

Homework 6

(38 points)

Part 1 - Scheduling with RM and DM

1. Schedule the following task set with Rate Monotonic from $t=0$ to $t=20$. (10 points)
(T, C): { (7, 2), (5, 1), (12, 5) }

2. Schedule the following task set with DM from $t=0$ to $t=28$. (10 points)
(T, C, D): { (11, 2, 11), (7, 2, 6), (12, 1, 9), (8, 2, 8) }

3. Given the following task set, apply the RM utilization test. (6 points)
(T, C): { (7, 1), (13, 3), (14, 2), (23, 4) }

4. Come up with a implicit-deadline, periodic task set with three tasks, all with $\phi=0$, that fails the RM utilization test but the first job of each task completes by its deadline. (8 points)

Part 2 - Reading Questions

Note that in the reading on Sakai, a task is referred to as T_i , and its period is referred to as p_i .

1. What is a simply periodic task set? (2 points)
2. Give a simply periodic task set that has four tasks represented as (T, C). (2 points)

Feedback

1. How much time did you spend completing this assignment (ignoring interruptions)?
2. How much time did you spend doing the assigned reading (ignoring interruptions)?
3. How much time did you spend on Programming Assignment 2?
4. Any other feedback?