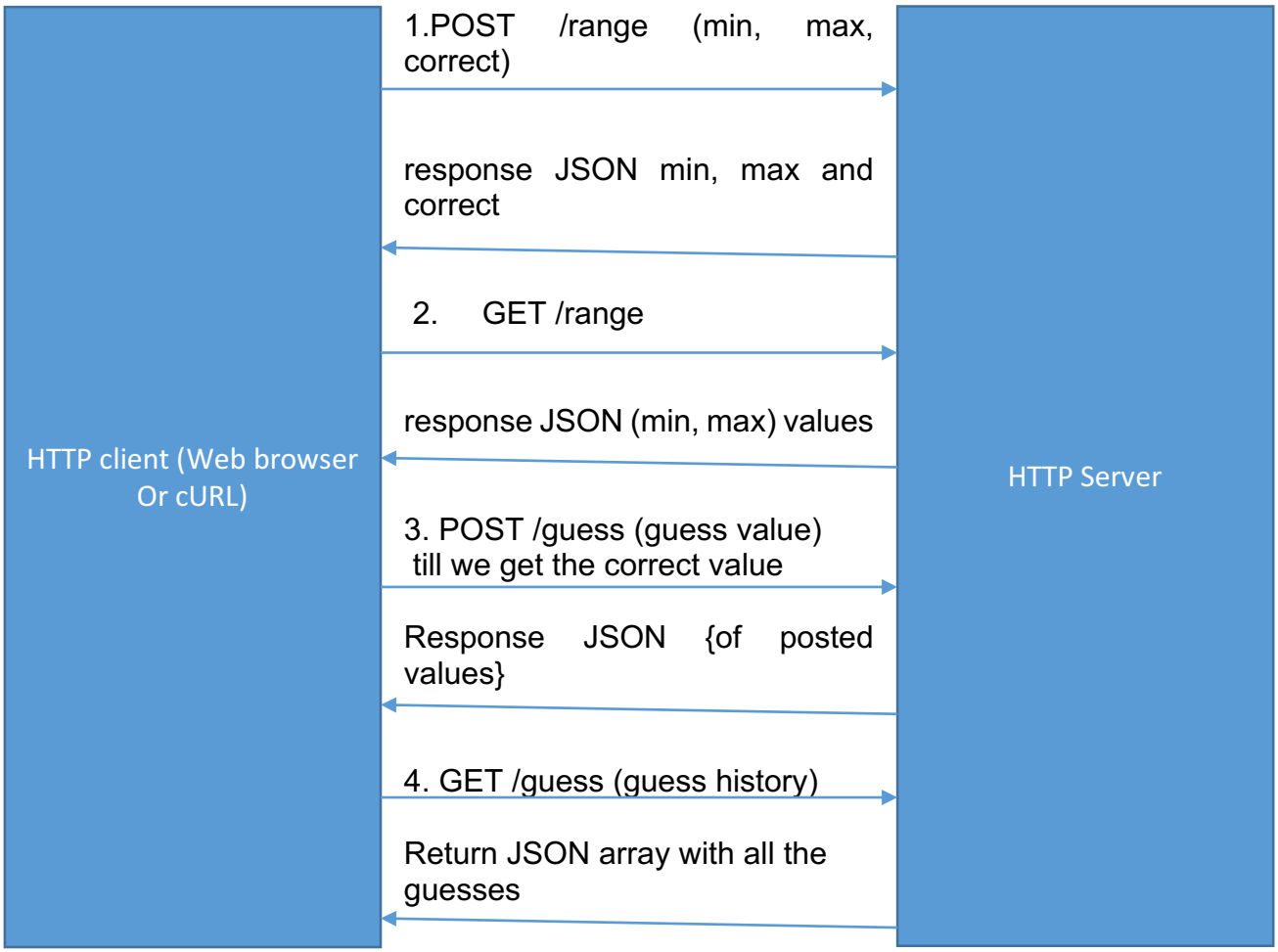
Numbers game HTTP server with REST API:

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



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

Run the python script using

$ python numbers_httpserver.py

Design of the application is in the following 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.

Method	URL
POST	*$ curl -i -H "Content-Type: application/json" -X POST -d '{"minimum":<yourchoice(num)>,"maximum":<yourchoice(num)>,"correct":<yourchoice(num)>}' http://localhost:5000/range* Example: /curl -i -H "Content-Type: application/json" -X POST -d '{"minimum":23,"maximum":27,"correct":24}' http://localhost:5000/range

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

Method	URL
GET	*$ 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.

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

Method	URL
GET	*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. ☺

Testing:

The Test script is run using:

$ pytest testing.py

It runs automated test cases against the numbers_httpserver.py