ITSS Linux System and Network Management

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Course contents

- This course will cover
  - Basic knowledge of Linux
  - Linux system installation and management
  - Linux system operation.
- This course is indispensable for the engineers who want to engage in the software development in the Linux environment.
- Lecture is provided by practical way based on the hands-on exercise using computers.
- And also the students can confirm their knowledge through the the exercises and projects

Course assessment

- Progress (50%):
  - Attendance
    - No absence: +1 point
    - 3-4 absences: -1 point
    - >=5 absences: -2 point
  - Weekly exercises
    - Exercises based on lectures will be provided weekly and need to be finished within 1 week
    - They need to be submitted through Microsoft Team
- Final project (50%)
  - Students need to form groups (2-4 students/ group)
  - Select or propose a topic
  - Progress checking points (2-3 times)
  - Final presentation (last 3 weeks)

Some topics for the final projects

- Program a shell application on Linux (self-proposal)
  - Ex: An program to execute or (re)schedule administration tasks or logging tasks
  - Ex: An program to get update information about covid-19 cases/vaccine from websites
- Write a desktop application for Linux (self-proposal)
- Build and install an open source software on Linux (E.g. XAMMP, SAMBA, Zoomla, Wordpress, Email, FTP Server, TightVNC, etc).
  - Advanced: need to make some modifications, upgraded, or add languages in source code and rebuild it.
- Investigate Apache Subversion (SVN) and TourtoiseSVN, install and testing
- Deloy a Linux system with some (or all) basic networking services such as DHCP, DNS, NAT, IP Masquerading.
- Deploy a Softrouter on Linux
- Deploy a FireWall on Linux based on Pfsense
- Other proposed topics from students