

Seneca College

July 26, 2018

Applied Arts & Technology

SCHOOL OF COMPUTER STUDIES

JAC444

Demo Due dates: August 03 and August 10, 2018

Final Code Submission Date: August 10, 2018

Workshop 5

Notes:

- i. Each task should be presented during the lab, demo worth 50% of the workshop marks and code uploading worth the other 50%.
- ii. **At least one task** should be demoed on August 03rd lab and the other task should be demoed on August 10th (Student can choose any task they want to give demo about first).
- iii. Make sure you have all security and check measures in place, like exceptional handling and 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.

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

Task 1:

Write/ 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. Your program should run minimum 3 windows, one **Server** and **two Clients**, Sample output below,

Server

```
MultiThreadServer started at Thursday July 26 04:53:15 EST 2018
```

```
Connection from Socket[addr=/127.0.0.1,port=57327,localport=8000] at Thursday July 26 04:53:15 EST 2018
```

```
Connection from Socket[addr=/127.0.0.1,port=57328,localport=8000] at Thursday July 26 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 Thursday July 26 05:15:20 EST 2018
Connected to a client at started at Thursday July 26 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
$18.5 \leq \text{BMI} < 25.0$	Normal
$25.0 \leq \text{BMI} < 30.0$	Overweight
$30.0 \leq \text{BMI}$	Obese