Report

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How to use:

Makefile

And find the complied file(wd) at /bin

Then use the command line to run it:

./wd <ipaddress> <port> <file> (optional -h)

Main function:

1. First to handle the command line parameter.

   Then we get the request type, host name, port, and filename. Use these

   parameter to generate the HTTP request with function **generateSendline()**.

2. For Host address, used **gethostbyname()** to get the IP address

   inet_pton() and **inet_ntop()** convert IPv4 and IPv6 addresses between text

   and binary form. And the socket uses binary form to construct the

   connection by struct **sockaddr_in**.

```
if(connect(sockfd, (struct sockaddr *)&serv_addr,
sizeof(serv_addr))<0)
```

3. Send the message (sendline) to the server by socket **send()** function. Receive

   the data by **recv()** in a while loop and write the data from the buffer into a

   file.

```
send(sockfd, sendline, strlen(sendline), 0)
recv(sockfd, buffer, BUFFER_SIZE, 0)
```

4. **Extra**: Handle the HEAD part. Build a function **getHTTPHEAD()** to receive the

HEAD content. Set the buffer size to 1 and find the end of the HEAD by finding the '\r\n\r\n'. And we can also divide the line by '\r\n'. After the HEAD we can get the data content and write to the file.

5. At last, close the file and socket.