CS62: Spring 2025 | Lecture #2 (Classes) worksheet | Jingyi Li

Practice problem 1: static vs instance

The following code has 4 errors in the lines that start with ❗. Please fix all of them and understand why they are errors. Then, what does it print?

```java
public class Exercise1 {
    int x;
    String message;
    static int y = 0;

    public Exercise1(int x) {
❗        x = x;
    }
    public void setMessage(String msg) {
        this.message = msg;
    }
    public String yell(){
        return message;
    }
❗ public int add(int x){
        return x + y;
    }
    public static void main(String[] args) {
        Exercise1 obj1 = new Exercise1(y);
        System.out.println(obj1.x);
        y = 7;
❗    message = "bark";
        System.out.println(add(4));
        obj1.setMessage("meow");
❗    System.out.println(yell());
    }
}
```

Practice problem 2

a. Add a counter in the Cat class that represents the total number of cats in the rescue.
b. Update the constructor to increase the counter by one every time a Cat object is created.
c. Write an adopt() method that updates a cat's adoption status and decreases the counter.
d. Update the toString() method to say the cat's name and if was adopted or not.
e. Create a new cat and adopt it in main. Print out the cat object. Print out the counter of cats.

```java
public class Cat {
    String name;
    String sex;
    int age;
    int daysInRescue;
    Boolean adopted;


    public Cat(String name, String sex, int age) {
        this.name = name;
        this.sex = sex;
        this.age = age;


    }

    @Override
    public String toString() {
        return
    }
```

f. Update all the instance variables to be private.
g. Define a getter method that returns the days spent in rescue, and a setter method that updates the days spent. Make sure they have the correct access modifiers.
h. Create a new cat, set it to have spent 20 days in rescue, and print out the number of days.

```java
    public static void main(String[] args) {




    }
}
```