

## Lecture #10: Classical scheduling

What makes scheduling different from planning?

When is it better to solve planning and scheduling problems together in an integrated approach?

Explain  $\alpha | \beta | \gamma$  notation.

What is a preemptive task?

What is the difference between lateness and tardiness?

What is the difference between due date and deadline?

What is a unary resource? Why is it also called disjunctive?

Explain EDD rule.

Under which conditions is the problem  $(1 | r_j | L_{\max})$  tractable?

What is the difference between uniform and general resources?

Show an algorithm to solve the problem  $1 | \text{prec} | C_{\max}$ .

What is a critical path?

What is a disjunctive graph and how is it used in scheduling?

How do you (lower) estimate makespan using a disjunctive graph?

Explain the role of problem  $(1 | r_j | L_{\max})$  in solving job scheduling problems.

Explain the notion of bottleneck in JSP.

What type of resources is used in JSP?

Is it possible that one job has more operations on the same resource?

Is it hard to find a feasible solution to a job-shop problem?

Does shifting bottleneck algorithm guarantee optimality of solution?