

Priority-List Scheduling

Lecture 35
Sections 8.3

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Hampden-Sydney College

Mon, Apr 16, 2018

1 Priority Lists

2 Assignment

Outline

1 Priority Lists

2 Assignment

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.

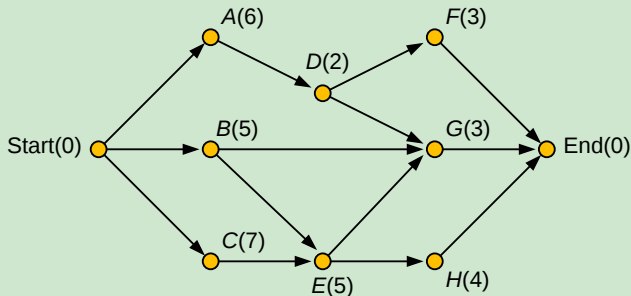
Definition (Priority List Model)

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.

Example

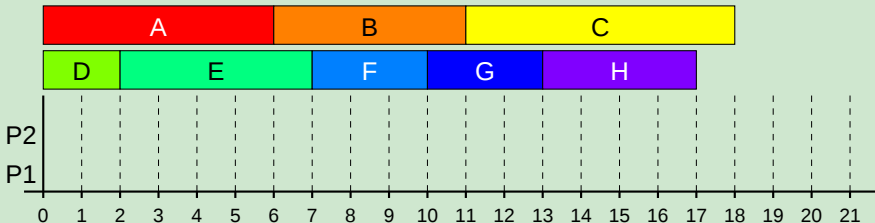
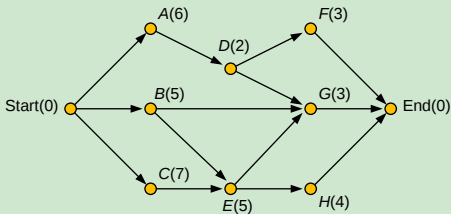
Example (Priority-List Scheduling)



- Suppose the priority list is A, B, C, D, E, F, G, H and that there are 2 processors.
- What is the resulting schedule?

