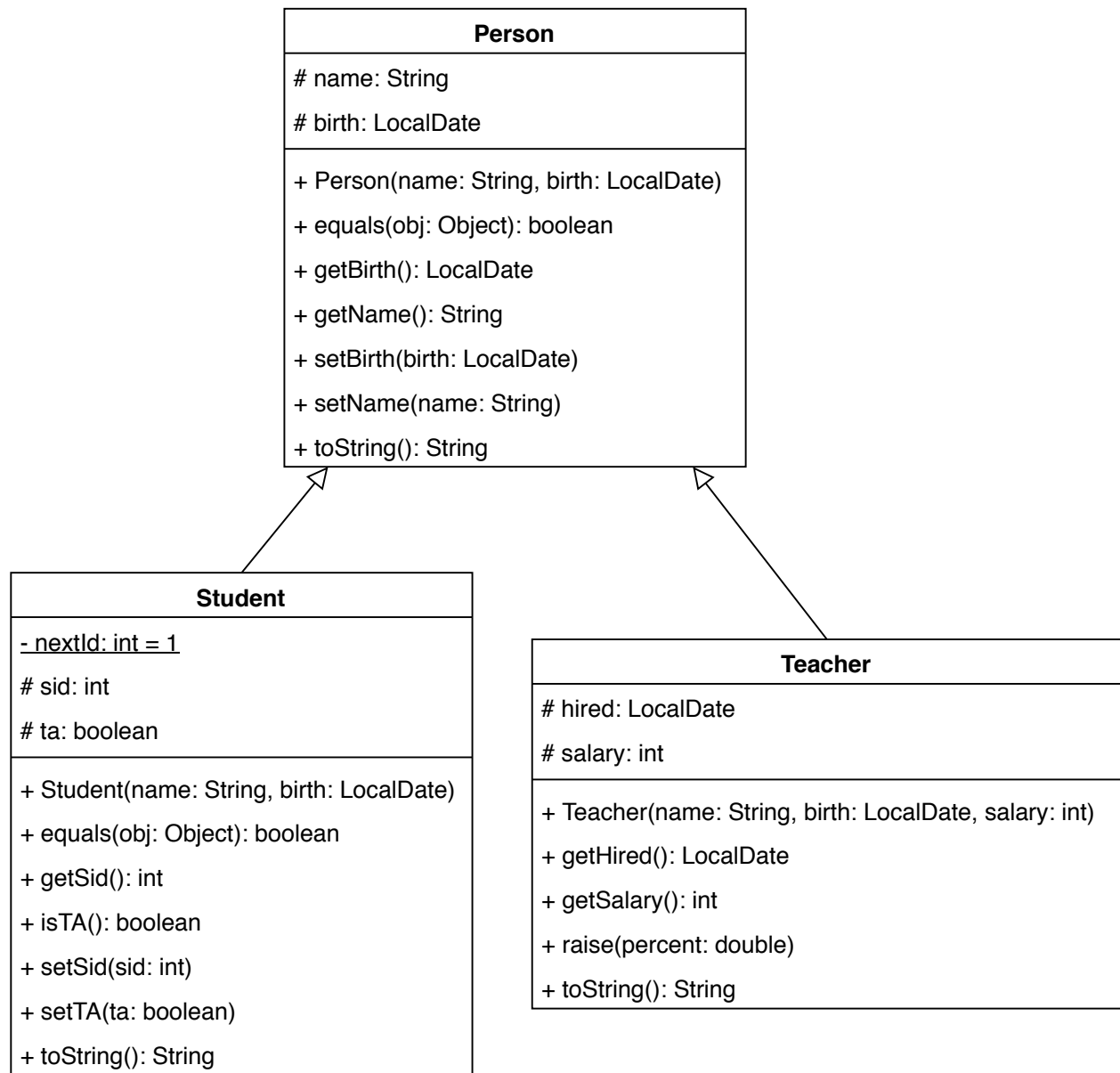


Model 1 Students and Teachers



Questions (15 min)

Start time:

1. Based on the UML diagram:
 - a) What attributes does a Student object have?
 - b) What attributes does a Teacher object have?
 - c) Which methods does Student override?
 - d) Which methods does Teacher override?

2. Based on the UML diagram:

- a) Which methods does a Student and a Teacher have in common? (i.e., inherited)
- b) Which methods does a Student object have that a Teacher object does not have?
- c) Which methods does a Teacher object have that a Student object does not have?

3. Fill in each blank with either “is a” or “has a”:

- | | | | |
|------------|-----------|------------|-----------|
| a) Person | String | d) Student | String |
| b) Person | LocalDate | e) Teacher | Person |
| c) Student | Person | f) Teacher | LocalDate |

4. Explain the difference between “is a” and “has a” in the previous question.

5. Why would it be incorrect to say “Person is a Student”?

6. Which equals method (in which class) will be invoked by the following code? Explain your reasoning based on the applicable “is a” or “has a” relationship.

```
LocalDate d = LocalDate.parse("1949-01-17");  
Teacher t1 = new Teacher("Anita Borg", d, 123456);  
Teacher t2 = new Teacher("Anita Borg", d, 123456);  
System.out.println(t1.equals(t2));
```