

# ECOO Round 2 QUESTIONS

**April 27, 2013**

## Problem 1: Upsetris

## FIRST TRY

### Suggested Marking Scheme

Input file name: DATA11.txt

Award 20 marks for each exactly correct board. Make sure the boards have the correct number of rows.

The data should be presented in a fixed-width font. If the team chooses, they can have the boards come out one at a time under input control. They can also scroll the output window horizontally or vertically. If necessary they can cut and paste from their output window into a text editor to display the result in a fixed-width font.

Award 10 bonus marks if all 5 boards are exactly correct.

<pre>       o  o      o  o      o     oo  o o oo  o  oo     oo  oooo oo  o o oo   oooooooooooooo oooooo   oooooooooooooo oooooo   oooooooooooooo oooooo   ===== </pre>	<pre>               o               o             o  o  o           ooo ooooooo  o  o   ===== </pre>	<pre>       o       o      o  o oo  ooo             o  o oo  ooo   ===== </pre>	<pre>               oo             o o  ooo             o o  ooooo             ooo  ooooo             oooooooooo             oooooooooo   ===== </pre>
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# ECOO Round 2 QUESTIONS

**April 27, 2013**

## Problem 1: Upsetris

## SECOND TRY

### Suggested Marking Scheme

Input file name: DATA12.txt

Award 20 marks for each exactly correct board. Make sure the boards have the correct number of rows.

The data should be presented in a fixed-width font. If the team chooses, they can have the boards come out one at a time under input control. They can also scroll the output window horizontally or vertically. If necessary they can cut and paste from their output window into a text editor to display the result in a fixed-width font.

The diagram illustrates the construction of a binary tree structure through four stages, each enclosed in a dashed box:

- Stage 1:** A root node 'o' has two children: 'oo' on the left and 'oooo' on the right. Below the children is a dashed line '=====|'.
- Stage 2:** The root node 'o' has two children: '0000' on the left and '000 0' on the right. Below the children is a dashed line '=====|'.
- Stage 3:** The root node 'o' has two children: 'oo 0' on the left and 'oooo 0' on the right. Below the children is a dashed line '=====|'.
- Stage 4:** The root node 'o' has two children: '0000' on the left and '000 0' on the right. Below the children is a dashed line '=====|'.