CmpE 160 – Introduction to Object Oriented Programming

Spring 2010

Project 2, Deadline: May 23, 2010 by 17:00

Specification:

Consider the following logic puzzle: In five houses that are next to each other, each with a different number of rooms, live 5 different people, each of whom prefer a different foreign series, a different local series and a different football club. Given the following facts, the question to answer is “Where is KSK supported, and in which house do they watch Hanımın Çiftliği?”

- Ali lives in the house with two rooms.
- Veli supports GS.
- Ahmet lives in the first house on the left.
- Lost is watched in the house with three rooms.
- The man who watches Heroes lives in the house next to man who supports FB.
- Ahmet lives next to the house with four rooms.
- 24 fan supports TS.
- Merlin fan is also a fan of Ezel.
- Mehmet is a fan of Kavak Yelleri.
- Niyazi enjoys Dollhouse.
- Lost is watched in the house next to the house where BJK is supported.
- Yaprak Dökümü is watched in the house with five rooms.
- The house with five rooms is immediately to the right (your right) of the house with 6 rooms.
- Aşk-ı Memnu is watched in the middle house.

You are required to implement the code to solve the above problem in Java. You need to implement two algorithms to solve the problem, namely Depth First Search (DFS) and Breadth First Search (BFS). The details of the algorithms and how to use them to solve the above problem will be discussed in the lab section.

According to the specification above and using the object oriented concepts (abstraction, data hiding using private class fields, inheritance, polymorphism, etc.), design and implement a set of classes in Java language to achieve your goal of finding the answer to the above questions.

What to deliver:

The (strict) deadline of the project is May 23, 2010 by 17:00. Deliver a CD that includes the following to one of the assistants:

- A report with sections:
  - Introduction: In this section, you should describe the problem in your own words.
Solution: In this section, you should specify how you solve the problem and the concepts (abstraction, inheritance, polymorphism, etc.) that you use in your work. Explain each one (i.e. why you need it, what you accomplish by using it, so on.).

Conclusion: You should evaluate your work here. State whether you have solved the problem correctly. If not, state what is missing, what could have been improved, and so on.

- All the Java source files of your program
- Javadoc documentation of your program

Assistants

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