



COMP 4981

ASSIGNMENT 3

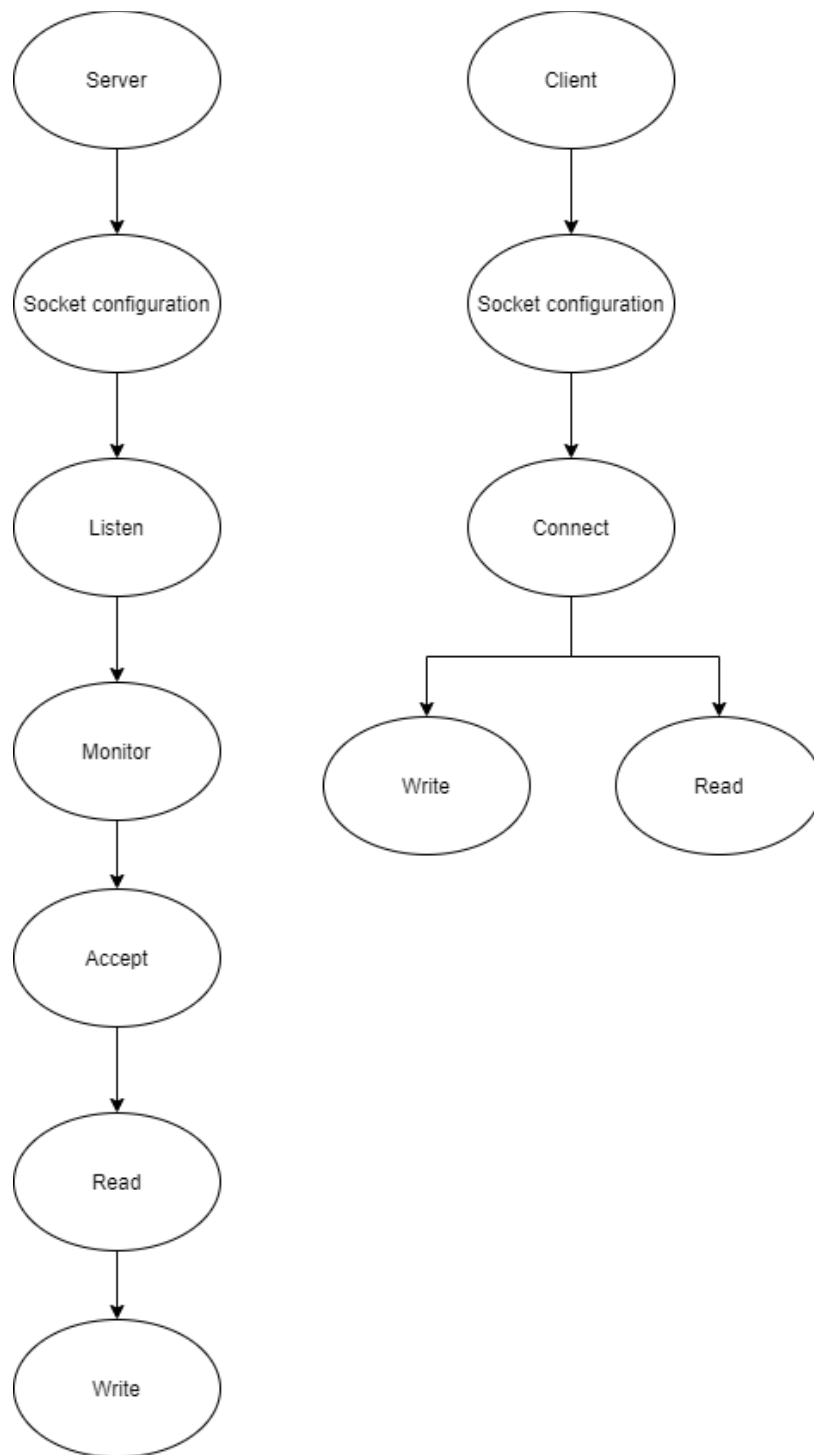
Linux chat application

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State Diagram



Pseudo Code

Server

Socket configuration

```
{  
    Create a TCP socket;  
    Set the socket option for reusing the socket  
    Bind the socket to the address according to the port input  
}
```

Listen

```
{  
    Set the created socket as a listen socket  
    Clears a file descriptor set.  
    Add the listen socket to the file descriptor set.  
}
```

Monitor

```
{  
    Use select function to monitor the sockets  
    If listen socket is set, calls the accept function  
    Check it each client socket is set  
}
```

Accept

```
{  
    Create accept socket  
    Add the socket number to the client array  
    Add the new accept socket to the file descriptor set  
}
```

Read

```
{  
    Read the characters on the socket and store them into the reading buffer  
    If connection close is read, close that client socket  
}
```

Write

```
{  
    Echo back the received message to the clients in the client array other than the client that the  
    message is received from  
}
```

Client

Socket configuration

```
{  
    Create a TCP socket;  
    Fill the server info structure based on the user input (host name and port number)  
}
```

Connect

```
{  
    Connect to the server with the created socket with the server info struct  
    Print the information of the connection  
    Create a thread for receiving  
}
```

Write

```
{  
    Accept user input  
    Send it to the server  
}
```

Read

```
{  
    Read the message from the server  
    If connection close message received, closes the socket  
}
```