EECE/CSCI 484 Real-Time Systems
Instructor: Gedare Bloom
Homework 2 (25 points)

You must do this assignment by yourself. However, you may discuss the problem or solutions with your peers; but **you may not share/copy code/data with anyone**. You may not use code downloaded from the Internet, but you may consult web sites for help figuring out how to do something.

Due Monday, February 18 at 11:59 P.M.

1. (20 pts) Write a C language program that calculates the response time analysis results for the following set of tasks, then answer the question: Is it schedulable by a fixed priority scheduler?

Process	Period T	ComputationTime C	Priority P	Response time R
a	80	40	1	80
b	40	10	2	15
c	20	5	3	5

   Write your program to read a whitespace-separated file containing the task information separated by 1 or more space or tab characters with one task per line, e.g.,
   a 80 40 1 80
   b 40 10 2 15
   c 20 5 3 5

2. (5 pts) Given the following sequence of threads and their priority and required cpu time, write out the order in which they will be scheduled by each of the following scheduling algorithms, and compute the average waiting time for the set of threads.
   a. Preemptive Fixed Priority Scheduler
   b. Non-Preemptive Fixed Priority Scheduler

   The Thread ID should be used to break ties when the primary scheduling algorithm has two equivalent options. A smaller value in the ID field should be interpreted as a more important thread. So thread with ID T1 is run before a thread with ID T2 if the scheduling algorithm ties.

Thread	cpu time	priority	arrival time
T1	5	2	0
T2	5	1	2
T3	8	4	3

T4	2	3	3
T5	2	1	5
T6	2	3	10
T7	1	2	15
T8	3	3	15

Submission Instructions

Create a zip file that contains a folder named your HowardU username and inside that folder put a PDF with all your answers and a C source code file with your code, and name the zip file your HowardU username plus .zip, for example my submission would be named gedare.bloom.zip

Check your conversion for any errors!

Submit the zip file under the Homework1 assignment on BlackBoard.