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Course Name: Programming And Problem Solving

**Project : Creating a simple chat program**

In this code the main goal was connecting two computers via network and enable the users to chat with eachother, it is not as complicated as whatsapp or other chat apps but an easier and simpler version for chatting on your terminal,

If i have to explain a little further, we used a programming language called python for creating our code

And in order for this code to work you need two code files , one for the server and the other one for the client, then you can get 2 computers for chatting , one computer should handle the server and the client part; and the other one can just contain the client file

The important parts are both of the computers should be on the same network and the clients should use the computer that we are using as a servers IP adress,for the connection, you may ask how can i get the IP adress of my computer ? It is very simple, just write ipconfig on your terminal and the terminal prints all the information you need to know

But what does a server do? The server accept the massages that coming from the user of a chat client and make sure that they get send to the appropiate places ,it is like a router

And what about the clients? They are the one that sends the massages and recieve them.

If i have to mention a little about the basics of the code, we used one library called socket , what does this library do ? This module is for the computers to connect through network.

Then we have the İP address and the port we use IP addresses to create an instant connection between the devices so they can send and recieve the texts and we use ports for helping the computers sort the network traffic that they recieve ,we represent ports as numbers such as 9999,8080,0000... and so on

Finally we create some loops in order to control the texting, we have a code called try, this codes job is to check if there are any errors ,if not it continues to run the code

As you may know the computers encrypt the text that we send and recieve because ,nobody wants other people to see their private messaages ,in order to make that, our code first decodes the incoming text with utf-8 and turns the unicode characters into a string for us to read

And if you like to send a massage, it does the opposite and encodes your massage

At last if someone writes quit it will exit the program ,as well as if you press control C it will print the server interrupted and exit the program again .

That is all you have to know about this program ,as you saw it is really easy but a usefull chat program.

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