Indian Institute of Technology Tirupati

Renigunta Road, Tirupati 517506, AP

August 1, 2019

CS3500 Operating Systems Lab1

Perform the following Tasks sequentially:

1. (5 marks) Prepare the development and backend VMs in the oracle virtual box (by importing the .ova files), and perform the following (on the spot grading):

    (a) Start the development VM in the headless mode, and remote login to this VM through SSH.

    (b) Locate the xinu/ folder, make a copy to a new folder as follows: fullrollno-name-labno (all of your work for today to be done in this folder, in the end, you will be compressing this folder and uploading to moodle).

2. (10 marks) (On the spot grading) Edit the appropriate file, so that the "Welcome to CS3500-Operating Systems Lab Fall2019" welcome message by "Your Roll Number and Full name", and perform the following

    (a) In your Ubuntu system, create a snapshot of the VM by using the following command, name the <snapshot-name> given below as $my_{firstsnapshot}$:

        i. VBoxManage snapshot <vm-name> take <snapshot-name> –live

    (b) For some reason, if you crash your system midway, you can restore this snapshot. Which can be done by, VBoxManage snapshot restore <snapshot-name>. Practice this once.

3. (15 marks) Explore different xinu directory structures, and do the following:

    (a) (5 marks) In a text file, write (briefly) what each of the different first level folders do, by studying the different files they contain. Place this file in the main xinu folder with file name as $rollnum_{details.txt}$

    (b) (5 marks) Modify appropriate files in Xinu such that a one-line welcome message is printed (just) before the Big XINU is shown during booting of the backend machine.

    (c) (5 marks) Observe what will happen when you type exit, in the xinu backend machine. Modify the functionality, in such a way that after exit command is executed, a "Welcome to IIT Tirupati, by <your-name>" to be printed before control is given to the shell.

4. (10 marks) Create one process, the prints your roll number 5 times, and this process to be executed for one time, after the xinu backend boots.

5. (10 marks for cosmetic details and organisation of work). Turn in the folder with your solutions, in compressed format to moodle.