# SOCKET PROGRAMMING USING PYTHON

Please go through examples in the below link to understand basic functions of **socketserver** framework.
**https://docs.python.org/3/library/socketserver.html**

**Note:** Use Router 2 as server and Router 4 as client**.** Submit your outputs and code with clear explanation

- Write an Echo Server/Client code using **socketserver** framework          (10 points)
   **Echo Server:**
   a) should receive a string from Client
   b) If the string contains secret code "SECRET", then server should return all the digits in the string and count of digits
   c) close the connection with client

   **Echo Client:**
   a)  Should send a string to the server
   b)  Should receive the output

   **Example**: If client sends "socket 123345nfjkw345 SECRET ", then server should reply
   **Digits:** 123345345 **Count:** 9

- File Transfer over network using sockets.                                     (10 points)
   **Server**:
   a) should receive data from Client (create a text file)
   b) write the received data in a file
   c)  close the connection

   **Client:**
   a) Connect with the server
   b) Send the file
   c) close the connection

   what to submit?
   1. Show Server/Client code and screenshots of output for the both of the questions.
      Note: Show output for three different inputs. (input without secret code, input with no numerics, …..)
   2. please explain your logic and output. (No need of explanation if you have comments)