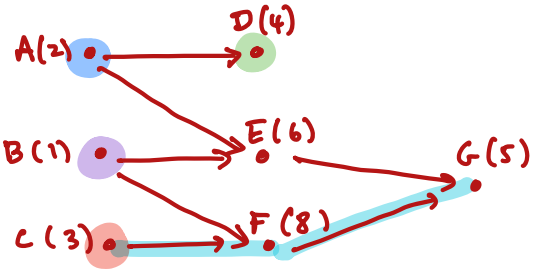
MATH F113X: Scheduling with Priority Lists

lecture notes

Goal: Learn how to construct a schedule, given a priority list and **document your thinking.** Learn strategies for making a priority list.

1. Create an associated digraph. Find a critical path and critical time.

label/task	time	dependence
A	2	
B	1	
C	3	
D	4	A
E	6	A,B
F	8	B,C
G	5	E,F



critical path: C → F → G

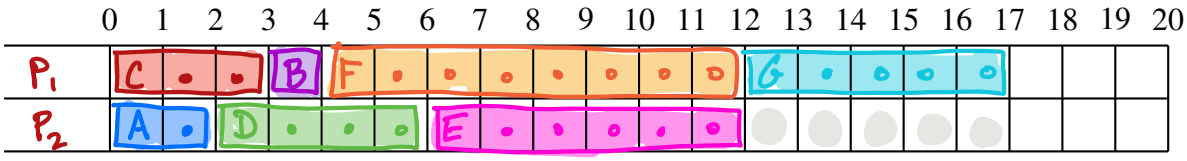
critical time: 16

2. Construct a schedule with two processors using the priority list below.

F E G D C A B

* At t=2, D & B are able to be assigned. We assign D first!

time	0	2	3	4	6	12	17
done		A	C	B	D	F, E	G ← everything listed
ready	C, A, B	D, B	B	F, E	E	G	

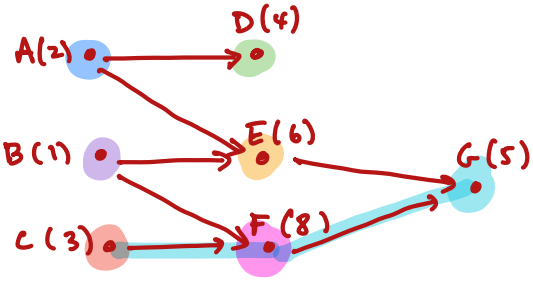


How long did this schedule take? 17

Is this the best possible? No – Critical time is 16

How much idle time was there? 5 units

3. Decreasing Time Algorithm



List tasks in order from longest to shortest (so, assign longer tasks before shorter tasks)

F(8), E(6), G(5), D(4), C(3), A(2), B(1)

oh look!