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REST

Theory

REST (Representational state transfer) or REST API is an architecture that describes the standard of which computer systems communicate on the web. A client trying to, for example access information from a system using REST (also known as RESTful systems) can expect the system to follow the constraints described by the REST architecture.

One of the main properties of REST is the separation of client and server, this means that the server and client can be implemented without each other in mind. The reason this is possible is because REST uncouples the two by defining the way information is shared between them.

Another main property is statelessness which means that a client does not need to know the current activity of the server that receives a message, and the server does not need to know the activity or state of a client that sends a message.(1)

Tools

Json

Json stands for JavaScript Object Notation that transmits data using only text(strings) with a specified format. Json is widely used in client-server communication for its simple format and the need for statelessness between server and client.(2)

web.py

web.py is a python web framework that simplifies web development. This framework simplifies the processing of HTTP requests such as POST and GET.(3)

Results

Our project group implemented a small Client/Server program that uses POST and GET requests in Python with a specific format of message passing(JSON). This system would be used to store users, with their name and age, in a database(.db file) and show the available users. Every user would then be assigned a unique ID. The data in the database are stored in a specific way. The storage was done with the DataBase class we implemented that helps us read/write from/to the database.

We implemented three functions: add_users that added users in the database, get_user that returned a user with a specific ID and get_all_users that returned all available users in the database.

References

(1) https://www.codecademy.com/articles/what-is-rest
(2) https://en.wikipedia.org/wiki/JSON
(3) http://webpy.org/