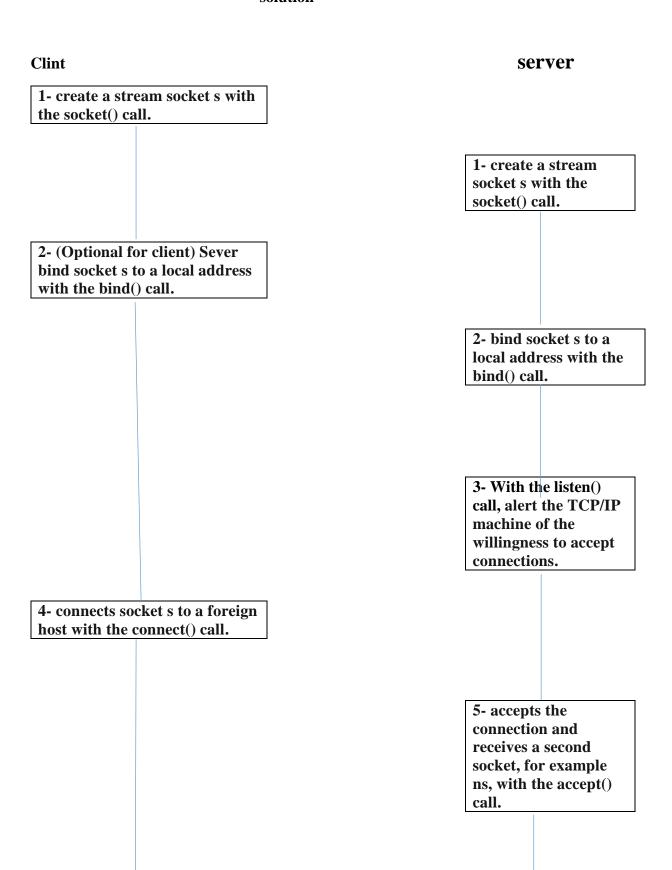**Task 2:**

Create a flow chart (sequence diagram) for the server and the client to show the execution and communication sequence.

"solution"

Clint   **server**

| 1- create a stream socket s with the socket() call. |

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| 2- (Optional for client) Sever bind socket s to a local address with the bind() call. |

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| 3- With the listen() call, alert the TCP/IP machine of the willingness to accept connections. |

| 4- connects socket s to a foreign host with the connect() call. |

| 5- accepts the connection and receives a second socket, for example ns, with the accept() call. |

6- reads and writes data on socket ns, client reads and writes data on socket s, by using send() and recv() calls, until all data has been exchanged.

7- reads and writes data on socket ns, client reads and writes data on socket s, by using send() and recv() calls, until all data has been exchanged.

8- closes socket s and end the TCP/IP session with the close() call.

8- closes socket ns with the close() call.

5- Accept another connection from a client or close the original socket s with the close().