Web Service:

What is Web service ?

Should be a machine to machine (application to application) interaction

Should be a interoperable - Not platform dependent

Should allow communication over a network

How?

How does data exchange between application takes place ?

* Input to a webservice is called "Request"
* Output to an webservice is called "Response"

XML is platform independent

Graphical user interface, text, application

Description automatically generated

JSON stands for Javascript object notation

Is a platform independent

It is typically on front end now it is used on back end (nodejs)

Graphical user interface, text, application, email

Description automatically generated

Every Webservice offers Service Definition

It specify the structure of Request/Response format

Diagram

Description automatically generated

Text

Description automatically generated

Request - Input to the webservice

Response - Output from the Webservice

Text

Description automatically generated with medium confidence

Diagram

Description automatically generated

Example:

Webservice - service provider

Application A - Consumer of Webservice

Endpoint - What url the service is exposed. How can service consumer call the service which is exposed by service provider.

A picture containing text

Description automatically generated

Transport - Defines how the service is called.

Is service exposed over internet - HTTP (web)

Is service exposed over a Q - MQ(communication over a Q)

Diagram

Description automatically generated

Kinds of Webservices:

SOAP - (simple object access protocol) defines a specific way of building webservice.

In SOAP we use XML as the request exchange format

Structure:

SOAP-ENV : Envelope

SOAP\_ENV: Header

SOAP-ENV: Body

SOAP - Service Defination - WSDL(Web service Defination Language)

WSDL - Endpoint

All operations

Request Structure

Response Structure

REST - Representational State Transfer

HTTP - Hyper Text Transfer

Protocol

HTTP Request Method:

1. GET - get the details of something

2. PUT - Update something

3. POST - Create Something

HTTP Response Status Code

1. 200

2. 404 …

REST is completely build on top of HTTP

Diagram

Description automatically generated