

Operating Systems

Assignment 1

Aniket Kumar - 2016CS50398

Installation:

I followed the instructions that were mentioned in the problem statement.

Creating System Calls:

Sys calls implemented:

1. **sys_add()**
2. **sys_print_count()**
3. **sys_toggle()**
4. **sys_ps()**

For incorporating the above system calls in the operating system, I had to make changes in the given files:

- Syscall.h
- Syscall.c
- Sysproc.c
- User.h
- usys.s

IPC:

1. A data structure for the message queues, which contain a queue for each process, having:
 - a. push()
 - b. pop()
2. **send_message()** and **recv_message()** which support the corresponding system calls.
3. Unicast was implemented, using the above two system calls.

Distributed Algorithm:

1. The distributed algorithm for this was a simple one. Just had to fork the processes and have them do the required calculation. After that they send their calculation to the master thread and it does the