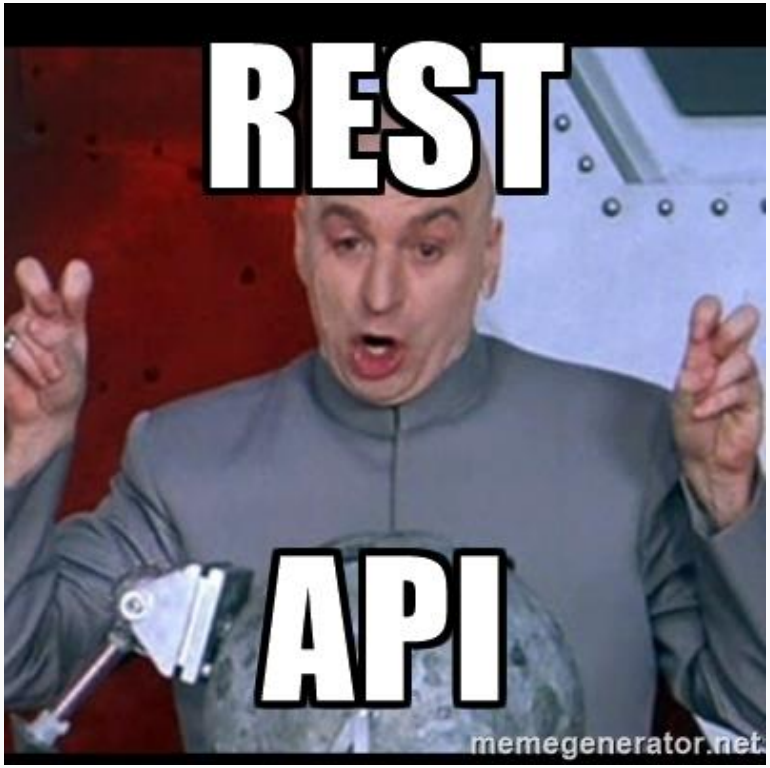
CSC309 - Winter 2017

Lab 6 - REST and Sessions

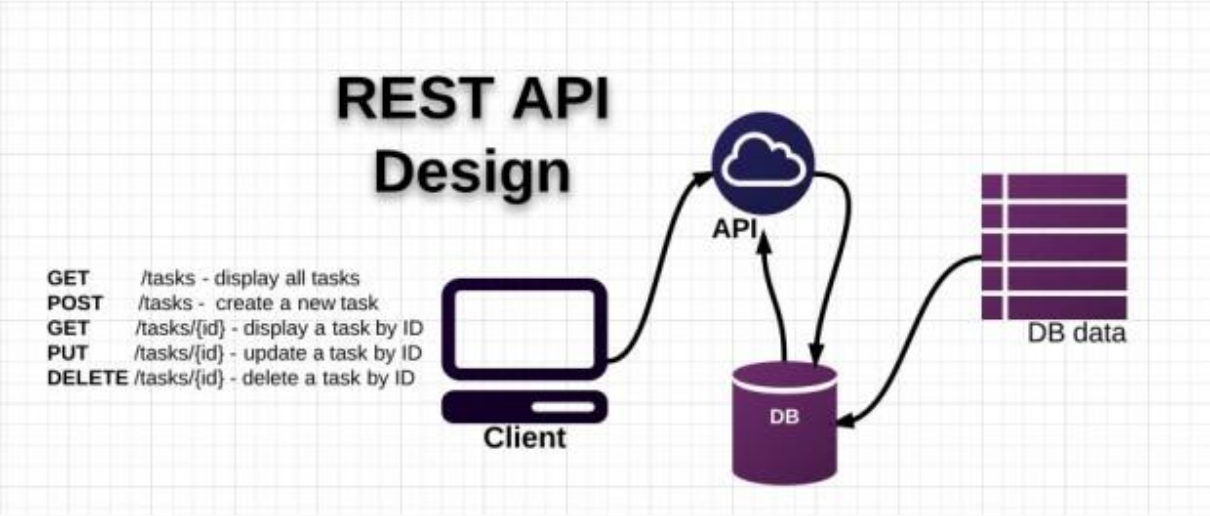
REST



REST stands for **Re**presentational **S**tate **T**ransfer.

It relies on a stateless, client-server, cacheable communications protocol -- and in virtually all cases, the HTTP protocol is used.

Rest Architecture



- URIs: persistent identifier
- Verbs: Create, Retrieve, Update, Delete becomes POST, GET, PUT, and DELETE
- Accept headers control whether you want XML, HTTP, or even a Java Object representing the resource.
- HTTP is stateless, but ReST allows you to maintain the state in the object and representing the state in the representation.
- REST is a lightweight alternative to mechanisms like RPC (Remote Procedure Calls) and Web Services (SOAP, WSDL, et al.)

