Soap and Rest web services

SoapUI -- Automation Tool to test webservices

SOAP

REST

what do we need before testing an API/Webservice:

UserStory/Requirement specification:given using Rally/JIRA/Word/excel/swagger

Request and Response - Headers and body(payload)

create order api/ service

Request Payload:

required: id, productid, address

optional: name, amount

sample request:

{

orderDetails:{

"name":"Gina"

"customerid":373878

productname:

productid:

address:{

city:

zip:

street:

}

amount:

}

}

sample response:

all 3 fields are required:

{

status:

orderid:889789

createdDateTime:

}

request and response payload:

required/optional params

data type of parameters

min length

max length

what do we test in a webservice:

FunctionalTesting

-

Important assertions:

status code

schema compliance

contenttype

key presence

value presence

key-value comparisions

data count

data order

data types

valid(happy path scenarios)/invalid/boundary conditions

SecurityTesting

LoadTesting

USING SOAPUI:

SOAP

http://www.webservicex.net/globalweather.asmx?WSDL

http://www.service-repository.com/

http://www.predic8.com:8080/crm/CustomerService?wsdl

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:web="http://www.webserviceX.NET">

<soapenv:Header/>

<soapenv:Body>

<web:GetCitiesByCountry>

<web:CountryName>?</web:CountryName>

</web:GetCitiesByCountry>

</soapenv:Body>

</soapenv:Envelope>

statuscode

contentype

schemacompliance

SLA-responsetime

contains

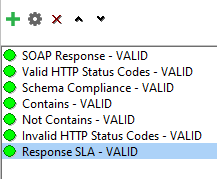
notcontains

validstatuscode

invalidstatuscode

xpath

jsonpath



TestSuite-TestCases- TestSteps

compare actual with expected- succes/failure- we use assertions for comparing expected vs actual

properties - key value pairs which we need for different steps

propertytransfer - data transfer from one step to other step

dependenncy webservice testing- pass parameters from one response to another request

eg: get after post

1. post request and get id that is created

2. we want to pass the id from the post response to get request

3. get response fields match with post request fields or query DB with post id and see that data matches with post request

eg: login and get session idi need to pass this session id for rest of the requests

Enter captcha

enter otp password

see that you receive a success mail or message

Groovy

JDBC

Mock

SecurityTesting

LoadTesting

DataValidation/dataMapping

customerid

select \* from customers where customerid=”454”

JDBCREquest

TestSteps:

CreateRequest(HttpRequest,SoapRequest,JDBCRequest etc....)

Properties

PropertyTransfer

ConditionalGoTo

ManualTestStep

Delay

PropertyTransfer:

we can tansfer the properties from one test step to other

properties step to request step

one step response to other step request

http://www.dneonline.com/calculator.asmx?WSDL

addrequest test step's response to multiplyrequest test step's request

JDBC- Java database connectivity- helps to connect to DB using programming language

hostname: localhost (ipadress of a machine where DB is setup)

port: 3306

username:root

pwd: Excellence

https://mvnrepository.com/artifact/mysql/mysql-connector-java/6.0.6

1. download respective DB jdbc jar and copy that to C:\Program Files (x86)\SmartBear\SoapUI-5.3.0\lib

2.Give connection details in SoapUI JDBC test step

driver: com.mysql.jdbc.Driver

connection string: jdbc:mysql://localhost:3306/MySQL?user=root&password=Excellence

REST:

WADL

https://api.qa.talentscreen.io/v1/subjects

https://api.qa.talentscreen.io - resource

v1/subjects- endpoint

https://itunes.apple.com/lookup?id=909253

https://developers.google.com/maps/documentation/directions/start- get below url and api key

https://maps.googleapis.com/maps/api/directions/json?origin=Disneyland&destination=Universal+Studios+Hollywood4&key=AIzaSyAUjYps53kX5zbM\_CquwZEtJ4kaEfx2Dw4

DataSourceLoop-SoaUIPro- data driven testing