***----HttpUtils----***

->contains utility methods related to handling HTTP responses and generating HTTP requests

1.GetResponseBody – extracts the response body from the given response content

- Splits the response content using the double CRLF sequence (\r\n\r\n) as a delimiter. If there is more than one part after splitting, it assumes the existence of a response body and returns the second part; otherwise, it returns an empty string.

2.ResponseHeaderFullyObtained – checks if the response headers are fully obtained

- looks for CRLF

3.GetContentLength – parses the content length header from the response content and returns it as an integer

- split the response content into lines and look for a line that containes content-length header

4.GetRequestString – generates http get request string with the specified hostname and endpoint. It includes the HTTP version, the Host header, and placeholders for Content-Length and Content-Type. The Content-Length is set to 0, indicating there is no request body.

5.PrintResponse – prints each line of the response content into the console

StateObject

-socket - for communication with the server

-buffer\_size – the size of the buffer allocated to store received data from the server

-receiveBuffer – stores the data received from the server

-responseContent – as data is received, it is appended in this response content

-clientID – identifies the client/connection this stateObject instance corresponds to

-hostname – identifies the server in socket operations

-endpointPath – used in constructing the http request string

-remoteEndPoint – used in establishing the connection to the server

-connectDone, sendDone, receiveDone – used to signify completion of specific asynchronous operations

DirectCallbacks

-has a list of hosts to be processed