

Participant code_____

Pre-study questionnaire

1. How long have you been programming?_____ years _____ months
2. Gender: _____
3. If you have any academic computer science background, what degrees have you completed? If you are partway through a degree, what degree and how far?

4. How much professional (paid) software development experience do you have?_____ years _____ months
5. How much experience do you have programming in Java? Include time spent doing Java part-time, such as in a course. _____ years _____ months
6. How much experience do you have programming in functional languages, such as SML or Haskell? Include time spent doing this part-time, such as in a course_____ years _____ months
7. Please rate your level of expertise in Java by circling one option:

novice intermediate expert
8. Please rate your level of expertise in functional programming by circling one option:

novice intermediate expert
9. Have you used Java annotations before? Java annotations start with “@”; examples include @Override and @Nullable. ____yes ____no
10. Approximately how big, in lines of code, is the largest project you’ve ever worked on? _____ lines
11. We are interested in your understanding of the final feature in Java. Have you used final before?

____yes ____no

Please consider the following Java code:

```
public class CalendarDate {  
    private int month, day, year;  
  
    public void setMonth (int month) { this.month = month; }
```

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```
    public void setDay (int day) { this.day = day; }
    public void setYear (int year) { this.year = year; }

    public int getMonth () { return month; }
    public int getDay () { return day; }
    public int getYear () { return year; }
}

final public class Person {
    private final CalendarDate birthdate;
    public Person (CalendarDate d) {
        birthdate = d; // ONE
    }

    public void setDateOne (CalendarDate d) {
        birthdate = d; // TWO
    }

    public void setDateTwo (CalendarDate d) {
        birthdate.setMonth(d.getMonth()); // THREE
        birthdate.setDay(d.getDay());      // THREE
        birthdate.setYear(d.getYear());    // THREE
    }
}
```

12. At the line marked “ONE”, will the compiler report an error? If so, what is the cause?

13. At the line marked “TWO”, will the compiler report an error? If so, what is the cause?

14. At the lines marked “THREE”, will the compiler report an error? If so, what is the cause?

15. Note that the Person class is marked `final`. Write a line of code that causes a compile error but would NOT cause a compile error if Person were not final.

16. What does it mean for a method in Java to be declared `final`?