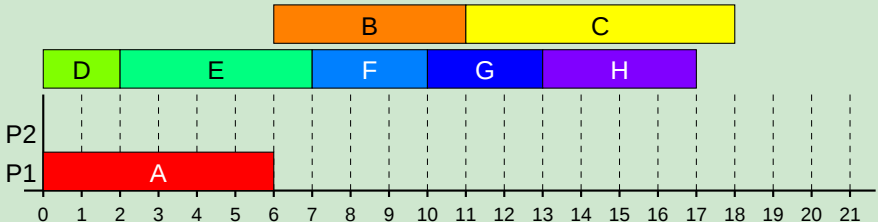
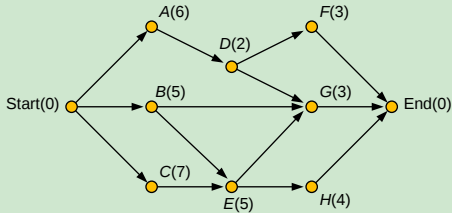
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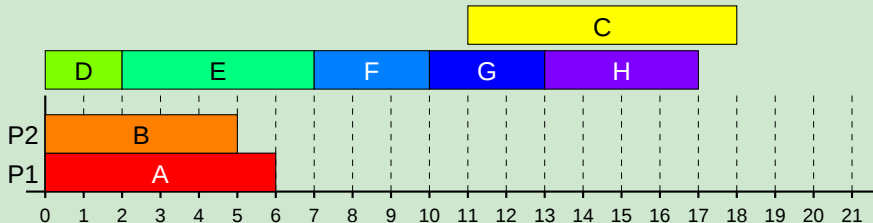
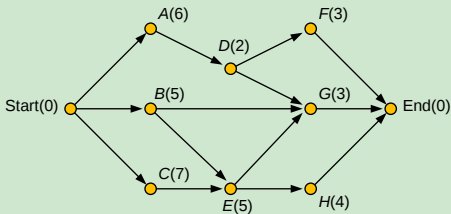
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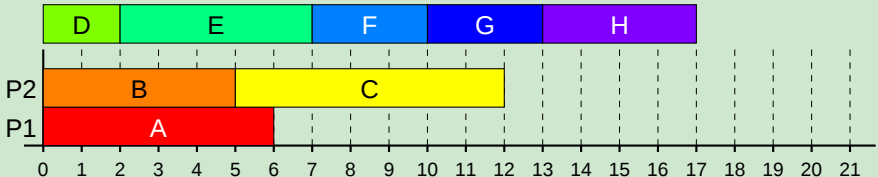
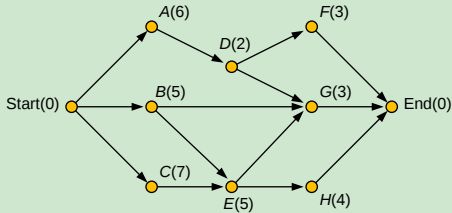
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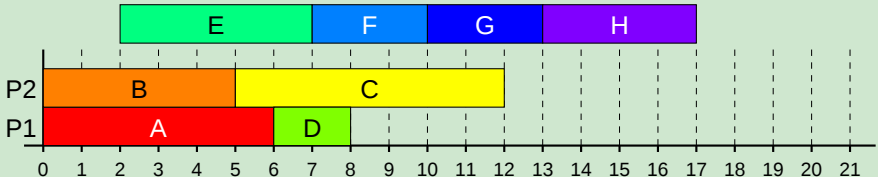
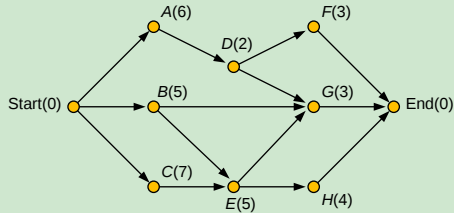
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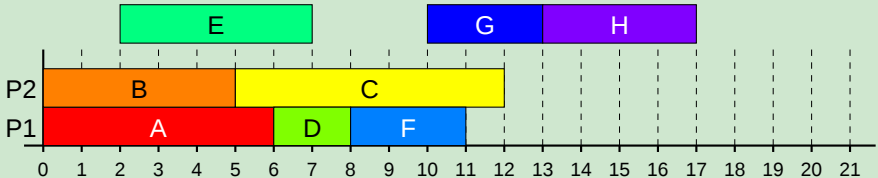
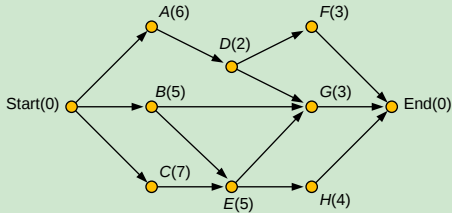
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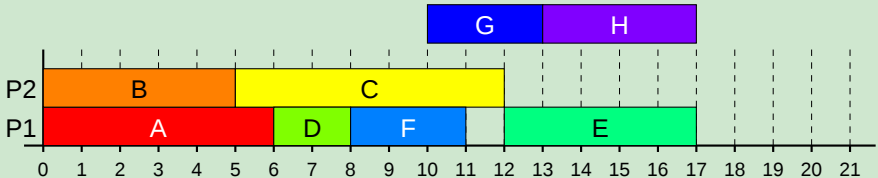
