***WEB SERVICES***

* Web services provide a common platform that allows multiple applications to communicate with each other

There are mainly two types of web services

1. SOAP web services

2. RESTful web services.

SOAP (Simple object access protocol)

Advantages: -

* It is a xml-based protocol for accessing web services
* It is platform independent and language independent.
* SOAP defines its own security.
* SOAP is secure than rest API.

Disadvantages: -

* SOAP uses XML Format, must be parsed to read.
* SOAP Supports only XML.

What is REST API?

REST: - Representational State Transfer

API: - API stands for **Application Programming Interface** which allows software applications to communicate with each other via API calls.

* A REST API defines a set of functions to process requests and responses via HTTP and HTTPS protocol.
* A Restful API is an application program interface (API) that uses HTTP methods to GET, PUT, POST and DELETE.

Advantages: -

* Rest does not have any protocols (Rules)
* It is very fast because it consumes less bandwidth and resource
* Language and platform independent (We can use any language for development and platform for execute)
* Response data in different types XML, JSON, HTML, TEXT and YAML

Disadvantages: -

* Rest is not secure than SOAP

What are the main HTTP Methods?

GET ==> Used to get information from web server

POST ==> Used to create new record in web server

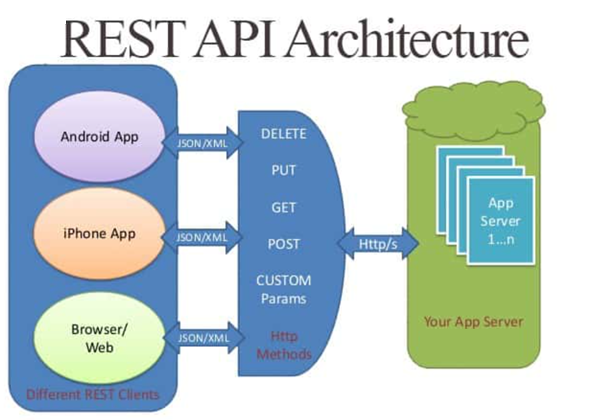
PUT ==> used to update existing record in web server

DELETE ==> Used to delete record in web servers

# Install below modules to do rest operations in python

python -m pip install flask

python -m pip install requests



# IMPORTEND RESPONSE STATUS CODES

|  |  |
| --- | --- |
| 200 OK | The request is OK. |
| 201 Created | The request is complete, and a new resource is created. |
| 202 Accepted | The request is accepted for processing, but the processing is not complete |

|  |  |
| --- | --- |
| 400 Bad Request | The server did not understand the request. |
| 401 Unauthorized | The requested page needs a username and a password. |
| 402 Payment Required | *You can't use this code yet*. |
| 403 Forbidden | Access is forbidden to the requested page. |
| 404 Not Found | The server can't find the requested page. |
| 405 Method Not Allowed | The method specified in the request is not allowed. |

|  |  |
| --- | --- |
| 500 Internal Server Error | The request was not completed. The server met an unexpected condition. |
| 501 Not Implemented | The request was not completed. The server did not support the functionality required. |