IIT PALAKKAD

Indian Institute of Technology Palakkad
Department of Computer Science and Engineering
Operating Systems - Jul to Nov 2020
13 October 2020

Instructions:

- *You should do the assignment in the same group as you did lab4*
- *Create a branch named "lab5" in the repository that you created in the previous lab*
- *Do the assignment, commit and push your changes when you are done.*
- *Submission deadline: 19-Oct, 2020 23:59 hrs.*

NOTE: The assignment is same the Exercise 2 given at:
https://moss.cs.iit.edu/cs450/assign02-xv6-syscall.html

1. In this assignment, you have to add a new system call named **`v2paddr`**. The **`v2paddr()`** system call should take a virtual address in the address space of the process calling the system call as an argument, and should return the corresponding physical address. If the virtual address passed is invalid (inside the calling processes' address space), then it has to return -1. You may also want to look at the Hints section of Exercise 2 given in the link for help on getting started with the assignment. You may want to make the xv6 kernel print suitable messages on to the console so that you can verify the correctness of your implementation.

   You have to create a user or application program named **`test_v2paddr.c`** that will call your newly created **`v2paddr()`** system call, edit the makefile appropriately to compile **`test_v2paddr.c`** and insert it into the filesystem of xv6 appropriately.

   To evaluate the submission, the instructor will do the following:

   - pull your changes
   - run the command **`make qemu-nox`**
   - In the command prompt of (booted) xv6, type **`test_v2paddr`**
   - For grading purposes, the instructor will replace your **`test_v2paddr.c`** with different programs.