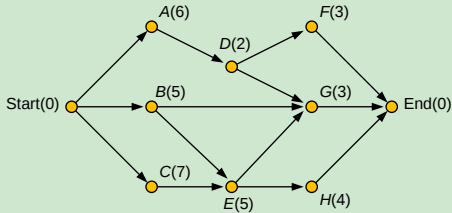
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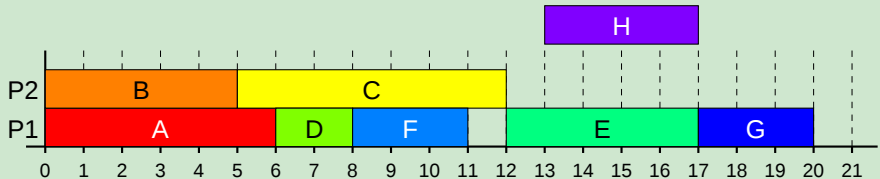
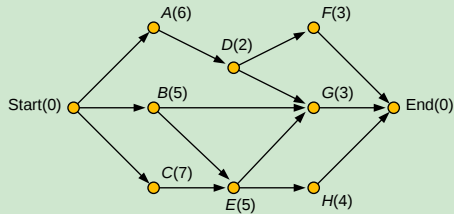
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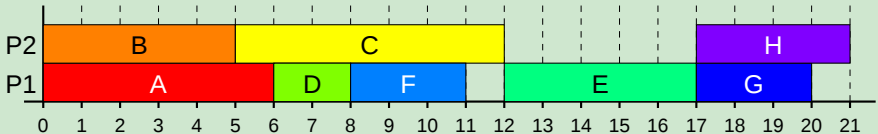
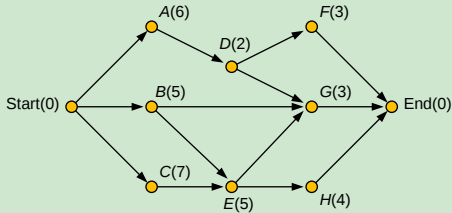
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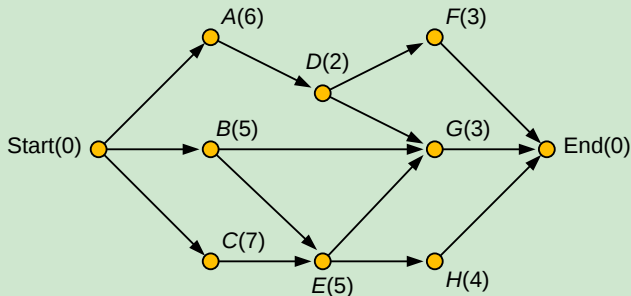
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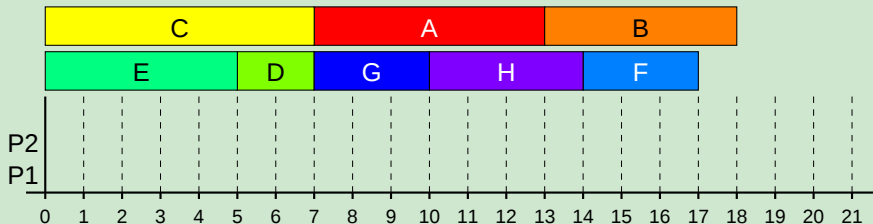
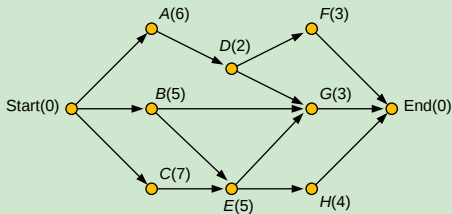
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- Suppose the priority list is C, A, B, E, D, G, H, F and that there are 2 processors.
- What is the resulting schedule?

