

TOPICS IN SOFTWARE ENGINEERING

ASSIGNMENT 1



September 2, 2022

FA19-BSE-014 ABDUL MAJID

FA19-BSE-042 NABEEL AMIR

# **Question: 1**

# **Question: 2**

Use PMD to help identify potential coding errors and customize the rules you use to make sure only pertinent rules are applied to your source code.

**File on which we apply PMD**: *SmartRestaurant/app/src/main/java/wasif/fyp/smartrestaurant/IntroLocationActivity.java*

**IDE used:** *IntelliJ Idea*

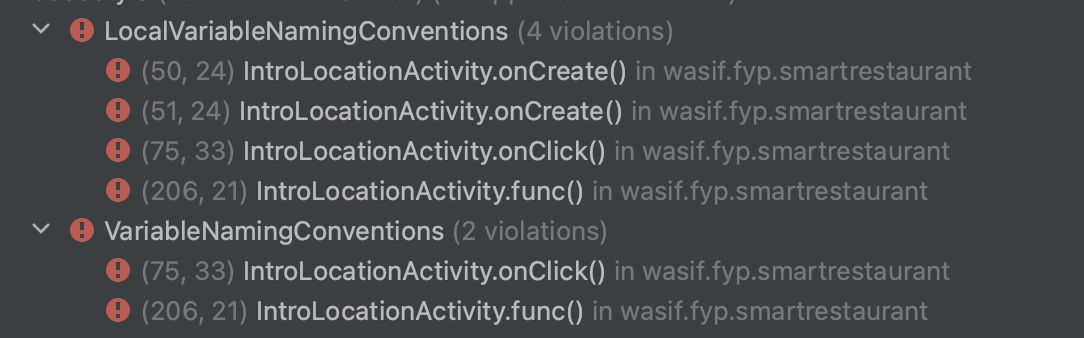
1. **Create & view code issues directly from your editor:**

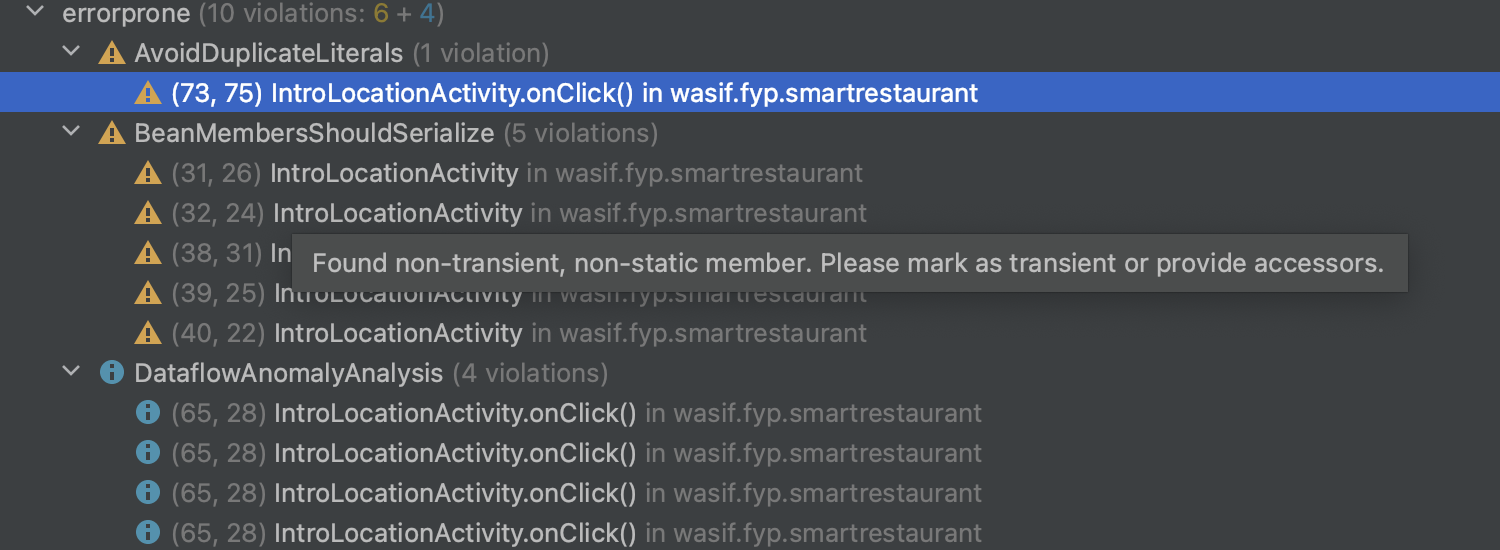
Code issue after Appling PMD:

**Text

Description automatically generated**

1. **Track & prioritize code improvements like technical debt**

****

****

1. **Check your code quality**

Code quality is not much bad because there is no critical error on this file.