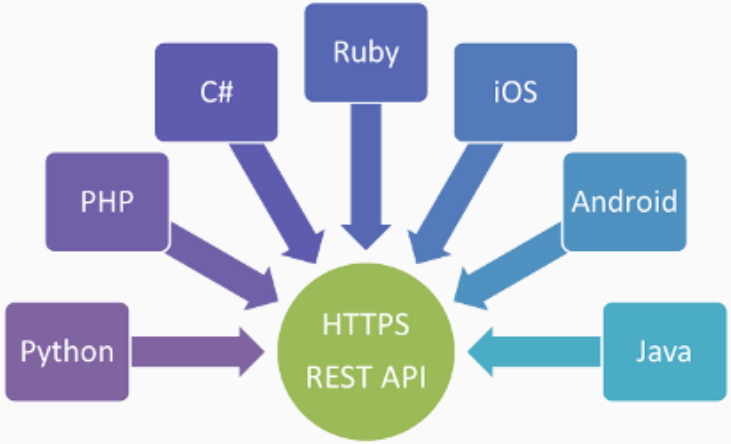
So What Exactly is ReST?

REST is an architecture style for designing networked applications.

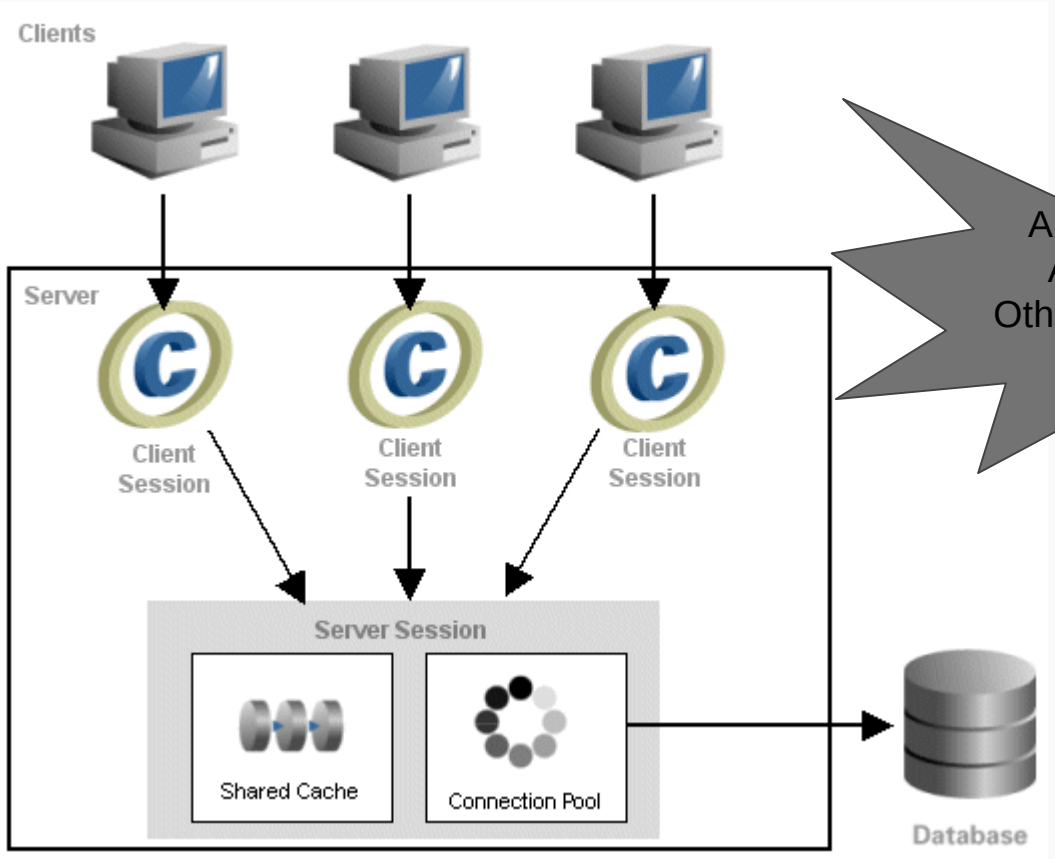
The idea is that, rather than using complex mechanisms such as CORBA, RPC or SOAP to connect between machines, simple HTTP is used to make calls between machines.

In many ways, the World Wide Web itself, based on HTTP, can be viewed as a REST-based architecture.

RESTful applications use HTTP requests to post data (create and/or update), read data (e.g., make queries), and delete data. Thus, REST uses HTTP for all four CRUD (Create/Read/Update/Delete) operations.



Web Sessions



A session token is a unique identifier that is generated and sent from a server to a client to identify the current interaction session. The client usually stores and sends the token as an HTTP cookie or sends it as a parameter in queries.

Demo and cURL

cURL is a command line tool for getting or sending files using URL syntax.

cURL is installed on most *NIX systems, windows users might need to fiddle with installation tutorials.

For the purpose of demo we will be using cURL the lab code also includes an alternative approach using PostMan, which is a commonly used API testing software

Quiz Time