Network Programming (Net Centric Programming) – IT096IU
Term Project Description

Objectives:
To allow students to gain practical experience of the design, prototyping, testing, and evaluation stages of network application development.
To allow students to gain practical experience of using the TCP and UDP communications protocols at the programming level.
To strengthen the student's understanding of networking and communication issues by relating theory and practice.

Project Deliverables:
Source code and documentation must be submitted on blackboard before due. Zip all your file and name it Groupnumber_project.zip (ex: Group01_project.zip)
A demonstration session will be held at the end of the course. You will be asked to run through your program. Questions will be asked to verify your project source code
Fail to show up during the demonstration session or no demonstration at all will result in ZERO grading for project

Due date:
8:00 Friday
Demo: starting 8:00 last Lecture

Project Task: Music Crawler and Music Player
This is project, we will build a simple system for listening to music. The system contains two separated modules: a Music Crawler and a Music Player.
Programming languages requirements: Python. You can use TCP, UDP for communication

Music Crawler:
For this module, you can choose one or many of the popular online music sites to get data: mp3 zing, nhac so, nhac cua tui…. You may suggest any other online music
The crawl module needs to get info of **at least 100** songs from multiple genres
For each song, the following need to be stored:
- Song name
- Author
- Singer
- Genres
- Last update (or upload time stamp)
- Lyrics
- List of streams (i.e. 128, 320, lossless)

The info must be stored in JSON file ***music_info.json***. A sample file is provided

Music Player
Build a simple webserver to feed data for web browser to play music base on the info constructed from the above module
The webserver read info from music_info.json and construct the html:
- /music.html: list of all songs, group into genres
- /song_info.html?id=<song_id>: show detailed info of a song with song_id
- /song.html?id=<song_id>: play the music. Lyrics should show while playing

Documentation:
- Architecture
- Instruction how to deploy and run your project

Grading:
- 20% of course grade
- music_info.json contains at least 100 manga with correct info: 10 pts
- document and demo: 10 pts
- Music Crawler: 30 pts
- Core webserver: 20 pts
- Each support html page: 10 pts, total 30 pts
- Bonuses (varies, max 20pts): all html are link together, multiple sites