進度：動態規劃與目標規劃
Dynamic Programming and Goal Programming

- **GOAL PROGRAMMING**
  - □ Criteria for Decision-Making: Attribute, Objective, Target, and Goal
  - □ Multiple Criteria Decision Making: Multiple Attribute and Multiobjective
  - □ Classification of Goal Programming: Non-Preemptive vs. Preemptive
  - □ Non-Preemptive Goal Programming
  - ⇨ Complementary relationship
  - ⇨ One-sided vs. Two-sided
  - □ Preemptive Goal Programming or Lexicographic GP
  - ⇨ Sequential procedure
  - ⇨ Streamline procedure
  - □ Graphical Solution Procedure
  - □ Drawbacks: Normalization and Weighting; Pareto Optimality?

- **INTRODUCTION TO DYNAMIC PROGRAMMING**
  - □ Formulation of DP? => No Specific Forms
  - □ Principle of Optimality
  - □ Terminology: Stage, State, Decision, Return, Recursive Equation
  - □ Dynamic programming is a technique for solving problems with a recursive structure with the following characteristics:
  - ⇨ Optimal substructure (principle of optimality): An optimal solution to a problem can be decomposed into optimal solutions for sub-problems.
  - ⇨ A small number of sub-problems: The total number of sub-instances to be solved is small.
  - ⇨ Overlapping sub-problems: During the computation same instances are referred to over and over again.

If

is the shortest path between u and v

then

is the shortest path between x and y