1. **Apply at least 3 PMD rules with the help of tool**
2. VariableNamingConventions at line 40

Solution change to:

private EditText password; // at line 40

password = findViewById(R.id.password); // at line 53

1. LoginModel class must have AtLeastOneConstructor
2. AvoidDuplicateLiterals violation at line 73, 74,75

You can see our changing on GitHub:

[*https://github.com/Abdul-Majid10/Learners/commit/7aca035a906e79e6c36a1170dda1026a615bf8cf*](https://github.com/Abdul-Majid10/Learners/commit/7aca035a906e79e6c36a1170dda1026a615bf8cf)

1. Generate the Abstract Syntax Tree of your source code suing PMD.

File is Generated you can see on GitHub:

[*https://github.com/Abdul-Majid10/Learners/blob/main/SmartRestaurant/app/src/main/java/wasif/fyp/smartrestaurant/IntroLocationActivity.ast*](https://github.com/Abdul-Majid10/Learners/blob/main/SmartRestaurant/app/src/main/java/wasif/fyp/smartrestaurant/IntroLocationActivity.ast)

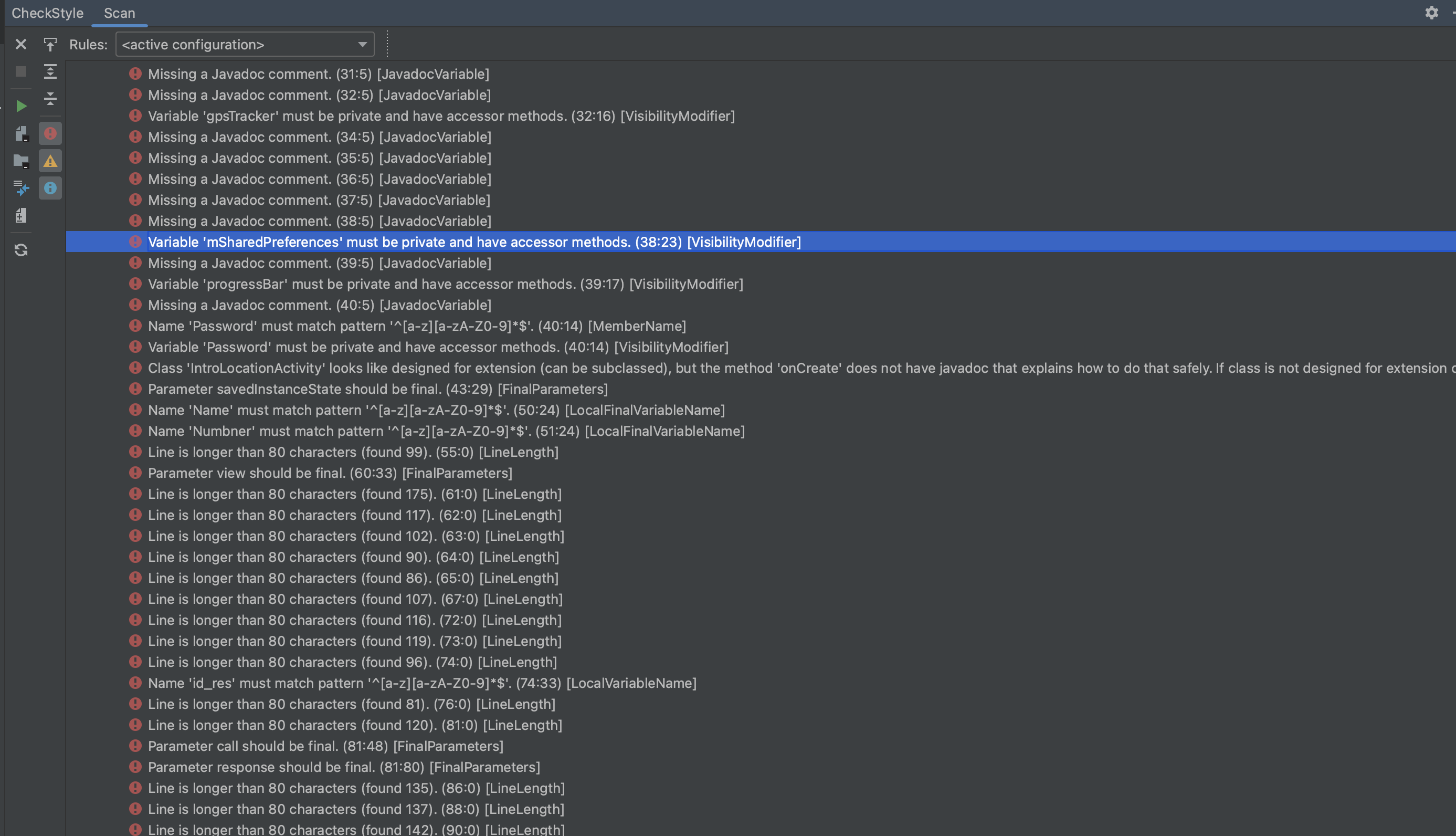
# **Question: 3**

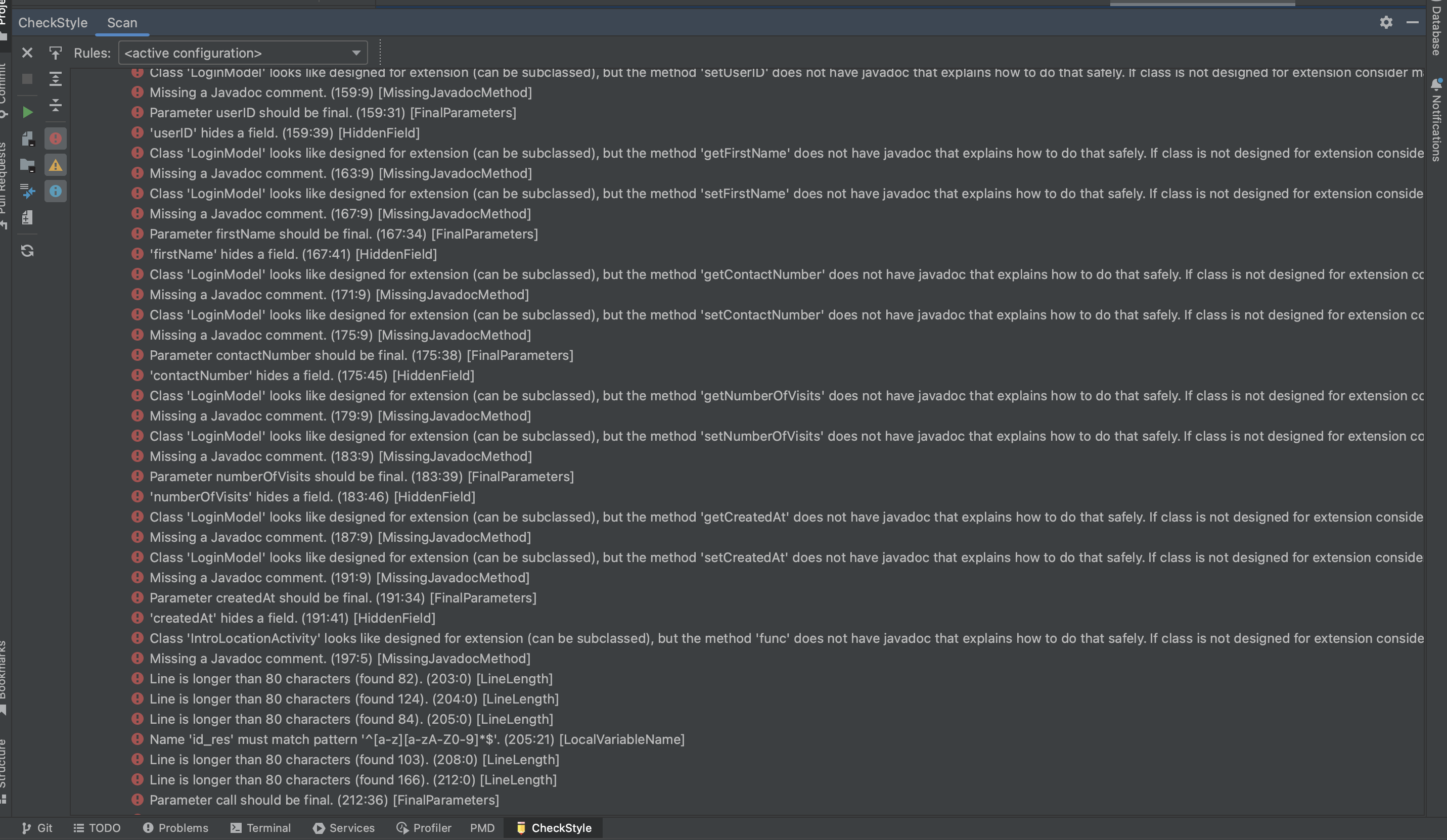
Use the Check Style tool to review your code. At least apply 2 rules on your code using CheckStyle

**File on which we apply Check Style**: *SmartRestaurant/app/src/main/java/wasif/fyp/smartrestaurant/IntroLocationActivity.java*

**IDE used:** *IntelliJ Idea*

After scan we got style issues:

**



**Rules applied**:

* 1 - Variable 'gpsTracker' must be private and have accessor methods. (32:16) [**VisibilityModifier]**

**Changed to:**

private GPSTracker gpsTracker;

* Line is longer than 80 characters (found 99). (55:0) [**LineLength**]

**Changed to:**

MSharedPreferences = getSharedPreferences(SignInActivity.PREFERENCE,  
 Context.MODE\_PRIVATE);

* Parameter firstName should be final. (167:34) [**FinalParameters**]

**Changed to:**

public void setFirstName(final String firstName) {  
 this.firstName = firstName;  
}

Changing commit link*:*

[*https://github.com/Abdul-Majid10/Learners/commit/e5a82c948d40c7d59cd791d6ea395f83fdb7b273*](https://github.com/Abdul-Majid10/Learners/commit/e5a82c948d40c7d59cd791d6ea395f83fdb7b273)