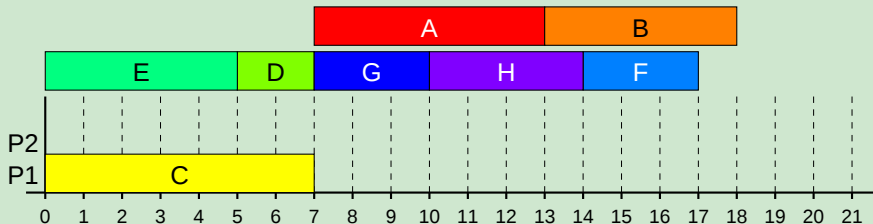
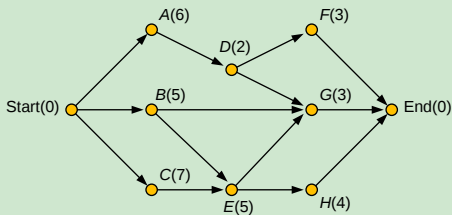
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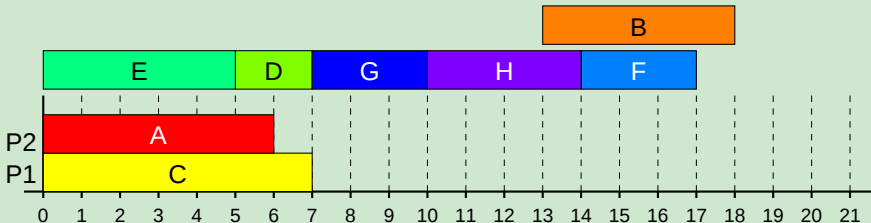
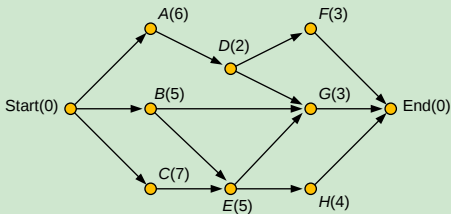
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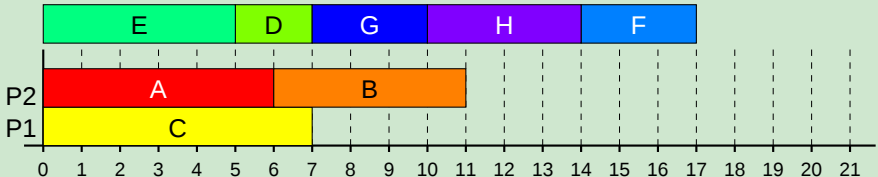
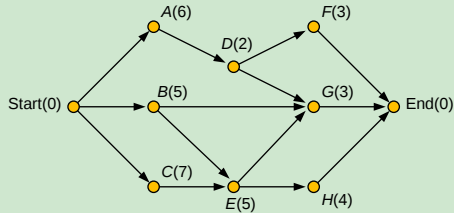
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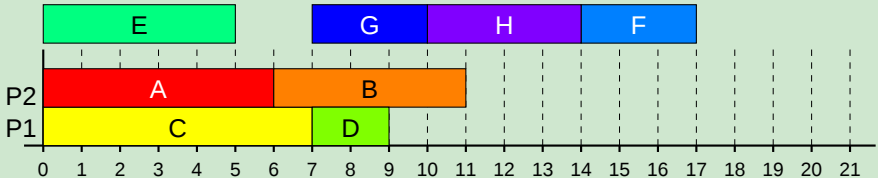
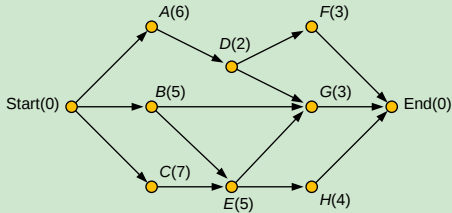
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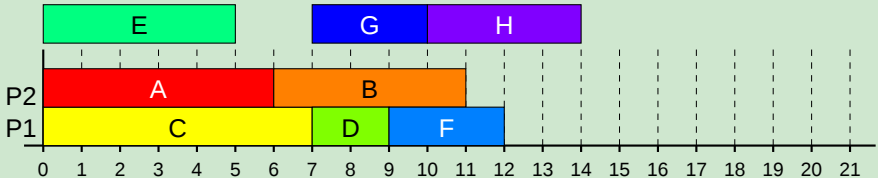
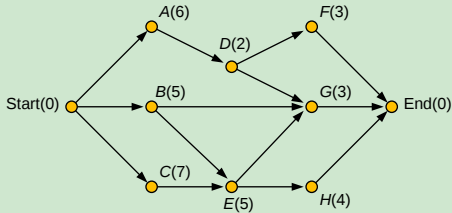
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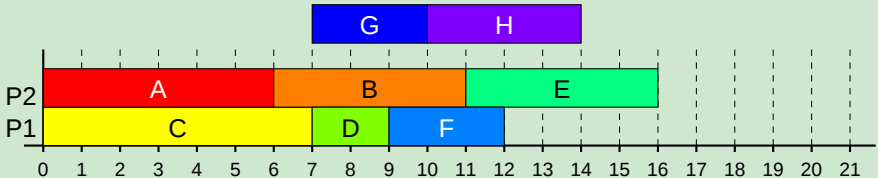
