Computing/ Games

Software Development

Inter-Networking – Yr 2

Take Home Assignment

60% of CA mark/ 24% of overall Module mark

1. You must submit **<u>original work only</u>**:
    a. Reference all external sources in your submission.
    b. **Plagiarism** will result in marks being deducted or a mark of zero being awarded. Furthermore, it may lead to disciplinary action.

2. **<u>Requirement A (*90 marks):*</u>**
    a. **Working in your assigned team, of two or more students**, implement two *client-server* (BSD socket library) network utilities in PYTHON, i.e. **four Python listings** including two clients and two servers. This task includes **designing, coding and commenting the following utilities:**
        i. ***<u>Client-Server 1:</u>*** Client connects using TCP and sends her name to the server, the server validates the data input, i.e. they are alphabetic characters, and *echoes* it back to the client. (***<u>10 marks</u>***);

        ii. ***<u>Client-Server 2:</u>*** This utility includes a client that inputs up to 4 numbers interactively and a server that returns TRUE/ FALSE if they are, or are not, powers of two. (***<u>10 marks</u>***).

            1) You will work in your assigned team in order to design and code the scripting elements of the assignment. This will give you experience of working in a small development team with the express intention of preparing you for the Team Project Module in 3rd year.

        iii. The designated Team member, as chosen by the team, will upload the four listings, in a single *.zip* compressed file, to the code repository on Moodle by **Midnight, Sunday 11th Apr 2021.**

    b. Write an **<u>individual reflective report</u>**, *minimum* 1000 words, on the knowledge, and skills, you will acquire in completing the tasks and on the research you will undertake. The focus of the report should be on: the **networking aspects of the assignment**; **the design and coding involved in implementing networked clients and servers**; **the functionality provided by the BSD socket library to application programmers**.

However code snippets should NOT be included in the body of the report unless they are embedded as images, i.e. cut and paste from files with extensions such as *.png/ .jpeg*. Full Code listings may be included in an Appendix to the report. ***(70 marks***).

    i. Each member of the team will complete and upload a word document to *Moodle* by **Midnight, Sunday 11th Apr 2021.**

    i. The report document may contain an **Appendix** which can include, for example, the four script listings and design documentation.

c. Late submissions will attract penalties as follows:
    i. Up to:
        1) 1 day/ 24 hours: 5%.
        2) 2 days/ 48 hours: 10%.
        3) 4 days/ 96 hours: 15%.
        4) 7 days/ 168 hours: 20%.
    ii. No Submissions will be accepted after 8 days.

d. Ensure you include your name in the all **files** when you save them. In the Python script files put your team, your names and client / server into the file as a comment, e.g. *#TeamA_AOMara_ANOther_client1*.

3. <u>**Requirement B - Validation of coding work submitted (*10 marks*):**</u>

A demo of you code will be required. An on-line meeting between the Team and Lecturer will be scheduled for the week of 11th April. 2021.

4. The teams are as follows:

	Project groups	
1	Chai, Jason Jing	A
2	Maziarek, Dylan	A
3	Wojcik, Albert	A
4	Corbett, Neil	B
5	Jong, Daniel Tze Yung	B
6	Mc Elligott, Patrick	B
7		
	Mc Loughlin, Robin P.	C
8	O Connor, Nathan	C
9	Vasurs, Valentins	C
10		
	Morais, Joabe	D
11	Nardi, Marcello	D
12	Ross, Matthew	D
13		
	Olummanuel, Richard Olayemi	E
14	Soundy, Ben	E
15	Sudeep, Bennett Preet	E
16		
	Toth, Zsolt	F
17	Ruane, Daniel	F
18	Zaidi, Mehwish	F

19	Afzal, Raseef	G
20	Bourke, Kieran	G
21	Ibrahim, Imad	G
22	Ahern, David	H
23	Caffrey, Ethan	H
24	Clohessy, Corey	H
25	Collins, Thomas	I
26	Cremins, Craig D.	I
27	Krol, Martin	I
28	Dallman, Bryan	J

29	Mamidi, Mahendra	J
30	Pyatnychka, Alexandra	J
31	O Connor, Stephen	J
32	Gaidamavicius, Armandas	K
33	Lane, Lorna	K
34	Lee, Ivy C.	K
35	Ward-O Brien, Nathan A.	K
36	Mac Cormaic, Jay A.	L
37	Moroney, Conor	L
38	Pawluczuk, Jakub	L
39	Ciara Roche	L

<u>Sign the below declaration and hand it to lecturer along with your hardcopy. Do NOT upload it with your report.</u>

Declaration of ownership of the attached assignment.
(Strike out the inappropriate pronoun.)

*I declare that this is all my own work and does not contain unreferenced material copied from any other source***.** *I have read the Institute's policy on plagiarism and understand the definition of plagiarism. If it is shown that material has been plagiarized, or I have otherwise attempted to obtain an unfair advantage for myself or others, I understand that I may face sanctions in accordance with the policies and procedures of the IT Department and Limerick Institute of Technology. A mark of zero or a reduced mark may be awarded and the reason for that mark will be recorded on my file.*

SIGNED_____

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