

Quiz 5

Name: _____

1. [4 marks] Given the classes:

```
// Parent.java
public class Parent {
    public Parent() {
        this("[apple]");
    }

    public Parent(String word) {
        System.out.print(word);
    }
}
```

```
// Child.java
public class Child extends Parent {
    public Child() {
        this("[orange]");
    }

    public Child(String word) {
        super(word);
        System.out.println("[pear]");
    }
}
```

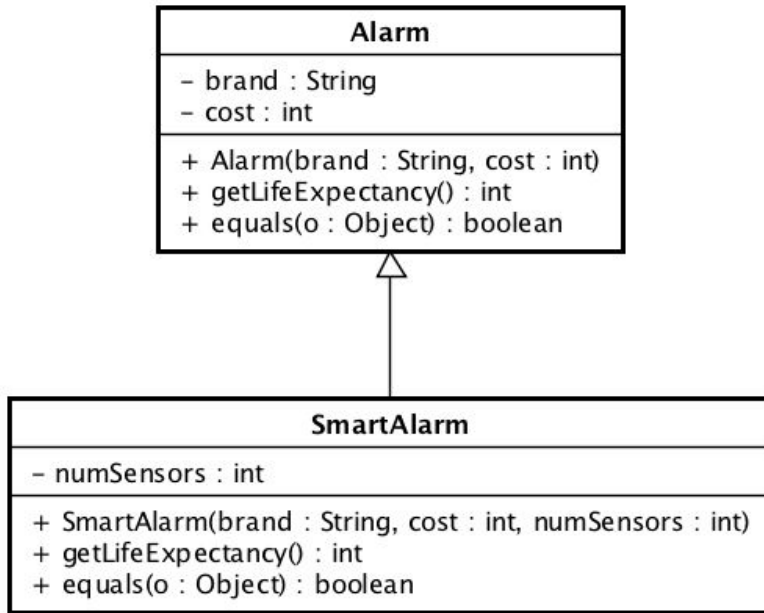
What is the output when you run the Test class?

```
public class Tester {
    public static void main(String[] args) {
        Child c = new Child("[durian]");
        System.out.println("--");
        Child c2 = new Child();

    }
}
```

Answer:

2. Given the following class diagram:



Implement the SmartAlarm class.

- **[2 marks]** Has a specific constructor that initialize the attributes to the values passed in.
- **[2 marks]** Override the method `getLifeExpectancy()` in `Alarm`. The life expectancy of a `SmartAlarm` is $5/7$ of a `Alarm`'s expectancy. Truncate all decimal places.
- **[2 marks]** Overrides the `equals` method in `java.lang.Object`. Two `SmartAlarm` objects are equal if they have they have the same number of sensors and superclass' `equals` method returns true.

Answer: