Seneca College

Applied Arts & Technology

SCHOOL OF COMPUTER STUDIES

JAC444   **Live Demo Due dates: April 16 and April 17, 2018**
                                     Code submission date: April 17, 2018

Workshop 5

Notes:

i.   Both tasks should be presented during the lab, demo worth 50% of the workshop marks and code uploading worth the other 50%.

ii.   The rule for showing at least one task on coming Tuesday/ Wednesday has been lift off for this workshop as you can see there is only one live demo date. If students want they can show me both tasks on this week Tuesday/ Wednesday lab or next week, and one this week and the other one next week.

iii. Make sure you have all security and check measures in place, like exceptional handling, wrong data types etc.

iv.   Given output structure is just for student to have a glimpse what the output can look, student are free to make the output better in any way.

v.   Other inputs can be given during demo, so make sure you test your program properly.

Task 1:

Rewrite the program given in the "Java Networking Slides" where single client and server are presenting a scenario of chatting. Your program should introduce two clients to chat. Implement one server that serves both the clients. Sample output below,

Server

```
MultiThreadServer started at Sat April 07 04:53:15 EST 2018

Connection from Socket[addr=/127.0.0.1,port=57327,localport=8000] at Sat April 07 04:53:15 EST 2018

Connection from Socket[addr=/127.0.0.1,port=57328,localport=8000] at Sat April 07 04:53:15 EST 2018

ali: hi how are you?

mahboob: I am fine, and you?

ali: this is fun

mahboob: yes it is
```

Client 1 Screen

Enter you name: ali

ali: hi how are you?

mahboob: I am fine, and you?

ali: This is fun

mahboob: yes it is

Client 2 Screen

Enter you name: mahboob

ali: hi how are you?

mahboob: I am fine, and you?

ali: this is fun

mahboob: yes it is

Task – 2:

Write a server for a client. The client sends the weight and height for a person to the server (see Figure (a) below). The server computes BMI (Body Mass Index) and sends back to the client a string that reports the BMI (see Figure (b) below).

Server

BMICalculatorServer started at Sat April 07 05:15:20 EST 2018

Connected to a client at started at Sat April 07 05:15:25 EST 2018

Waiting for height and weight from client:

Height is: 1.5

Weight is: 40

Calculating BMI…:

Client

Write your height in meters (ex 1.80): 1.5

Write your weight in kilograms (ex: 70.5): 40

Waiting for BMI from server…

Your BMI is: Underweight

Body Mass Index (BMI) is a measure of health based on height and weight. It can be calculated by taking your weight in kilograms and dividing it by the square of your height in meters. The interpretation of BMI for people 20 years or older is as follows:

BMI	**Interpretation**
BMI < 18.5	Underweight
18.5 ≤ BMI < 25.0	Normal
25.0 ≤ BMI < 30.0	Overweight
30.0 ≤ BMI	Obese