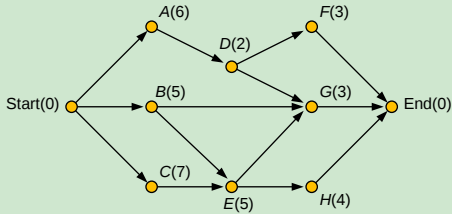
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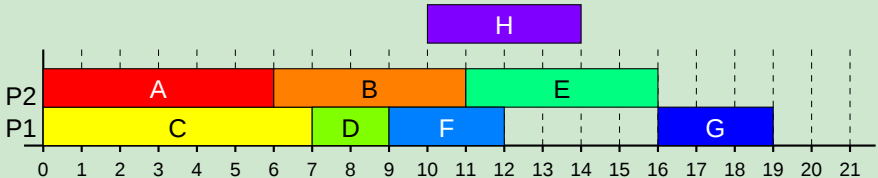
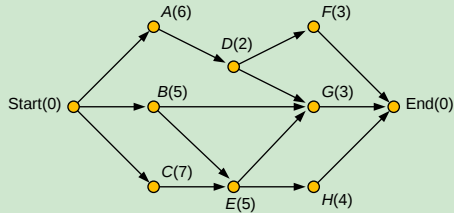
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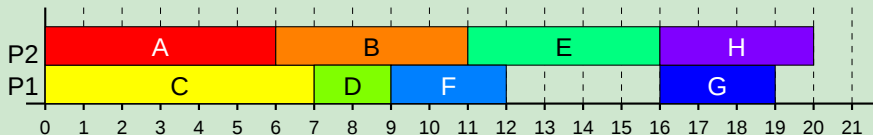
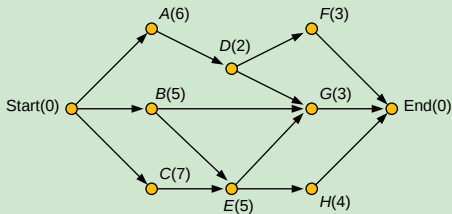
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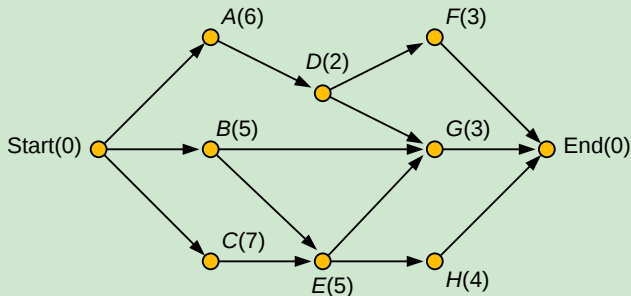
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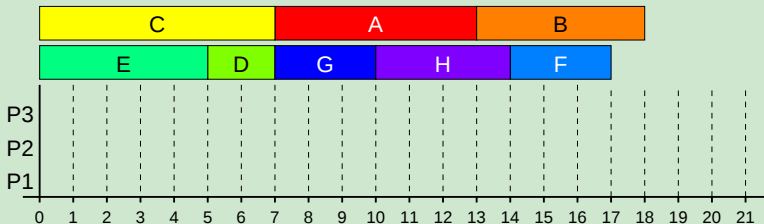
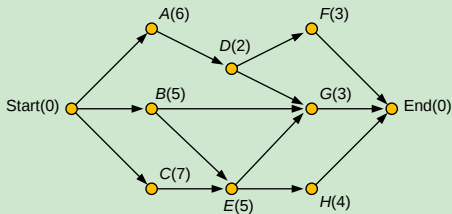
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- What is the resulting schedule?

