1. **https://www.udemy.com/soapui-with-groovy-with-realtime-projects/**

**Ans:**

**Or find answers for below questions and study:**

1. **Study basics from SOAPUI.org (study how to test soap and rest services)**

**Ans:** [**https://www.soapui.org/getting-started/your-first-soapui-project.html**](https://www.soapui.org/getting-started/your-first-soapui-project.html)

[**https://www.soapui.org/rest-testing/getting-started.html**](https://www.soapui.org/rest-testing/getting-started.html)

1. **what is web service?**

**Ans:** Web services are open standard (XML, SOAP, HTTP etc.) based Web applications that interact with other web applications for the purpose of exchanging data. Web Services can convert your existing applications into Web-applications.

1. **what is XML and what will be format?**

A web services takes the help of XML to tag the data, format the data.

XML is called Extensible Markup Language which is designed to carry or transport and store data. XML tags are not as predefined as HTML, but we can define our own user tags for simplicity. It mainly concentrates on storing of data, not on displaying of data.

1. **steps to test soap and rest web services using soapUI pro**

**(**[**www.soapui.org)**](http://www.soapui.org))

**http://www.softwaretestinghelp.com/soapui-tutorial-13-soap-vs-rest-services/**

1. **what is request xml and response XML**
2. **Different http methods?**

Currently, HTTP is the most popular option for service transport. HTTP is simple, stable, and widely deployed. Furthermore, most firewalls allow HTTP traffic. This allows XML-RPC or SOAP messages to masquerade as HTTP messages.

1. **what is json and how is the format look like?**
2. **how to read from json string (for validation purpose) and how to create json data for input**
3. **difference is soap web service and rest web service**

There are many differences between SOAP and REST web services. The important 10 differences between SOAP and REST are given below:

|  |  |  |
| --- | --- | --- |
| **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. |
| 4) | SOAP **uses services interfaces to expose the business logic**. | REST **uses URI to expose business logic**. |
| 5) | **JAX-WS** is the java API for SOAP web services. | **JAX-RS** is the java API for RESTful web services. |
| 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. |
| 8) | SOAP **defines its own security**. | RESTful web services **inherits security measures** from the underlying transport. |
| 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. |

1. **assertions in soapUI**

**Assertion** means act of affirming or stating something. It can also be interpreted as check point or a validation point. Once a request is sent to a web server a response is received.

1. **xpath from w3school**

**(**[**http://www.w3schools.com/xml/xml\_xpath.asp)**](http://www.w3schools.com/xml/xml_xpath.asp))

1. **what is / and // in xpath**

/ introduces an absolute location path, starting at the root of the document.

//ename selects all ename elements in a document.

“ .” introduces a relative location path, starting at the context node.

1. **how to read attributes in xpath**
2. **different functions in xpath (contains(), text() etc)**
3. **how to read child nodes/parent nodes in xpath**
4. **what is XSD (schema), wsdl, wadl and what is contains**
5. **security testing of soap and rest api**
6. **what is endpoint and operation names**
7. **Groovy script**

**(connecting to database, declaring variables, foreach loop, converting json string to object)**

**21) soap UI environment tab , what is the use of this**

**22) Calling soap services directly in selenium with jax-rs and jax-ws frameworks**

**23) Calling rest services using bdd/cucumber or in feature file**

**24) Write test cases to test soap services**

**25) Write test cases to test res services**

**Other tools:**

**RestAssured (u can learn this after completing all QA concepts)**

**Postman (u can learn this after completing all QA concepts)**

### **How to Select Correct Test Cases for Automation Testing**

<http://www.softwaretestinghelp.com/manual-to-automation-testing-process-challenges/>

### **Test Automation Framework Design**

<http://www.evoketechnologies.com/blog/test-automation-framework-design/>

* [**SoapUI Projects**](https://www.soapui.org/soapui-projects/soapui-projects.html)[**SOAP and WSDL**](https://www.soapui.org/soap-and-wsdl/getting-started.html)[**REST**](https://www.soapui.org/rest-testing/getting-started.html)

https://www.soapui.org/functional-testing/validating-messages/getting-started-with-assertions.html

### **Webservices**

### **http://www.javatpoint.com/web-services-interview-questions**

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

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

### advantages of web services

* **Interoperability**: By the help of web services, an application can communicate with other application developed in any language.
* **Reusability**: We can expose the web service so that other applications can use it.
* **Modularity**: By the help of web service, we can create a service for a specific task such as tax calculation etc.

A web service takes the help of SOAP to transfer a message.

* It is available over the Internet or private (intranet) networks.
* It uses a standardized XML messaging system.
* It is not tied to any one operating system or programming language.
* It is self-describing via a common XML grammar.
* It is discoverable via a simple find mechanism.

Web services are open standard (XML, SOAP, HTTP etc.) based Web applications that interact with other web applications for the purpose of exchanging data.

Web Services can convert your existing applications into Web-applications.

A web service enables communication among various applications by using open standards such as HTML, XML, WSDL, and SOAP.

* SOAP is a communication protocol.
* SOAP is for communication between applications.
* SOAP is a format for sending messages.
* SOAP is designed to communicate via Internet.
* SOAP is platform independent.
* SOAP is language independent.
* SOAP is simple and extensible.
* SOAP allows you to get around firewalls.

# Advantages of SOAP Web Services

SOAP stands for Simple Object Access Protocol. It is a XML-based protocol for accessing web services.

SOAP is a W3C recommendation for communication between two applications.

SOAP is XML based protocol. It is platform independent and language independent. By using SOAP, you will be able to interact with other programming language applications.

## Advantages of RESTful Web Services

**Fast**: RESTful Web Services are fast because there is no strict specification like SOAP. It consumes less bandwidth and resource.

**Language and Platform independent**: RESTful web services can be written in any programming language and executed in any platform.

**Can use SOAP**: RESTful web services can use SOAP web services as the implementation.

**Permits different data format**: RESTful web service permits different data format such as Plain Text, HTML, XML and JSON