

CS 341 Project 2

Objective

1. To reinforce the concepts pertaining to trees by designing an ADT GameTree and developing a game application using the ADT GameTree
2. To practice software development with Java's inheritance and generics mechanisms

Problem Description

Solve Programming Problems 3 from Chapter 11 of the textbook.

Requirements

1. Design an ADT GameTree that extends the abstract class BinaryTreeBasis provided in the textbook. You need to think about what additional methods are needed for the GameTree for the problem.
2. Separate the implementation of ADT GameTree from its interface.
3. Develop the application (i.e., a driver program) that uses the ADT GameTree to solve the problem.
4. The following files will be provided to you:
 - GameTreeInterface.java
 - BinaryTreeBasis.java
 - TreeNode.java
 - TreeException.java
5. You are not allowed to modify the files provided to you except adding additional constructor specifications and public method specifications for extra credits to GameTreeInterface.java.
6. In summary, all you need to develop are two java files:
 - The implementation of the interface that also extends the tree's base class
 - The application (driver) main program
7. A report that states your algorithm used to implement the application, any obstacles encountered, bugs, and comments.

Submission

Email a zip file that includes all the files for the project to the instructor by 4/4/2011.

Extra Credits

Suggest and implement extensions/add-ons for the application.