Assignment 3
Intro to Socket Programming
DNS Cache Poisoning Attack

1. Intro to Socket Programming (Required):

In this assignment, you will develop a simple Web server in Python that is capable of processing only one request. Specifically, your Web server will:
(i) create a connection socket when contacted by a client (browser);
(ii) receive the HTTP request from this connection;
(iii) parse the request to determine the specific file being requested;
(iv) get the requested file from the server's file system;
(v) create an HTTP response message consisting of the requested file preceded by header lines;
(vi) send the response over the TCP connection to the requesting browser. If a browser requests a file that is not present in your server, your server should return a "404 Not Found" error message.

You can use the skeleton Code provided in the resources section below

2. DNS Cache Poisoning Attack (Optional):

It's required to experiment and show the results of the following attacks:
• DNS Cache Poisoning Attack (Section 17.12)

Deliverables:

1. Python scripts for web server
2. Report contains screenshots for each step done
3. For DNS Cache Poisoning Attack a detailed report contains screenshots for each step and final output

Resources:
Socket Programming Tutorial :A Complete Guide to Socket Programming in Python | DataCamp
Skeleton Code for Assignment: WebServer_programming_lab_only.pdf

For DNS Assignment: https://engineering.purdue.edu/kak/compsec/NewLectures/Lecture17.pdf