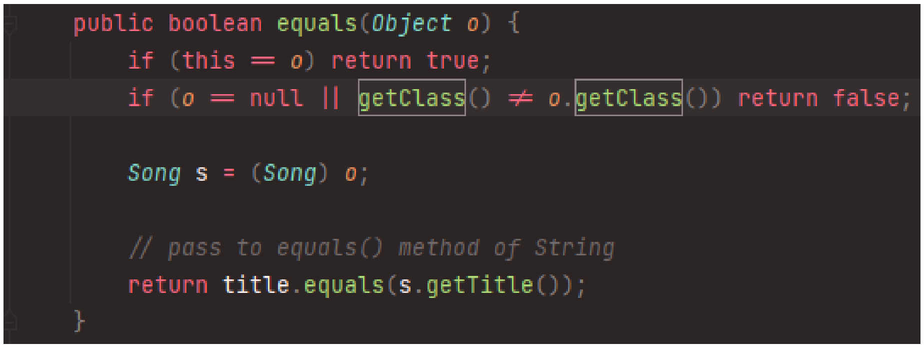
1) Signature a) should be implemented. First, the equals() method should be public otherwise the contains() method of ArrayList class is not able to use it. Second, all instances of Object class should be a parameter of equals() method. Some might argues that only instances of Song class should be a parameter of equals() method since the contains() method checks whether if a song with a specific title is in the collection. Doing so might cause runtime expcetion when a non Song class object try to use contains() method. For instance, during the comparison, the equals() method will access the attribute, which stores the title of the song but non Song class object do not have this attribute.



```
public boolean equals(Object o) {
    if (this == o) return true;
    if (o == null || getClass() != o.getClass()) return false;

    Song s = (Song) o;

    // pass to equals() method of String
    return title.equals(s.getTitle());
}
```

4) According to the current implementation of class Album, null will not to be added to an Album. null will be identified before passing into contains() method. Without doing this conditional check, null will be added to Album after passing it to equals() via contains() method since equals() will return “false”. The reason why equals () method does not complain about this is that this method itself only check whether if two Song objects have the same title. If one of objects is not a Song objects or null, it will return “false” because objects from different classes cannot compare to each other, otherwise, it will rise exceptions.

5) There are issues with allowing null to be added to an Album. When the Album class or the SongCollection class have some actions related to the attributes and methods of the Song objects, and these actions apply to null, it will give rise of exceptions becasue null is not an object nor an Song object neither, which means that it does not contain anything attributes and behaviour.