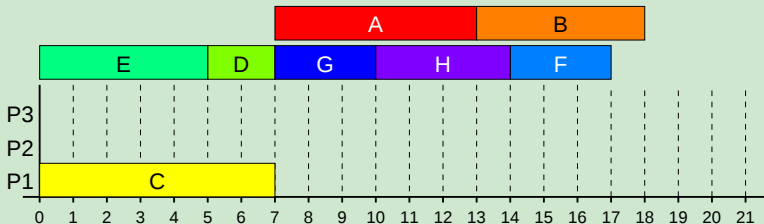
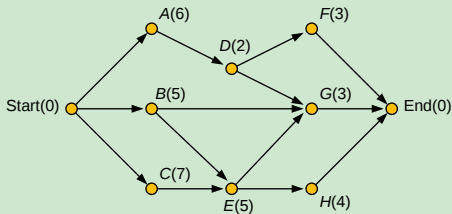
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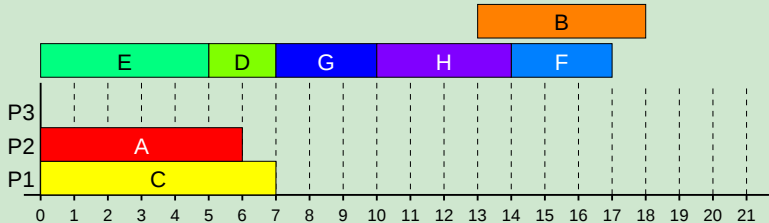
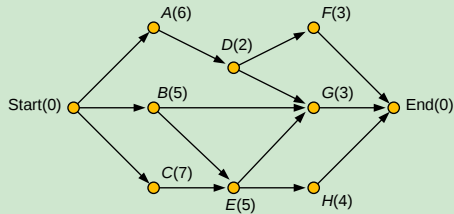
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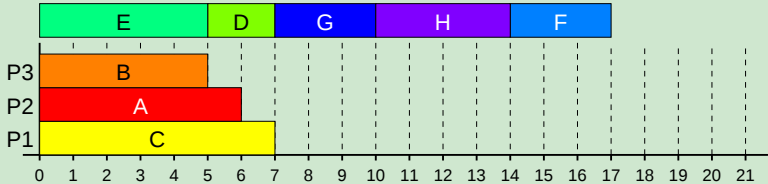
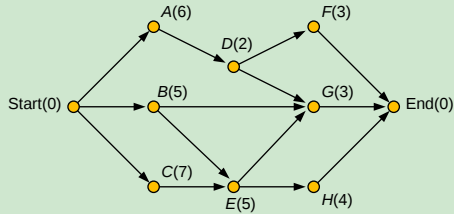
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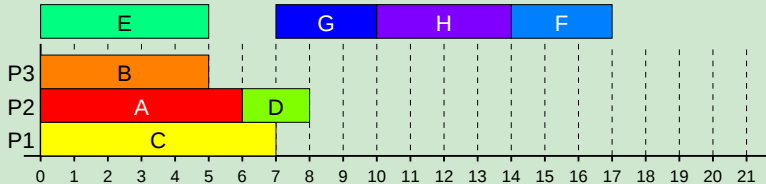
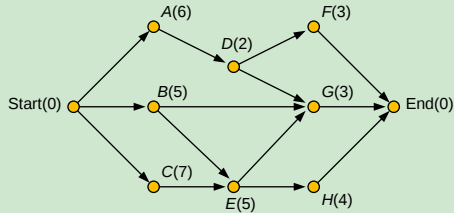
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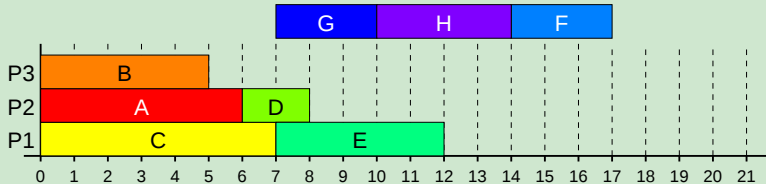
