AN OVERVIEW:

Question 1 of the assignment contains two programs. The First Program is for counting up to the 32nd power of 2 using three different scheduling policies. All these are compiled simultaneously to achieve the desired output. The Second Program is for Compiling 3 Kernels simultaneously using different processes, which are called using the fork() system call and using waitpid() to wait for the appropriate measurement of time used. A Priority Vs. Time Histogram for both Programs has also been compiled.

SysCalls Used:

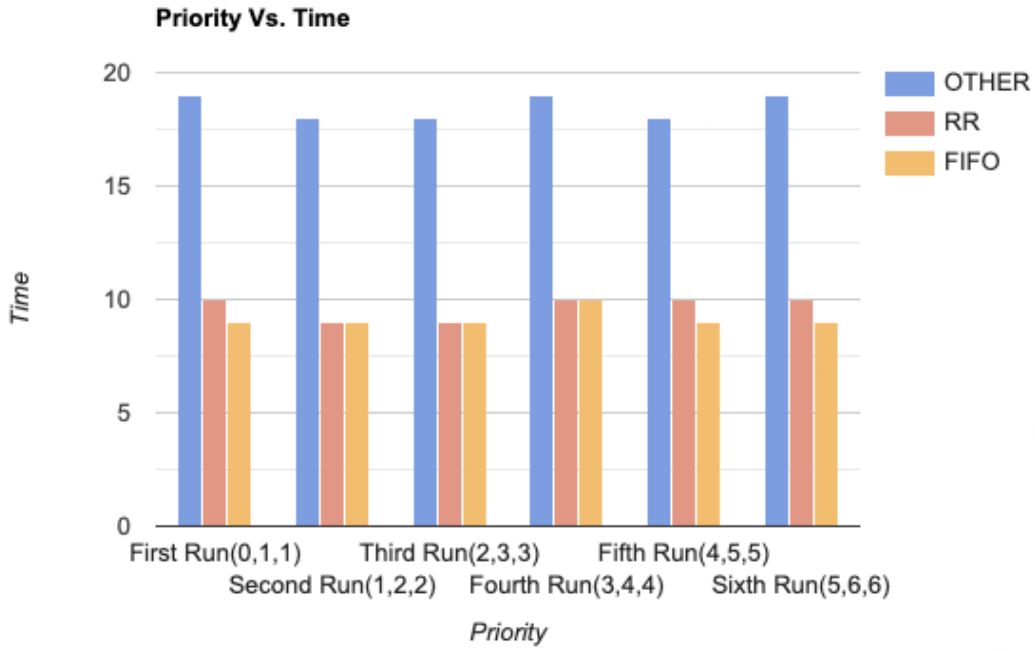
For part 1, no syscalls have been used. For part 2, the fork(), the execl(), and the waitpid() system calls have been used.

Detailed Explanation:

For part 1, First 3 threads are created using pthread_create() and these threads are then allowed to run(count upto the 32nd power of 2). The Time taken for each threads are then written to a file name Output1.txt. This iteration is done 6 times along with different scheduling priorities. With Enough Data so that we can plot the appropriate Histogram.

For part 2, First 3 mini parent processes are created from the main process(the one created to run a file). These mini parent processes than each create a child process which compiles the kernel. These 3 child process all run simultaneously. These are then manually compiled 6 times with different scheduling policies to have enough data to plot a Histogram

Histogram For the 1st Program:



Histogram For the 2nd Program: