King Fahd University of Petroleum and Minerals
College of Computer Sciences and Engineering
Department of Computer Engineering

COE 451 – Computer and Network Security (T201)

Mini-Programming Project-Phase I (due date: Sunday 04/10/2020 by 11:59 PM on Blackboard)

Description:
Build a client-server or peer-to-peer two persons **online chatting** application using any programming language of your choice. The application **must have a simple graphical user interface (GUI)** and **must use TCP** as a transport layer to ensure reliability. The GUI should have a box for typing the IP address of the target host, a box for typing the text message to be sent to the target host, a "Send" button to transmit the typed message to the target host, and a "Display" box that displays the exchange of text messages taking place between you and the target host, and an "Exit" button to terminate the chatting application. When one person clicks the "Exit" button, a message must be sent to the other person's "Display" box informing that person that the other person has terminated the chatting application.

You may use any chatting application source code that you find on the Internet, but **you must provide the website URL from which you obtained the source code**.

Make sure to understand the code very well, and to test it preferably using 2 virtual machines. You can use either ***VirtualBox*** or ***VMware*** to set up the 2 virtual machines.

Deliverables: Submit the following items to **Blackboard** before the due date:
1. A **well commented source code** of your implementation. If you acquired the source code from the Internet, then you may need to add additional comments to the code to make it more readable.
2. A **short soft copy report** that shows screenshots of your testing of the application that clearly displays the execution and the networking aspect of the application (make sure to provide screenshots of the IP addresses used for testing the two sides of the application).
3. A **step-by-step readme file** that explains what is needed to execute your implementation and how to execute and test your implementation.

If you acquired the source code from the Internet, then make sure to include the website URL from which you obtained the source code. **Failure to do so will result in losing all marks of the 3 phases of the mini-project, no exception!**

Grading Scheme:

Program readability and comments	**[15 points]**
Step-by-step readme file	**[15 points]**
Softcopy report with screen shots	**[20 points]**
Program contains GUI and executes correctly over a network	**[50 points]**
Total	**[100 points]**