CSC 220 Data Structures

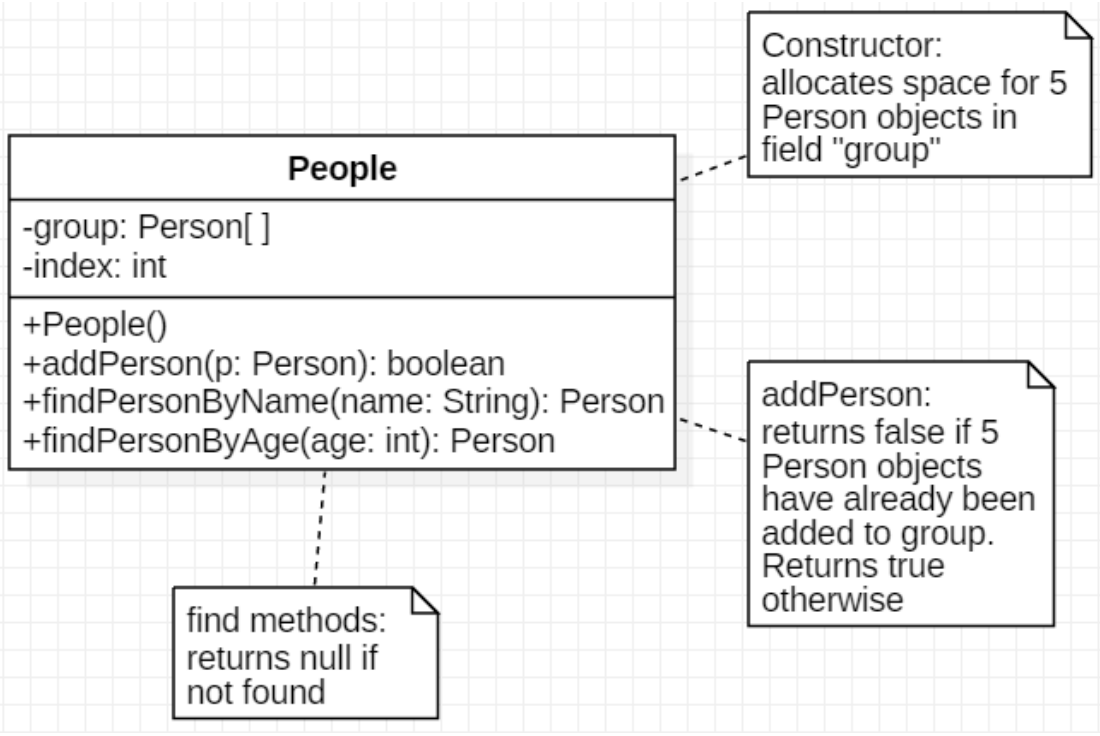
Program #2

Java Arrays

Description:

Copy over your Person class from the last assignment into the provided template and create a new class called “People”. This new class requires a bit of detective work on your part. I will give you a class diagram describing the class (shown below) and sample output from running the program (i.e. what I expect to see on the screen from a completed assignment) and that’s it. You will have to comb over the notes given on Moodle and in class as well as look online for help. You are NOT ALLOWED to ask classmates for help on this assignment. I want you to do your own research and find the answers out for yourself. If you don’t know how to do something in Java, look it up. If you don’t know or remember something about class diagrams, look it up. In the professional world, collaboration is fine and even encouraged BUT constantly asking for the answer to questions you can easily look up for yourself doesn’t look good on you. To really impress an employer, you need to be able to learn on your own and find out answers yourself. If you get stuck, have given a good attempt to find out the answer for yourself but still can’t get it, I will be more than happy to help if you come by my office. But only after you have tried.

Here is the class diagram for the People class



Sample output:

You'll know it when you see it ☺

After looking over the class diagram, several questions might immediately come to mind, such as “what does addPerson do”, “how do we search for a person by name”, “do you want us to use a certain type of search algorithm”, “which type of loop should we use”, etc. For this assignment, you can use whichever algorithms and loops make sense for the project and for your implementation. You are not allowed to add any additional classes (aside from Person, People and Main). You are not allowed to add any additional fields or methods. But what is inside of those methods are up to you as long as the method accomplishes its goal and returns the right value in all cases. For questions about what a particular method does, use your own logical thinking to find this out. Perhaps the main code given will give you some clues, or maybe the name of the method or the notes added into the class diagram.

One final thing. I want you to add Javadoc comments to the People class and to all its fields and methods. For the class itself and its fields, just briefly describe what the purpose of each is. For methods, describe the purpose of the method as well as each parameter and the return value (using the ‘@’ symbol properly). You don’t have to worry about doing this for the Person class.

Submitting your assignment:

Name your file “Main.java” and submit it on Moodle. Do not submit any .class files.

Rubric:

#	ITEM	POINTS
1	JavaDoc comments used and filled out properly	5
2	Fields are done correctly	5
3	Methods are done correctly	15
4	Program works	15
	TOTAL	**40**

#	PENALTIES	POINTS
1	Doesn’t compile	-50%
2	Doesn’t execute once compiled (i.e. it crashes)	-25%
3	Late up to 1 day	-25%
4	Late up to 2 days	-50%
5	Late after 2 days	-100%