

Simple File Download (Server)

Description

In this problem, you are given an incomplete Python server code that implements a basic file download service. The server listens for incoming connections, accepts download requests for files, and sends the requested file to the client if it exists in its predefined list of files. Your task is to complete the provided server code and implement additional functionalities or fix issues as specified in the problem statements below.

Request from the client

The server will receive input through network connections. Each incoming connection will send a string with two parts: the command and the filename, separated by a space. For example: "download 729.txt"

Response from the server

The server's response will depend on the input command and the existence of the requested file:

- If the command is not "download", respond with "Unknown command".
- If the file does not exist in the server's predefined list, respond with "File {filename} doesn't exist".
- If the file exists, send a header containing the filename and file size, followed by the file's content.

Expected unit test output

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test_attribute passed: Attributes are as expected.
test_attribute2 passed: Attributes are as expected.
test_attribute3 passed: Attributes are as expected.
test_attribute4 passed: Attributes are as expected.
test_first_file passed: Received correct header for '729.txt'.
test_first_file passed: Received correct content for '729.txt'.
test_not_exists passed: Received 'File doesn't exists' response.
test_second_file passed: Received correct header for
's41066-020-00226-2.pdf'.
test_second_file passed: Received correct content for
's41066-020-00226-2.pdf'.
test_third_file passed: Received correct header for 'xlsx.zip'.
test_third_file passed: Received correct content for 'xlsx.zip'.
test_unknown passed: Received 'Unknown command' response.
```

Constraints

- The server should handle one connection at a time.
- Filename comparison is case-sensitive.

Example:

Client sends: "download 729.txt"

Server responds: "file-name: 729.txt,\r\nfile-size:
18\r\n\r\nContent of 729.txt"