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Design doc asg1

Main:
- Receive message from client
- Parse through message to see what is being called either put, get or head
  - Parsing will require to use strtok probably to be able to delimit each header by \r\n
  - Once we get the first header we need to find the function name and the file name
  - Check if each header after that follows the correct http conventions if not throw error
  - Get content length if request has it and store it
- If correctly formatted call that function method
- For each function it will require different arguments

Put:
- Requires the client socket to be able to receive the data it wants to put into file
- Requires content length, filename
- Want to be able to request to write to a file
- Open a preexisting file, or create one if it doesn't exist
- Read in file size to make a buffer, using the content length that we received from request
- We then must call receive again to get the data from the client socket to be able to place into the buffer
- Write to file with buffer contents
- Return code 201 if everything works out and creates a file of that name with the contents
- Else we check for errors and return the appropriate error code

Get:
- Requires the client socket to be able to send data to it
- Requires the file name to get data from as well
- Make sure file exists and can be opened
- Find the size of the file first to be able to send in the response to the client
- Use filename to see if directory has it and if it does open it and start continually reading data and writing to the client in a loop
- If file is not in the directory return 404
- If file is forbidden to access then return 403
- Any other error is 500
- Return code ok with 200 if everything works and also send file size

Head:
- Same thing as get but do not send the contents of the file back to the server
- Just send the file size
- If filename bad file 400
- If forbidden 403
- If filename doesn exist 404
- If everything is good then send ok code 200