Operating Systems (PG)
Assignment 4

Objective:
To understand the internals of PINTOS

Pintos is an instructional operating system, complete with documentation and ready-made, modular projects that introduce students to the principles of multi-programming, scheduling, virtual memory, and filesystems. By allowing students to run their work product on actual hardware, while simultaneously benefiting from debugging and dynamic analysis tools provided in simulated and emulated environments, Pintos increases student engagement. Unlike tailored versions of commercial or open source OS such as Linux, Pintos is designed from the ground up from an educational perspective. It has been used by multiple institutions for a number of years and is available for wider use.

Assignment :

Part A: [Reading Assignment]

- Understanding PINTOS basics from reading material
- Building PINTOS executable from source code and run it on virtual machine
- Understanding basics of utilities like GNU MAKE,etc
- Get familiar with source code – files and data structures.

Link :

Introduction :http://www.stanford.edu/class/cs140/projects/pintos/pintos_1.html#SEC1
Source code: http://www.stanford.edu/class/cs140/projects/pintos/pintos.tar.gz

Part B: [Adding new file to Pintos Kernel]

- Write a simple C file which prints “Hello Programmer”
- Add this file to PINTOS source code
- Build the OS and run the OS to execute the file you added to Kernel
- The file added by you should run by typing “pintos run hello”

Deadline: 25th September, Tuesday, 11:59PM

Upload Format: .tar.gz

Create a folder named your roll number.
Copy the /src directory from installed PINTOS directory to this folder.
Create a tar.gz named “Assignment4.tar.gz” and upload it.