steps
* Add step

**Test Example Project With Localhost8082 and DB**

**Basic Assertions for Test validations**

* Add Project
* Create Testsuite
* Create Testcase
* Right click on teststeps
* Add steps 🡪 soap reqst
* Ok 🡪 ok 🡪 ok
* Add employee Details
* Click On Assertion(green+ symbol on top)

**// Contains assertion**

* Click on “Contains”
* Type “True”
* Click on “Assertions in the bottom”
* Click on contains valid
* Then type other word thn true, it fails

**// Not Contains assertion**

* Click On Assertion(green+ symbol on top)
* Click on property content
* Click on not contain, ok
* Enter false, it pass

**// Soap response assertion**

* Click On Assertion(green+ symbol on top)
* Click on compliance, status
* Select soap response 🡪 ok

**// Http Code**

* Click On Assertion(green+ symbol on top)
* Click on compliance, status
* Select “valid http status code”
* Ok, enter 200( to check http value, in right side execution window, select raw and see)
* It pass

**// SLA**

* **Click on sla**
* **Click on response sla**
* **Give 200**

**// Security**

* Click on security
* Click on sensitive info
* Click on green +
* Enter random
* Enter “info”

**REST Manual Testing With SOAP UI**