OS-PG ASSIGNMENT 5
Multilevel FeedBack Queue Scheduling
Deadline: 20 November 11:59 pm.

In this assignment you are suppose to implement Multilevel Feedback Queue with two levels:
Level 1 : Fixed priority preemptive Scheduling
Level 2 : Round Robin Scheduling

1. **Fixed priority preemptive Scheduling** (Queue 1)
   ● Priority 0 is highest priority.
   ● Quantum : 4 unit time
   ● Preemptive: If   one   process e.g. P1 is scheduled and running, now another process with higher priority comes e.g. P2. New process (high priority) process P2 preempts currently running process P1 and process P1 will go to second level queue.

2. **Round Robin Scheduling** (Queue 2)
   ● Quantum : 4 unit time
   ● All the processes in second level queue will complete their execution according to round robin scheduling.
   ● Queue 2 will be processed after Queue 1 becomes empty.
   ● Priority of Queue 2 is lower than that of Queue 1.

Suppose Queue 1 is empty and currently process from Queue 2 is being executed Now, If at this time a new process arrives then new process will be added to Queue 1. So, new process should be scheduled since Queue 1 has higher priority than Queue 2. Again after Queue 1 becomes empty Queue 2 will resume execution.

Input :
Line 1: <#process>
Line 2: <pid> <arrival_time> <burst_time> <priority>
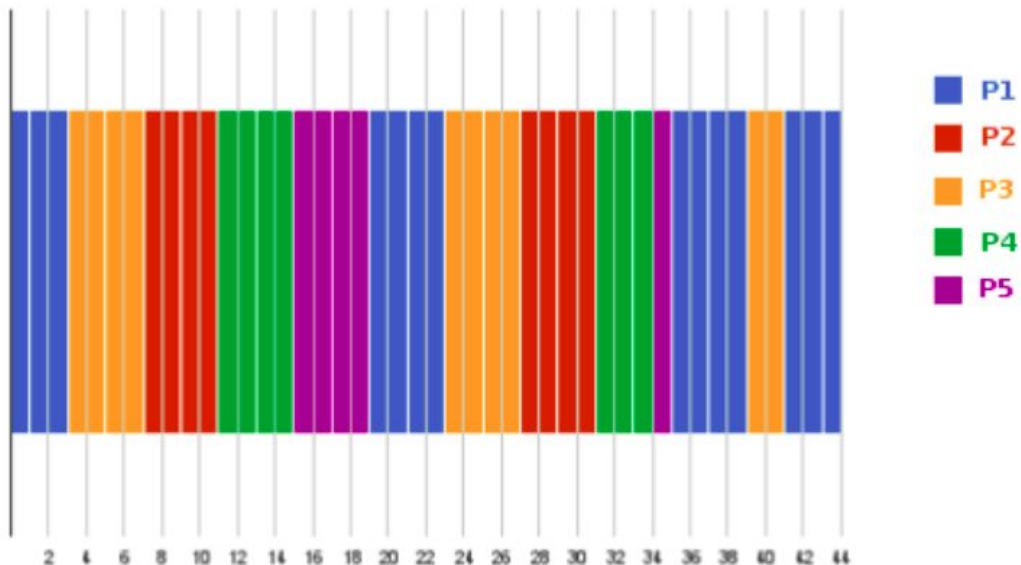example:
5
1 0 14 2
2 7 8 1
3 3 10 0
4 5 7 2
5 1 5 3

Output:
<pid> <Response_Time> <Finish_Time> <Waiting_Time>
1 0 44 30
2 0 31 16
3 0 41 28
4 6 34 22
5 14 35 29

Note: Here, Response_Time means the initial waiting time before it was allocated a CPU for the first time.

Multilevel FeedBack Scheduling

 Upload Format:
Put source code in folder named RollNo_Assignment5. Also create a shell script RollNo.sh to compile and execute your code. Finally create RollNo_Assignment5.tar.gz and upload on courses portal.

Example [folder structure] :

2015XXXXX_Assignment5
        |_1.cpp
        |_2015XXXX.sh
create 2015XXXXX_Assignment5.tar.gz

Shell script file:
#!/bin/bash
g++ file.cpp
./a.out < $1 > $2

$1 is input file and $2 is output file.

Instructions:
- Follow upload format strictly. Follow input and output format strictly. Evaluation will be automated for this assignment. Make sure you upload script file as well and test your script file before uploading.
- Copying code from friends/internet/seniors will lead to straight zero. No arguments will be entertained later for copy cases.
- You are allowed to use STLs in this assignment.
- Deadline- 20 November 2015 11:59 pm. No submissions will be accepted after deadline.