EI338 Computer Systems Engineering

Project 4

November 16, 2019

Zhihui Xie, 517030910356

The environment used in this project is **Deepin 15.11**, the latest version of an open source operating system based on Debian's stable branch. The kernel version is **Linux version 4.15.0**.

Exercise

In this exercise, we will implement several different process scheduling algorithms. The scheduler will be assigned a predefined set of tasks and will schedule the tasks based on the selected scheduling algorithm. Each task is assigned a priority and CPU burst. The following scheduling algorithms will be implemented:

- **First-come, first-served (FCFS)**, which schedulestasksintheorderinwhich they request the CPU.
- **Shortest-job-first (SJF)**, which schedules tasks in order of the length of the tasks' next CPU burst.
- **Priority scheduling**, which schedules tasks based on priority.
- **Round-robin (RR) scheduling**, where each task is run for a time quantum (or for the remainder of its CPU burst).
- **Priority with round-robin**, which schedules tasks in order of priority and uses round-robin scheduling for tasks with equal priority.