CS401-2024-09A-09D-01 Modern Programming Practices

LAB 3

August 4th, 2024

Group 4

Members:
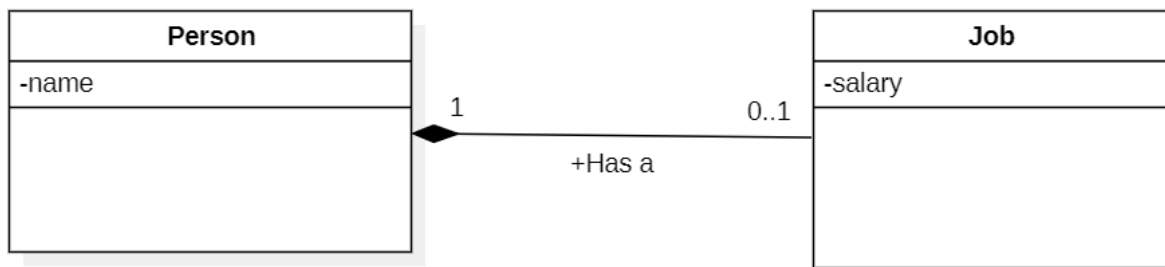- Awais Waheed - 618677
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Question 1

P1 is an instance of PersonWithJob class. P2 is an instance of Person class. PersonWithJob extends Person class.

- For case p1.equals(p2), according to the p1.equals method, p2 needs to be an instance of PersonWithJob, which p2 is not, hence `false` is returned.
- For case p2.equals(p1), Object p1 can be an instance of Person due to inheritance. That's why all checks pass and `true` is returned.
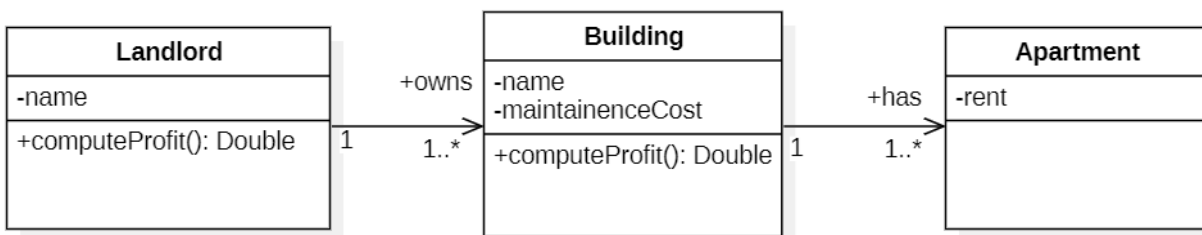
Fixed code can be found in the prob1 package.
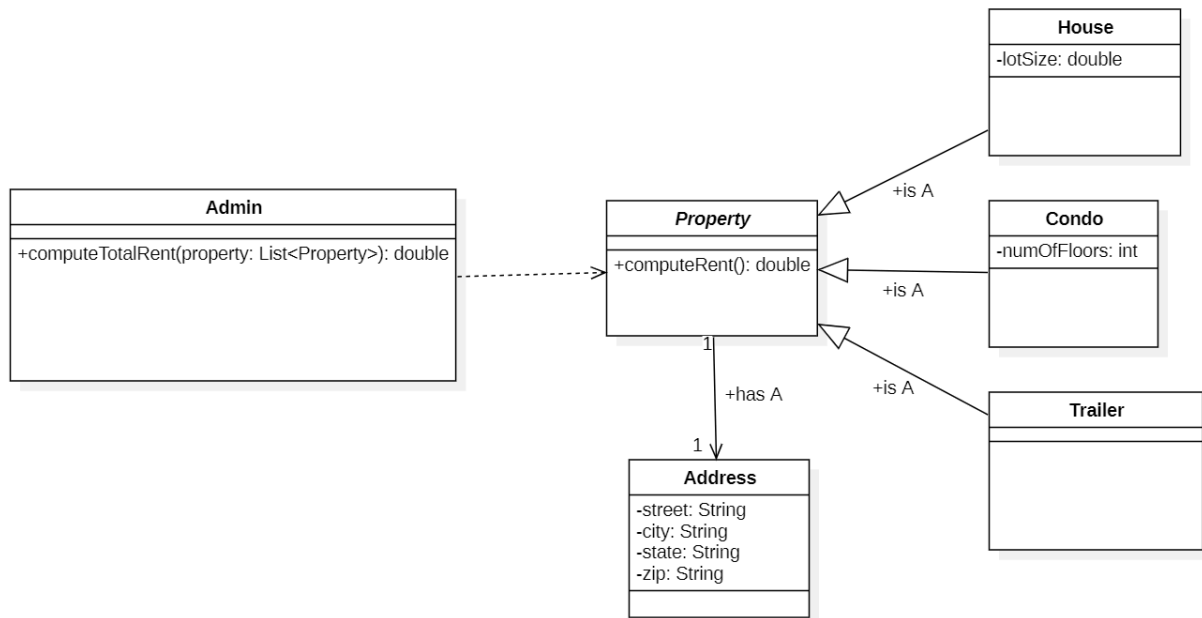**Solution**

Person class has a Job composition. If an object has a job, this attribute will be populated with salary, otherwise will be null. **For the equals method, we can check if the job object is not null, salary is the same along with name, then they are the same object. Main Method is in Person class to run example code.**

Question 2

Code is in the prob2 package. Main class is also in the same package to run example code.

Question 3

Code is in the prob3 package. Main method is also in the same package in Driver Class to run example code.