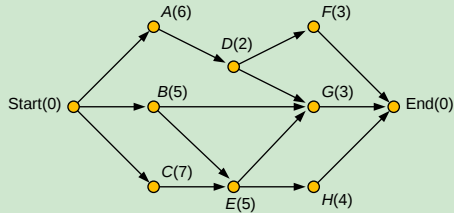
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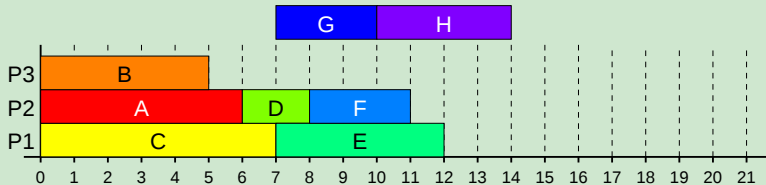
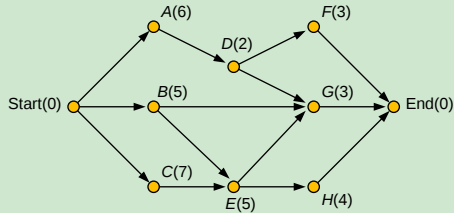
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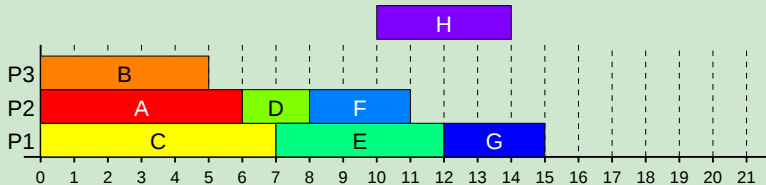
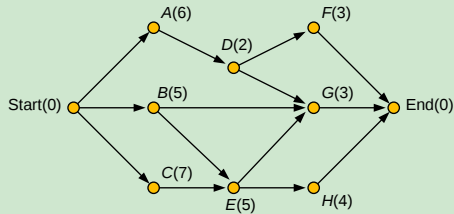
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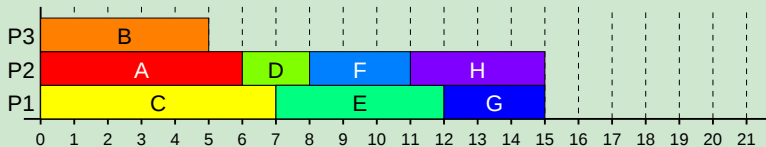
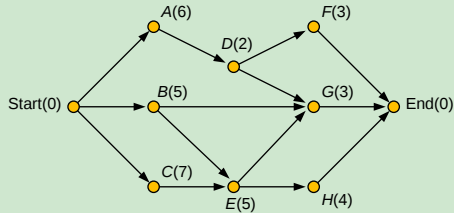
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- Chapter 8: Exercises 33, 35, 36, 37, 38.