

UIUC Upward Bound Summer 2008
Computer Science

Java Project

Your project is to complete write a Java program to play one of the following games:

(1) **Nim:** Nim is an ancient two-player game. The game starts with a pile of bones. Players alternate turns, and on each turn a player has the option of removing one or two bones from the pile. The player who removes the last bone from the pile wins.

Specifications: Your program should start with a random number of bones, between 1 and 50, in the pile. At each turn, it should print to the screen whose turn it is and how many bones remain. At the end, it should print on screen who won.

(2) **Tic-Tac-Toe:** Everyone knows how to play tic-tac-toe.

Specifications: On every turn, your program should print the current board and ask the player to select a square. If someone wins, it should print who won on the screen. Otherwise, it should print that it was a "cat's game".

(3) **Add 'em Up:** This is a made-up two-player game. The board is twenty numbers in a line. Players alternate turns, and on each turn the player can choose the leftmost or rightmost number in the line. This number is then removed from play and added to the total of the player who selected it. The player with the highest total at the end wins.

Specifications: Your program should generate the board by choosing twenty random numbers between 1 and 20. On every turn, it should print the current board to the screen as well as whose turn it is. At the end, it should print who won.