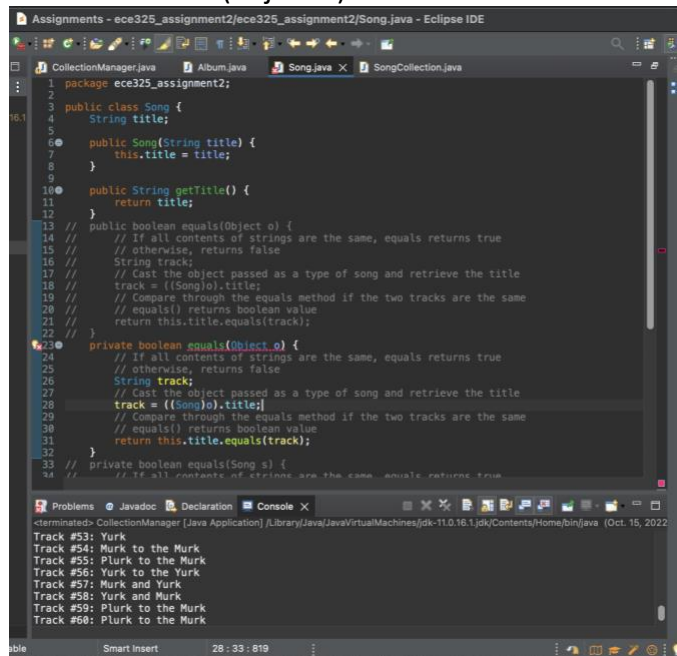


Question 1:

Private Boolean (object o):



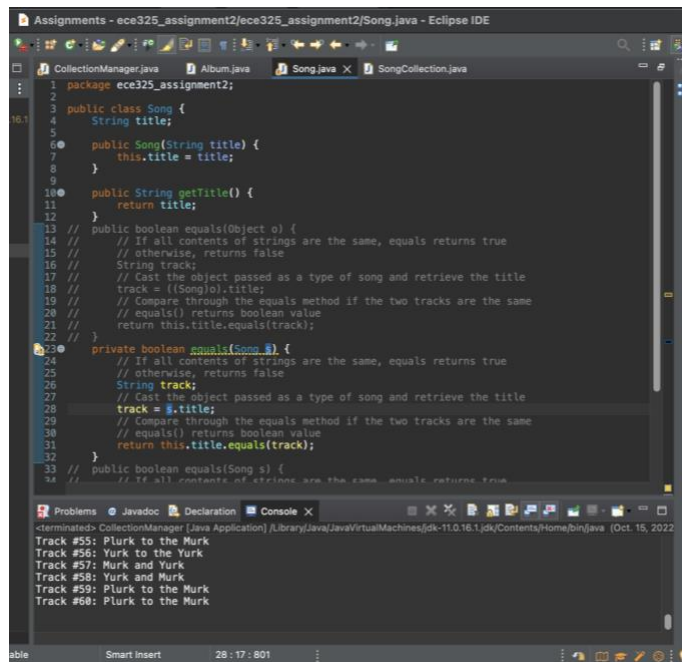
```
1 package ece325_assignment2;
2
3 public class Song {
4     String title;
5
6     public Song(String title) {
7         this.title = title;
8     }
9
10    public String getTitle() {
11        return title;
12    }
13
14    // public boolean equals(Object o) {
15    //     // If all contents of strings are the same, equals returns true
16    //     // otherwise, returns false
17    //     String track;
18    //     // Cast the object passed as a type of song and retrieve the title
19    //     track = ((Song)o).title;
20    //     // Compare through the equals method if the two tracks are the same
21    //     // equals() returns boolean value
22    //     return this.title.equals(track);
23    // }
24
25    private boolean equals(Object o) {
26        // If all contents of strings are the same, equals returns true
27        // otherwise, returns false
28        String track;
29        // Cast the object passed as a type of song and retrieve the title
30        track = ((Song)o).title;
31        // Compare through the equals method if the two tracks are the same
32        // equals() returns boolean value
33        return this.title.equals(track);
34    }
35
36    // private boolean equals(Song s) {
37    //     // If all contents of strings are the same, equals returns true
38    // }
```

Console Output:

```
<terminated> CollectionManager [Java Application] /Library/Java/JavaVirtualMachines/jdk-11.0.16.jdk/Contents/Home/bin/java (Oct 15, 2022)
Track #53: Yurk
Track #54: Murk to the Murk
Track #55: Plurk to the Murk
Track #56: Yurk to the Yurk
Track #57: Murk and Yurk
Track #58: Yurk and Murk
Track #59: Plurk to the Murk
Track #60: Plurk to the Murk
```

Does not work because it is no longer accessible, being a private method.

