**V TEACHING-LEARNING ACTIVITIES**

Note: Add a folder and name it into module4\_tla (tla means Teaching Learning Activities) before you commit your answer/document.

A ENGAGE : Misconception , Commit your answer/document on your remote repository that shared to your instructor github account.

**Misconception Check Select 2 programming language and compare the advantages and disadvantages of their socket programming.**

**-Java and Python;**

**-Java is powerful and and it could handle multithreading very well, makes It more preferable**

**In socket programming. Its disadvantage is it takes a while to memorize the code and the**

**Process as well as the variables that will be needed.**

**-Python is easy and readable language, it takes less time to write codes. Sometimes it has problems creating and connecting the server and client.**

B EXPLORE : API Specifications list 1. Give all of socket and serversocket methods with their descriptions.

**Modifier and Type**

[Socket](https://docs.oracle.com/javase/7/docs/api/java/net/Socket.html)- [accept](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#accept())() - Listens for a connection to be made to this socket and accepts it.

Void - [bind](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#bind(java.net.SocketAddress))([SocketAddress](https://docs.oracle.com/javase/7/docs/api/java/net/SocketAddress.html" \o "class in java.net) endpoint) - Binds the ServerSocket to a specific address (IP address and port number).

Void - [bind](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#bind(java.net.SocketAddress,%20int))([SocketAddress](https://docs.oracle.com/javase/7/docs/api/java/net/SocketAddress.html" \o "class in java.net) endpoint, int backlog) - Binds the ServerSocket to a specific address (IP address and port number).

Void - [close](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#close())() - Closes this socket.

[ServerSocketChannel](https://docs.oracle.com/javase/7/docs/api/java/nio/channels/ServerSocketChannel.html) - [getChannel](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#getChannel())() - Returns the unique [ServerSocketChannel](https://docs.oracle.com/javase/7/docs/api/java/nio/channels/ServerSocketChannel.html" \o "class in java.nio.channels) object associated with this socket, if any.

[InetAddress](https://docs.oracle.com/javase/7/docs/api/java/net/InetAddress.html) - [getInetAddress](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#getInetAddress())() - Returns the local address of this server socket.

Int- [getLocalPort](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#getLocalPort())() - Returns the port number on which this socket is listening.

[SocketAddress](https://docs.oracle.com/javase/7/docs/api/java/net/SocketAddress.html) - [getLocalSocketAddress](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#getLocalSocketAddress())() - Returns the address of the endpoint this socket is bound to, or null if it is not bound yet.

Int - [getReceiveBufferSize](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#getReceiveBufferSize())() - Gets the value of the SO\_RCVBUF option for this ServerSocket, that is the proposed buffer size that will be used for Sockets accepted from this ServerSocket.

Boolean - [getReuseAddress](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#getReuseAddress())() - Tests if SO\_REUSEADDR is enabled.

Int -  [getSoTimeout](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#getSoTimeout())() - Retrieve setting for SO\_TIMEOUT.

protected void - [implAccept](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#implAccept(java.net.Socket))([Socket](https://docs.oracle.com/javase/7/docs/api/java/net/Socket.html) s) - Subclasses of ServerSocket use this method to override accept() to return their own subclass of socket.

Boolean - [isBound](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#isBound())() - Returns the binding state of the ServerSocket.

Boolean - [isClosed](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#isClosed())() - Returns the closed state of the ServerSocket.

Void - [setPerformancePreferences](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#setPerformancePreferences(int,%20int,%20int))(int connectionTime, int latency, int bandwidth) - Sets performance preferences for this ServerSocket.

Void -  [setReceiveBufferSize](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#setReceiveBufferSize(int))(int size) - Sets a default proposed value for the SO\_RCVBUF option for sockets accepted from this ServerSocket.

Void - [setReuseAddress](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#setReuseAddress(boolean))(boolean on) - Enable/disable the SO\_REUSEADDR socket option.

static void - [setSocketFactory](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#setSocketFactory(java.net.SocketImplFactory))([SocketImplFactory](https://docs.oracle.com/javase/7/docs/api/java/net/SocketImplFactory.html" \o "interface in java.net) fac) - Sets the server socket implementation factory for the application.

Void - [setSoTimeout](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#setSoTimeout(int))(int timeout) - Enable/disable SO\_TIMEOUT with the specified timeout, in milliseconds.

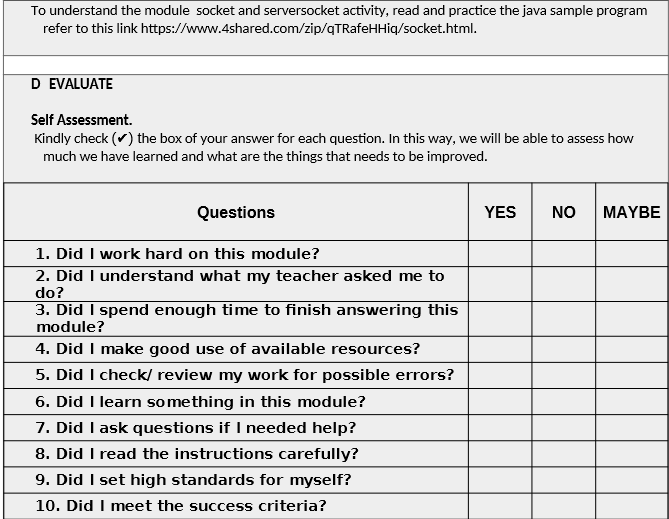
[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html) - [toString](https://docs.oracle.com/javase/7/docs/api/java/net/ServerSocket.html#toString())() - Returns the implementation address and implementation port of this socket as a String.

C EXPLAIN : Reading

To understand the module socket and serversocket activity, read and practice the java sample program refer to this link https://www.4shared.com/zip/qTRafeHHiq/socket.html.

D EVALUATE

Self Assessment. Kindly check (✔) the box of your answer for each question. In this way, we will be able to assess how much we have learned and what are the things that needs to be improved.

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