

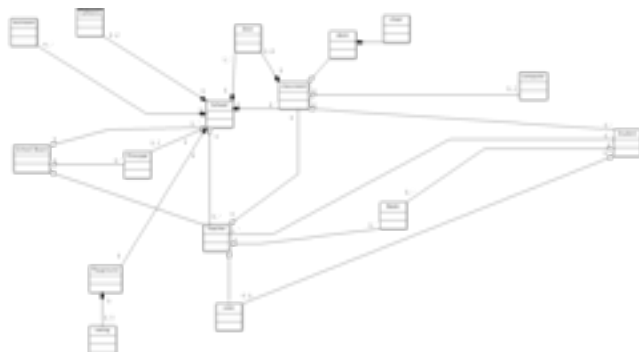
Albert Wallace  
COMP3700  
Homework #1

1. \_\_

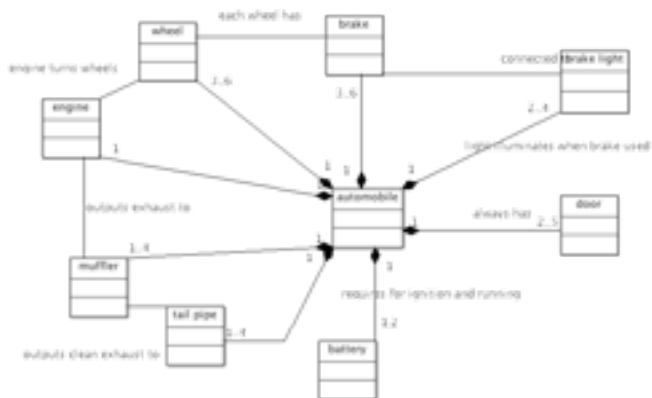


a....

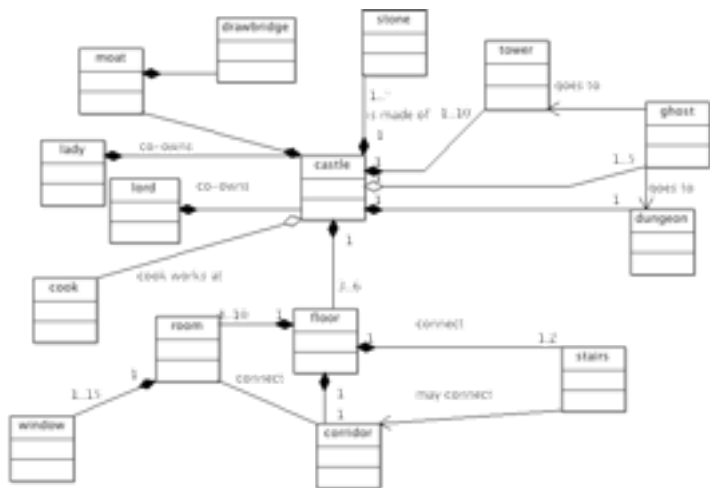
a....



b.....



C.....



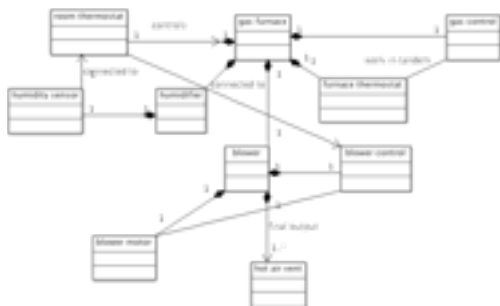
d.....



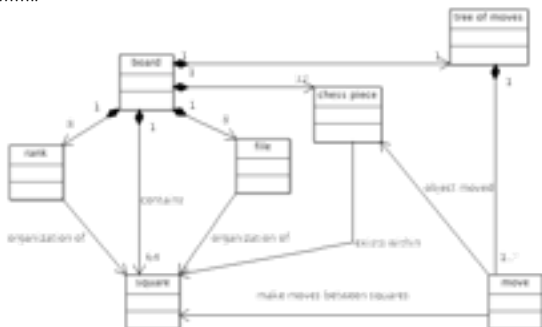
e.....



f...



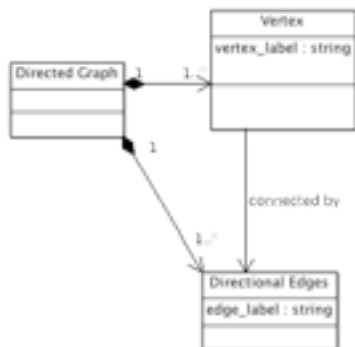
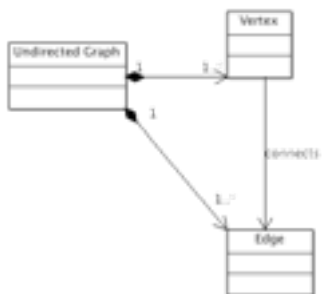
the . . . . .



h.....



3.



#### 4. Question 4.3

- 4.a. A country has a capital city: An aggregation. If a country no longer exists, its capital city effectively does not exist, as the country has ownership of its capital.
- 4.b. A dining philosopher uses a fork: An association. If “philosopher” is a type of person, multiple types of people can use forks. That same fork can be reused later by different people, or by the same person, so it is a separately-created object.
- 4.c. A file is an ordinary file or a directory file: A generalization. Whether a directory file is a specific type of ordinary file, or both are specific types of a “file”, this is representative of one object type adding a few specific attributes on top of another, basic object.
- 4.d. Files contain records: An aggregation. Records are a part of the files, and without records, the files would be incomplete; without the rest of the files, the records would be useless.
- 4.e. A polygon is composed of an ordered set of points: An aggregation or association. Association from the viewpoint that the points can exist without the polygon, and the polygon can be drawn from any similar set of points, but aggregation in that the polygon can be represented as the owner of a specific set of points depending on design.
- 4.f. A drawing object is text, a geometrical object, or a group: Generalization. Drawing object is the parent object, and the latter three are specialized versions of the generic drawing object.
- 4.g. A person uses computer language on a project: Association. The computer language is a tool, one of many possible options. The tool will still exist and is available to other people, as well as being used by computers.
- 4.h. Modems and keyboards are input/output devices: Generalization. Modems and keyboards are two of many different types of I/O devices.
- 4.i. Classes may have several attributes: Aggregation. The classes need the attributes, which are expected to not exist without the classes themselves.
- 4.j. A person plays for a team in a certain year: Association. There are many other people on the team, but the team would likely still exist without that one person, and the one person would exist independently of the team.
- 4.k. A route connects two cities: Association. The route exists independently of the cities, and the cities may exist with different routes in-between or no other routes at all.
- 4.l. A student takes a course from a professor: Association. The professor will still teach (to a certain point) without the student, and the student will still take classes (to a point) without that professor.



5.

