GTU

Department of Computer Engineering

CSE 222/505 - Spring 2020

Homework 5 Report

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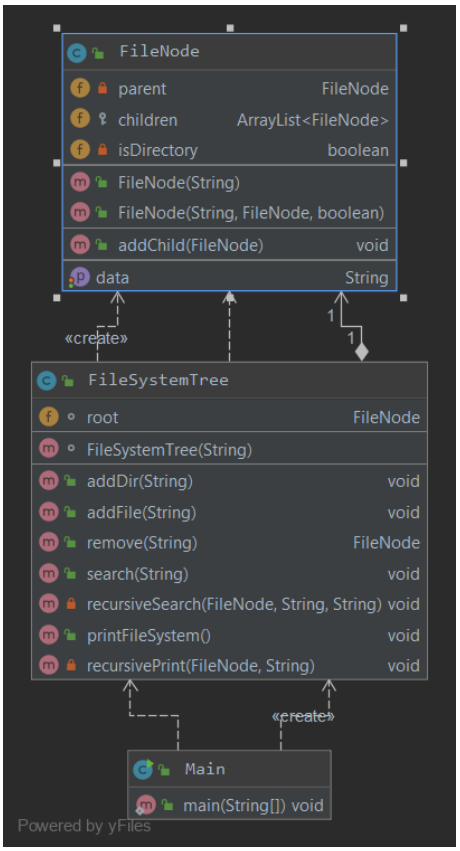
Part 1

1-Class Diagrams:



2-Problem Solution Approach

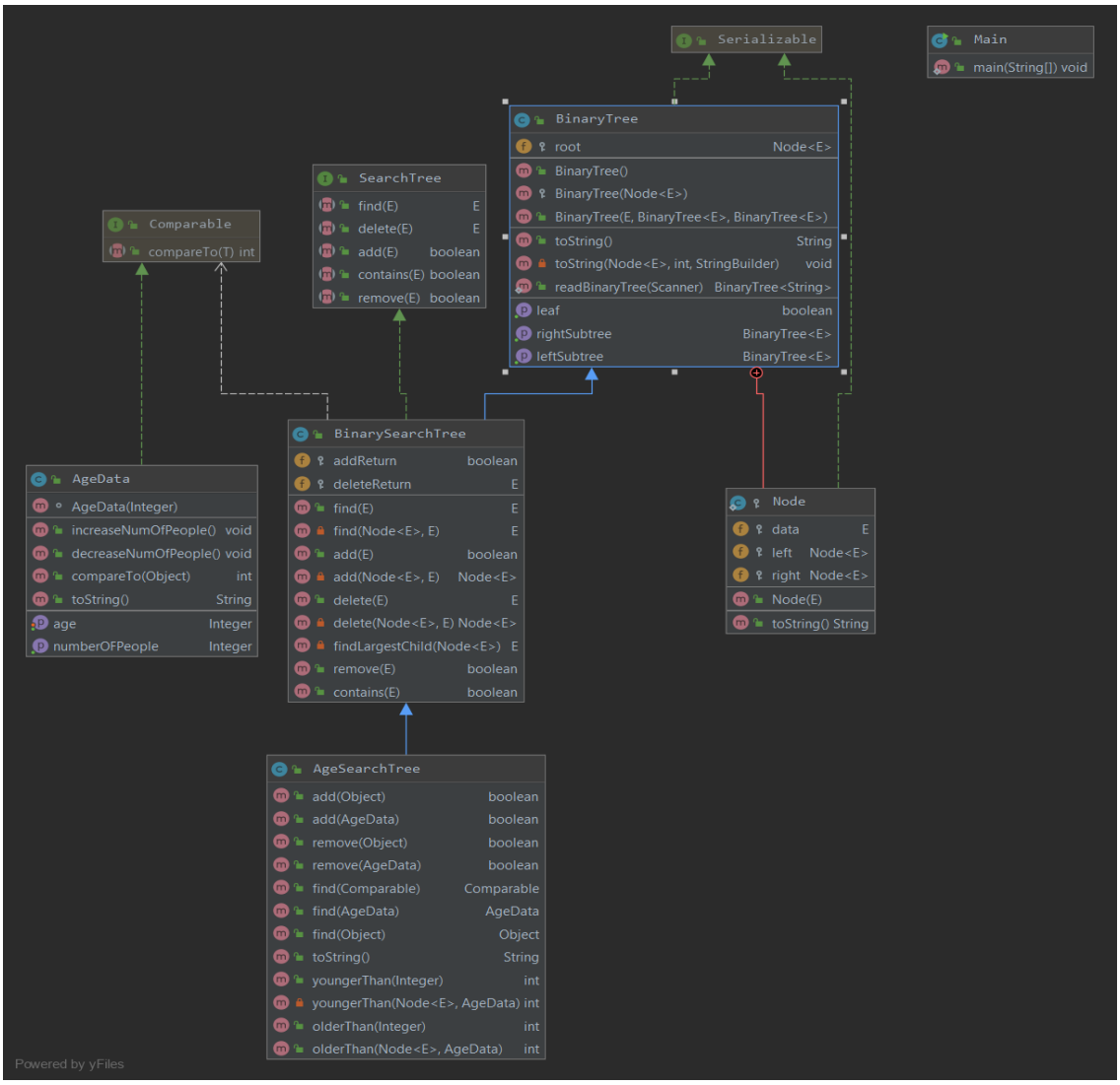
Firstly I implemented a FileNode class to create a File System tree, it has a FileNode for parrent and FileNode ArrayList for children, also it keeps a boolean value named isDirectory to know if its directory or a file. After finishing FileNode i implented the methods mentioned in homework5 pdf.For implenting add and remove methods i used split method to parse given path. After that it goes through to given path iteratively and adds to tree. Search method checks childrens data iteratatively but it goes lower levels recursively, and prints data path if it finds a match .PrintFileSystem works like search method.

3-Test Cases, Running and Results

The test cases and results exist in Part1/ConsoleOutput.pdf

Part 3

1-Class Diagrams:



2-Problem Solution Approach

SearchTree, BinaryTree, BinarySearchTree implemented as mentioned in course book. I created a comparable class to keep age data.and then i implemented AgeSearchTree.For add method it finds given node if it exist increments, if its not, creates new node to tree.remove method also using find method it finds target element, if number of people greater than 1 then it decreases, if lower than 1 it removes the Node. Find method calls parent find method, i think it works properly.youngerThan and olderThan methods checks tree recursively and returns the number of people younger or older.

3-Test Cases, Running and Results

The test cases and results exist in Part3/ConsoleOutput.pdf