UDLAP
Engineering School
Computing, Electronics and Mechatronics

Instructor	Dr. Juan Carlos Galán Hernández	**Term**	Spring 2017
Course	Network and Server Laboratory	**Code**	LIS4091

1 Purpose

This document describes the content and activities for Weeks 12 and 13 of the course **Network and Server Administration** with code **LI4091**.

2 Instructor-led Training Activities

1. Creating a Daemon in python.
   1.1. http://stackoverflow.com/questions/473620/how-do-you-create-a-daemon-in-python
   1.2. http://web.archive.org/web/20131017130434/http://www.jejik.com/articles/2007/02/a_simple_unix_linux_daemon_in_python/
   1.3. http://stackoverflow.com/questions/17954432/creating-a-daemon-in-linux
   1.4.
2. Creating a Socket in python.
3. Creating a Pipe in python.
   3.1. https://docs.python.org/3.6/library/pipes.html
   3.2. http://www.python-course.eu/pipes.php
   3.3. http://www.cs.fredonia.edu/zubairi/s2k2/csit431/pipes.html
4. Writing to a Log File in python from a daemon.

3 Self-pace Learning Activities

1. Daemons
   1.1. http://www.catb.org/jargon/html/D/daemon.html
   1.2. http://www.linfo.org/daemon.html
   1.3. https://wiki.archlinux.org/index.php/daemons
   1.4. http://unix.stackexchange.com/questions/7608/does-bash-support-forking-similar-to-
2. Process Intercommunication
   2.1. https://www.ibm.com/developerworks/aix/library/au-spunix_sharedmemory/
3. Berkeley Sockets
   3.1. http://research.omicsgroup.org/index.php/Berkeley_sockets
   3.2. https://en.wikipedia.org/wiki/Berkeley_sockets
4. Pipes
   4.1. Understanding The Linux Kernel (Chapter 19, pp 775)

- https://www.amazon.com/Understanding-Linux-Kernel-Process-Management-ebook/dp/B0043D2E54/ref=sr_1_1?s=books&ie=UTF8&qid=1486685370&sr=1-1&keywords=understanding+the+linux+kernel+3rd+edition

5. Log files.
   5.1. https://www.cyberciti.biz/faq/linux-log-files-location-and-how-do-i-view-logs-files/
   5.2. http://cs.brown.edu/~scl/files/IPCWinNTUNIX.pdf

4 Assignment: Creating a Web Server

Create a web sever using python. You should create a web server like Apache or NGINX. It must fulfill the following conditions:

- It must serve on the 18181 port
- It must support HTTP/1.1 protocol
- It has to at least accept .html files
- Public directory must be configurable
- It must use daemons for serving pages to a different clients
- The amount of daemons (also called workers) must be configurable
- It must work with chrome and firefox.

Additional resources:

- https://ruslanspivak.com/lsbaws-part1/
- https://ruslanspivak.com/lsbaws-part2/
- https://ruslanspivak.com/lsbaws-part3/