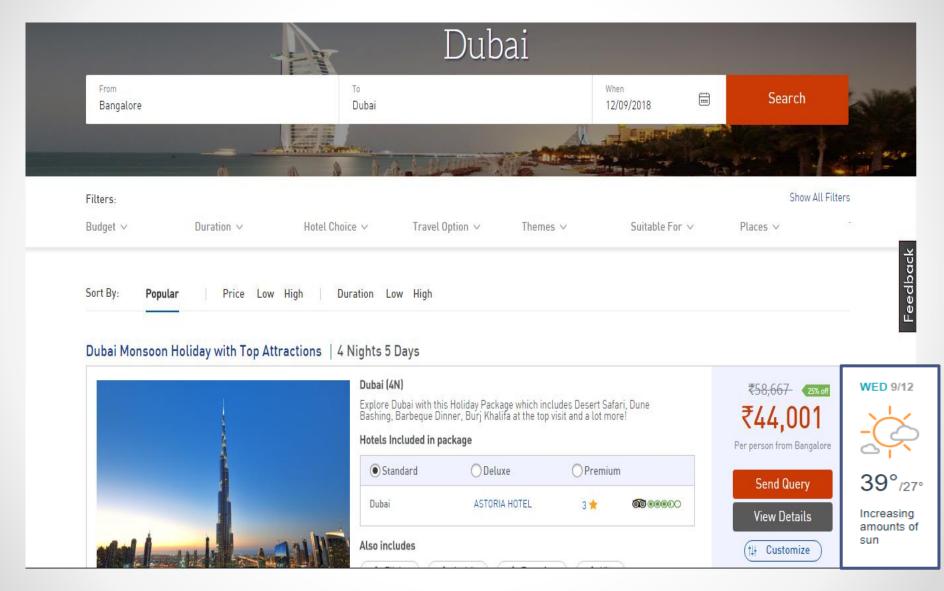
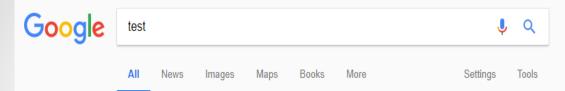
# REST

(REpresentational State Transfer)





Sign in

About 4,10,00,00,000 results (0.30 seconds)

#### Speedtest by Ookla - The Global Broadband Speed Test

www.speedtest.net/ ▼

Test your Internet connection bandwidth to locations around the world with this interactive broadband speed test from Ookla.

Apps · Windows · Ookla Speedtest · Mac

#### Fast.com: Internet Speed Test

https://fast.com/en/ ▼

How fast is your download speed? In seconds, Fast.com's simple Internet speed test will estimate your ISP speed.

#### Telstra speed test

https://speedtest.telstra.com/ ▼

Telstra provides this test to help customers measure their connection speed. There are many different factors that impact the speeds you receive including the ...

#### Xfinity Speed Test

speedtest.xfinity.com/ ▼

Xfinity Speed Test tests your Internet connection speed.

#### Spectrum.net Spectrum Speed Test

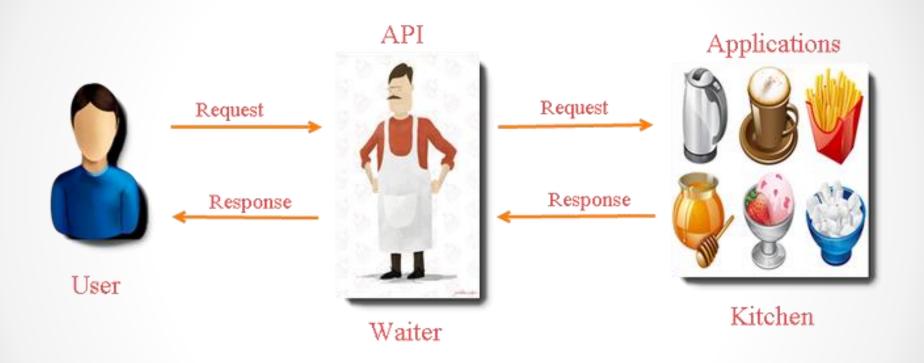


### **Test**

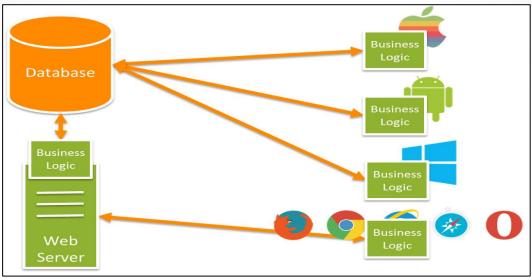
Test(s) or TEST may refer to: Test (assessment), an assessment intended to measure the respondents' knowledge or other abilities. List of tests.