Private Boolean equals(Song s):



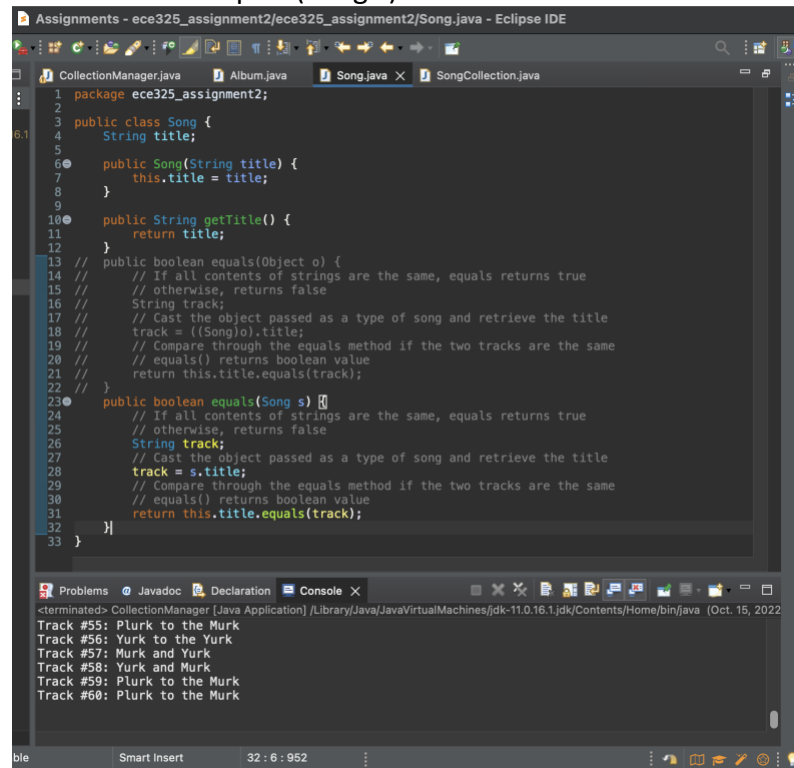
```
1 package ece325_assignment2;
2
3 public class Song {
4     String title;
5
6     public Song(String title) {
7         this.title = title;
8     }
9
10    public String getTitle() {
11        return title;
12    }
13
14    // public boolean equals(Object o) {
15    //     // If all contents of strings are the same, equals returns true
16    //     // otherwise, returns false
17    //     String track;
18    //     // Cast the object passed as a type of song and retrieve the title
19    //     track = ((Song)o).title;
20    //     // Compare through the equals method if the two tracks are the same
21    //     // equals() returns boolean value
22    //     return this.title.equals(track);
23    // }
24
25    private boolean equals(Song s) {
26        // If all contents of strings are the same, equals returns true
27        // otherwise, returns false
28        String track;
29        // Cast the object passed as a type of song and retrieve the title
30        track = s.title;
31        // Compare through the equals method if the two tracks are the same
32        // equals() returns boolean value
33        return this.title.equals(track);
34    }
35
36    // public boolean equals(Song s) {
37    //     // If all contents of strings are the same, equals returns true
38    // }
```

Console Output:

```
<terminated> CollectionManager [Java Application] /Library/Java/JavaVirtualMachines/jdk-11.0.16.jdk/Contents/Home/bin/java (Oct 15, 2022)
Track #55: Plurk to the Murk
Track #56: Yurk to the Yurk
Track #57: Murk and Yurk
Track #58: Yurk and Murk
Track #59: Plurk to the Murk
Track #60: Plurk to the Murk
```

Doesn't work either – returns all the songs, including duplicates, just as private did. This is because we don't even enter the method.

Public Boolean equals(Song s):



```
package ece325_assignment2;

public class Song {
    String title;

    public Song(String title) {
        this.title = title;
    }

    public String getTitle() {
        return title;
    }

    public boolean equals(Object o) {
        // If all contents of strings are the same, equals returns true
        // otherwise, returns false
        String track;
        // Cast the object passed as a type of song and retrieve the title
        track = ((Song)o).title;
        // Compare through the equals method if the two tracks are the same
        // equals() returns boolean value
        return this.title.equals(track);
    }

    public boolean equals(Song s) {
        // If all contents of strings are the same, equals returns true
        // otherwise, returns false
        String track;
        // Cast the object passed as a type of song and retrieve the title
        track = s.title;
        // Compare through the equals method if the two tracks are the same
        // equals() returns boolean value
        return this.title.equals(track);
    }
}
```

Problems Javadoc Declaration Console

<terminated> CollectionManager [Java Application] /Library/Java/JavaVirtualMachines/jdk-11.0.16.1.jdk/Contents/Home/bin/java (Oct. 15, 2022)

Track #55: Plurk to the Murk
Track #56: Yurk to the Yurk
Track #57: Murk and Yurk
Track #58: Yurk and Murk
Track #59: Plurk to the Murk
Track #60: Plurk to the Murk

Again, doesn't work.

Question 4:

If we add null, equals does not complain about this because the objects that we are comparing aren't references to anything – meaning, we do not have to dereference a pointer that doesn't reference anything because the object is itself.