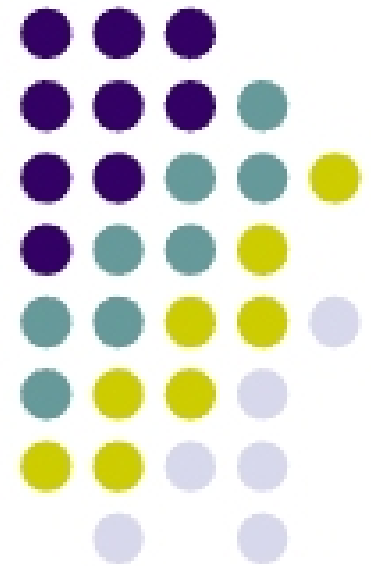


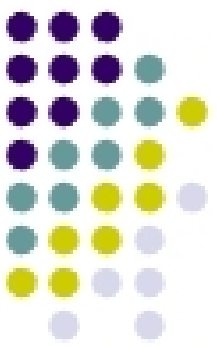
# Minimax Trees: Utility Evaluation, Tree Evaluation, Pruning

CPSC 315 – Programming Studio  
Spring 2009  
Project 2, Lecture 2

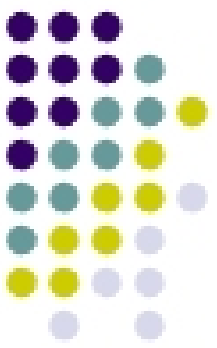


Adapted from slides of  
Yoonsuck Choe

# Two-Person Perfect Information Deterministic Game



- Two players take turns making moves
- Board state fully known, deterministic evaluation of moves
- One player wins by defeating the other (or else there is a tie)
- Want a strategy to win, assuming the other person plays as well as possible



# Minimax

- Create a utility function
  - Evaluation of board/game state to determine how strong the position of player 1 is.
  - Player 1 wants to maximize the utility function
  - Player 2 wants to minimize the utility function
- Minimax tree
  - Generate a new level for each move
  - Levels alternate between “max” (player 1 moves) and “min” (player 2 moves)