CS 485–Assignment 3: System V Message Passing

Prof. Jon Solworth

Due: Wednesday, 5 Apr 2005

1 Introduction

You are to implement System V Message Passing APIs (that is, msgget, msgctl, msgsnd, and msgrcv) in two different ways:

- POSIX message queues and
- POSIX shared memory and semaphores.

Your system should be efficient in time and space. Please take care to ensure that IPC persistent resources are cleaned up in your code. (You might want to write a small utility to remove it as well).

2 Instructions for handing in your program

Obviously, your program listing and program turnin must be complete by 12:00 on the due date. No late programs will be accepted. Its a real good idea to start on this program right away.

Please take particular care to show in your documentation:

- Why your program does not deadlock.
- Why your storage reclamation works.
- How much concurrency can be obtained.
- What you tested.
- What you did not test.
- What works.
- What does not work.
3 Grading Criteria

- Code quality (10 pts)
- Documentation (20 pts)
- Testing (20pts)
- Correctness (40 pts)
- Concurrency (10 pts)