1 Priority Lists

2 Assignment
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Priority Lists

Definition (Priority List)
A priority list is a list of the tasks of a project, listed in the order in which we prefer to execute them.

Definition (Priority List Model)
The priority list model uses a priority list to schedule the tasks. Whenever a processor is available, the model chooses the next task in the list that is ready to be processed. (To be ready, all precedent tasks must have been completed.)

- If there are $M$ tasks, then there are $M!$ possible priority lists.
- It is not practical to try them all.
Suppose the priority list is $A, B, C, D, E$ and that there are only 2 processors.

What is the resulting schedule?
Example (Priority-List Scheduling)

Start(0)

B(5)
D(2)
A(6)
C(7)

End(0)

E(5)
Example (Priority-List Scheduling)

Start(0)

B(5)

D(2)

A(6)

C(7)

End(0)

E(5)

Processor 1

Processor 2

A(6)

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
Example (Priority-List Scheduling)

Start(0) B(5)
D(2)
A(6)
C(7)
End(0)
E(5)
Example (Priority-List Scheduling)

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Example (Priority-List Scheduling)

Start(0) B(5)
D(2)
A(6)
C(7)
End(0)
E(5)

Processor 1
A(6)  D(2)
Processor 2
B(5)   C(7)
Example (Priority-List Scheduling)

Start(0) B(5)
D(2)
A(6)
C(7)
End(0)
E(5)

Processor 1
A(6)
D(2)
Idle
E(5)

Processor 2
B(5)
C(7)
Idle
Example (Priority-List Scheduling)

- What if there had been 3 processors?
- What if the priority list had been $A, C, D, E, B$?
- What if the priority list had been $E, D, C, B, A$?
1. Priority Lists

2. Assignment
Assignment

- Chapter 8: Exercises 33, 35, 36, 37, 38.