

HTTP Client

Background

In this problem, you will work with a simple HTTP client that connects to a server, sends a request, and processes the response. The client code interacts with an HTTP server using sockets and processes JSON data in the response. The server responds with different status codes and JSON messages based on the requested resource. You need to implement a function to fetch data from a server, send an HTTP GET request, receive the response, and correctly process and parse the JSON response based on the status code. Note that you need to decompress only the BODY of the response using zlib module.

Tasks

Implement the function `client()`:

- Connect to the server at localhost on port 8080.
- Send an HTTP GET request for the resource `/index.html`.
- Read the server's response and process it based on the HTTP status code.
- For status codes 200, 404, and 500, print specific messages.
- Note that you need to decompress only the BODY of the response using zlib module.
- Parse the JSON body of the response and print the status and message contained in the JSON.

Implement the function `get_first_length(data)`:

- This function takes the raw HTTP response data and returns the total length of the headers plus the content length specified in the headers.

Output (with unit test)

```
Testing create_socket ...
connect called with: call(('localhost', 8080))
Testing get_first_length_no_content_length ...
test attribute passed: 35 is equal to 35
Testing get_first_length_with_content_length ...
test attribute passed: 39 is equal to 39
```