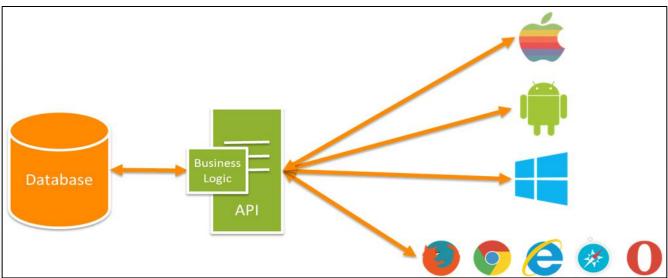
Test - Wikipedia Wikipedia

Feedback



https://keshavtechinfo.wordpress.com/api-testing/api-manual/





https://blogs.msdn.microsoft.com/martinkearn/2015/01/05/introduction-to-rest-and-net-web-api/

## What is REST?

- The REST architecture was originally designed to fit the <u>HTTP</u> <u>protocol</u> that the world wide web uses.
- Central to the concept of RESTful web services is the notion of resources.
- Resources are represented by <u>URIs</u>.
- The clients send requests to these URIs using the methods defined by the HTTP protocol, and possibly as a result of that the state of the affected resource changes.

## REST

- Simple web service as an example: querying a phonebook application for the details of a given user
- The query will probably look like this: <a href="http://www.acme.com/phonebook/UserDetails/12345">http://www.acme.com/phonebook/UserDetails/12345</a>
- GET /phonebook/UserDetails/12345 HTTP/1.1

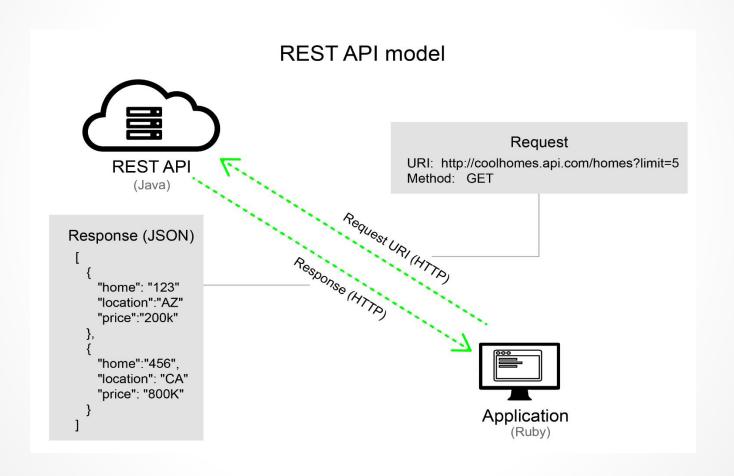
Host: www.acme.com

Accept: application/xml

Complex query:

http://www.acme.com/phonebook/UserDetails?firstName=John&lastName=Doe

# ReST API Model



# REST over HTTP – Uniform interface

- CRUD operations on resources
  - o Create, Read, Update, Delete
- Performed through HTTP methods + URI

| CRUD Operations | 4 main HTTP methods |                |
|-----------------|---------------------|----------------|
|                 | Verb                | Noun           |
| Create (Single) | POST                | Collection URI |
| Read (Multiple) | GET                 | Collection URI |
| Read (Single)   | GET                 | Entry URI      |
| Update (Single) | PUT                 | Entry URI      |
| Delete (Single) | DELETE              | Entry URI      |

# HTTP Methods

| HTTP<br>Method | Action                              | Examples  |
|----------------|-------------------------------------|---|
| GET            | Obtain information about a resource | http://manipal.edu/api/v1/students (retrieve student list)  |
| GET            | Obtain information about a resource | http://manipal.edu/api/v1/students/123 (retrieve student #123)                                    |
| POST           | Create a new resource               | http://manipal.edu/api/v1/students (create a new student, from data provided with the request)    |
| PUT            | Update a resource                   | http://manipal.edu/api/v1/students/123 (update student #123, from data provided with the request) |
| DELETE         | Delete a resource                   | http://manipal.edu/api/v1/students/123<br>(delete student #123)                                   |

### **HTTP Status Codes**

Level 200 (Success)

200: OK

201: Created

203: Non-Authoritative

Information

204: No Content

Level 400

400: Bad Request

401: Unauthorized

403 : Forbidden

404 : Not Found

409 : Conflict

Level 500

500 : Internal Server Error

503 : Service Unavailable

501: Not Implemented

504 : Gateway Timeout

599: Network timeout

502 : Bad Gateway

# Characteristics of a REST system

- Client-Server: A Client-Server Architecture separates the user interface (the Client) from data processing and storage (the Server) so that a system has improved portability, scalability, and malleability (ability to modify on the fly).
- **Stateless**: Each request from a client must contain all the information required by the server to carry out the request. In other words, the server cannot store information provided by the client in one request and use it in another request. This makes the interface between Clients and Servers reliable.
- Cacheable: Caching is all about making information available at the right place at the right time. Your web browser caches data from websites (assets like images, colors, types, fonts, etc) so that it can reload them faster the next time you view them. Caching, if implemented properly, can improve the scalability and performance of an application significantly.

# Characteristics of a REST system

- **Uniform Interface**: The uniform interface constraint is fundamental to the design of any RESTful system. It simplifies and decouples the architecture, which enables each part of a system (e.g. the Client or the Server) to evolve independently which makes a system more flexible and easier to maintain..
- Code on demand: Code on Demand means that Servers can temporarily extend or customize the functionality of a Client by transferring executional code like Java applets or client-side JavaScript. This increases the malleability of an application built on a REST API.