



Vantage 140 CPSC 110

Midterm Preparation

Week 9

Lesson Plan:

Midterm practice with Abstraction, 2-OneOf, Mutual Ref

Intended Learning Outcomes:

- Identifying Generative Recursion problems from description
- Difference between Generative and Structural Recursion
- Generative Recursion – establishing what “problem”/ “changing information”
- Template blending

Required Materials:

- 1) problem

Lesson Procedure		
	Resource(s)	Time
Main Task 1 – Discussion	Problem	<5 mins
What makes this a gen rec problem – make them answer this question. Some helpful indicators... -No data defined to operate on -multiple possible next moves from any given cell		
Main Task 2 – Establish the problem/next problems		30 mins
Do not let them write code yet!! Ask them to sketch out a picture of their solution like we did with triangle solitaire and in Sudoku (problems + next problems). If they don't know where to start ask them to: - label the axis of the maze (x,y values) - walk through the maze and identify what is changing as they walk through – do the values of the cells change? Does the position you are at in the maze change?		

<p>What they should have:</p> <ul style="list-style-type: none"> -a clear description of what the problem is: a position -what it means to be in a solved position -an example problem (position 0,0) with example next problems (list) <p>Before they move to code get them to write in words the steps they follow to generate the next problems (positions). You want to see enough detail that you understand their approach. For example:</p> <ul style="list-style-type: none"> -I create a list of 2 next positions -I get rid of the ones outside the maze -I get rid of the ones that are walls 		
Main Task 3 – Code		15 mins
<p>NOTE: it is ok if they do not get to this step!</p> <p>Blend template and add wishlist entries. If they get stuck on the main function or wishlist entries then ask them to refer back to their picture.</p>		