**Numbers game HTTP server with REST API:**

**Approach:** Client (a Web browser or Curl) will send a data to the HTTP server. The backend of the server is created with python.

HTTP Server

HTTP client (Web browser

Or CURL)

1.POST /range (min, max, correct)

response JSON min, max and correct

2. GET /range

response JSON (min, max) values

3. POST /guess (guess value)

till we get the correct value

Response JSON {of posted values}

4. GET /guess (guess history)

Return JSON array with all the

guesses

The Diagram above describes the sequence of instructions and design of the software

**Commands to be followed in order**:

Run the python script using

$ python numbers\_httpserver.py

Curl commands: (In order of execution)

# Post range:

curl -i -H "Content-Type: application/json" -X POST -d '{"minimum":<yourchoice(num)>,"maximum":<yourchoice(num)>,"correct":<yourchoice(num)>}' <http://localhost:5000/range>

Use this command and replace the values of Minimum maximum and correct to your choice. Please note that minimum <= maximum and correct value should be in the range.

# Get Range:

curl -i http://localhost:5000/range

#To post guesses:

curl -i -H "Content-Type: application/json" -X POST -d '{"guess": <your guess(number)>}' http://localhost:5000/guesses

# To get guess history:

curl -i http://localhost:5000/guesses

**Numbers game is played in this way:**

STEP 1: Person A chooses a range with Minimum, maximum values and also chooses correct value to be guessed in that particular range. We use POST call to define this range and correct values. The values set are returned in JSON format.

Example: For valid requests:

$ curl -i -H "Content-Type: application/json" -X POST -d '{"minimum":23,"maximum":27,"correct":24}'

Example: For invalid requests i.e., if value is not in range:

curl -i -H "Content-Type: application/json" -X POST -d '{"minimum":23,"maximum":27,"correct":28}’ http://localhost:5000/range

STEP 2: Person B comes and gets the range by calling /range using GET and sees the maximum and minimum values.

curl -i http://localhost:5000/range

STEP 3: Person B tries to guess the value assigned by A using POST (guess) and gets responses according in JSON format.

Example: curl -i -H "Content-Type: application/json" -X POST -d '{"guess": 28}' <http://localhost:5000/guesses>

STEP 4: After a few guesses or after guessing the correct value Person B can see the guess history of JSON output. By using GET on /guess. As we use /guess as the end point.

For example: $ curl -i <http://localhost:5000/guesses>

STEP 5: Re run the above steps as many times starting from selecting a new range and selecting value to be guessed. ☺