Task 2

Write a script to get a list of your last 200 emails(Gmail) and display the list of sender and subject of the mail. You are free to use the Gmail APIs.

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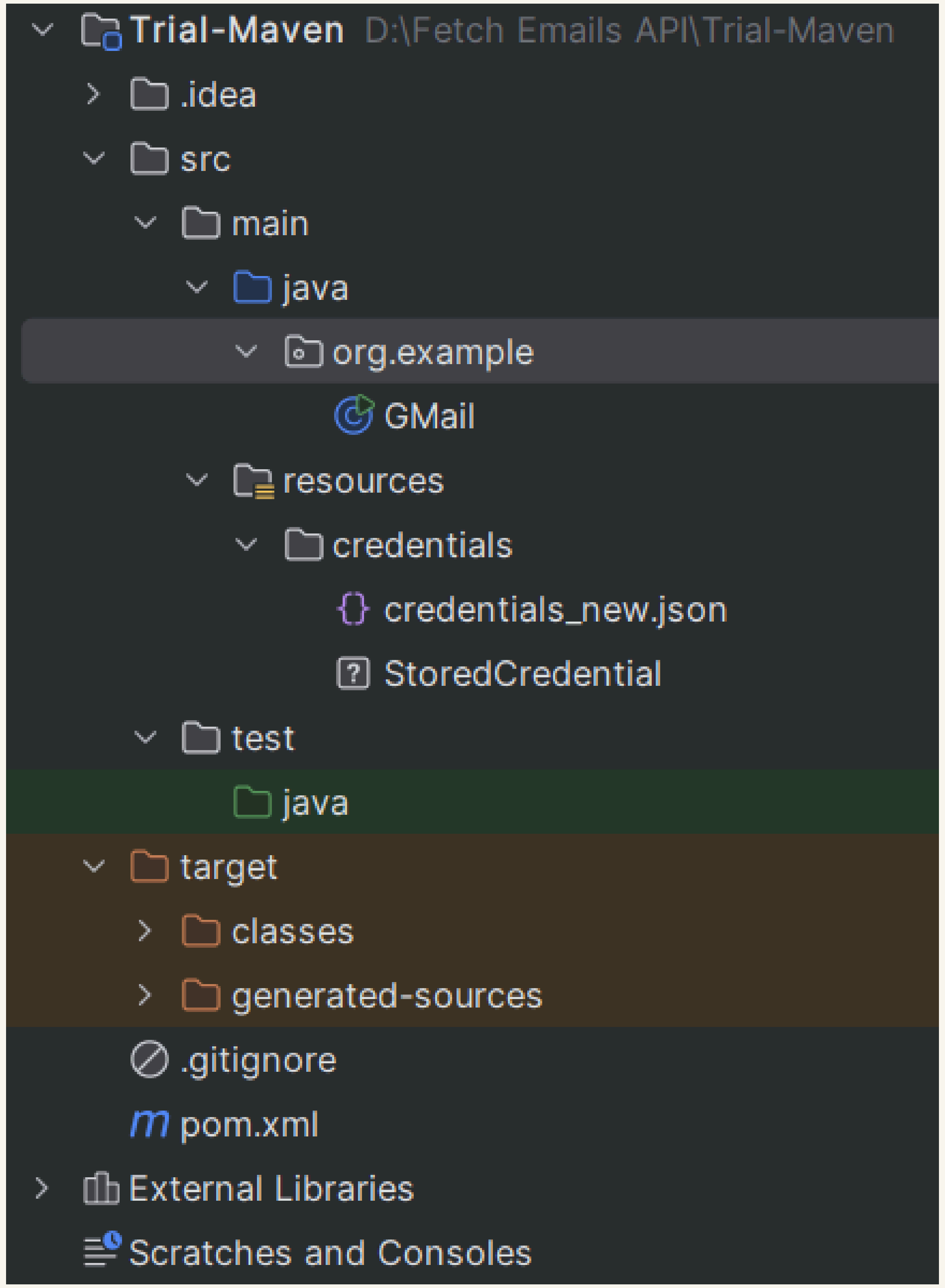
Requirements

1. Java SDK Version 17
2. Gradle Version 8
3. IntelliJ Community 2024
4. A Google Cloud Project & Enabled Gmail

4. A Google Cloud Project & Enabled Gmail

1. Create an account on Google Cloud [here](#).
2. Create a New Project.
3. Enable the API
4. Configure the OAuth consent screen
5. Authorize credentials for a desktop application
6. Save the downloaded JSON file as credentials.json, and move the file to your working directory.
7. If you go to Menu menu > APIs & Services > Credentials, you'll see your application name, in my case, it's "Fetching Emails".

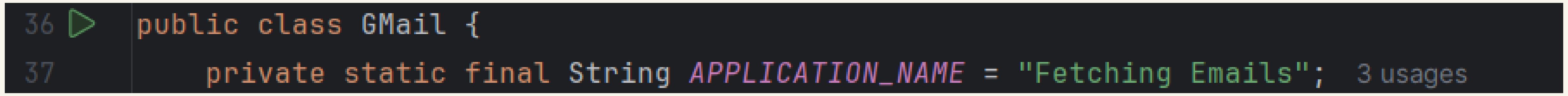
Steps to Follow



```
Trial-Maven  D:\Fetch Emails API\Trial-Maven
  .idea
  src
    main
      java
        org.example
          GMail
      resources
        credentials
          credentials_new.json
          StoredCredential
    test
      java
  target
    classes
    generated-sources
  .gitignore
  pom.xml
External Libraries
Scratches and Consoles
```

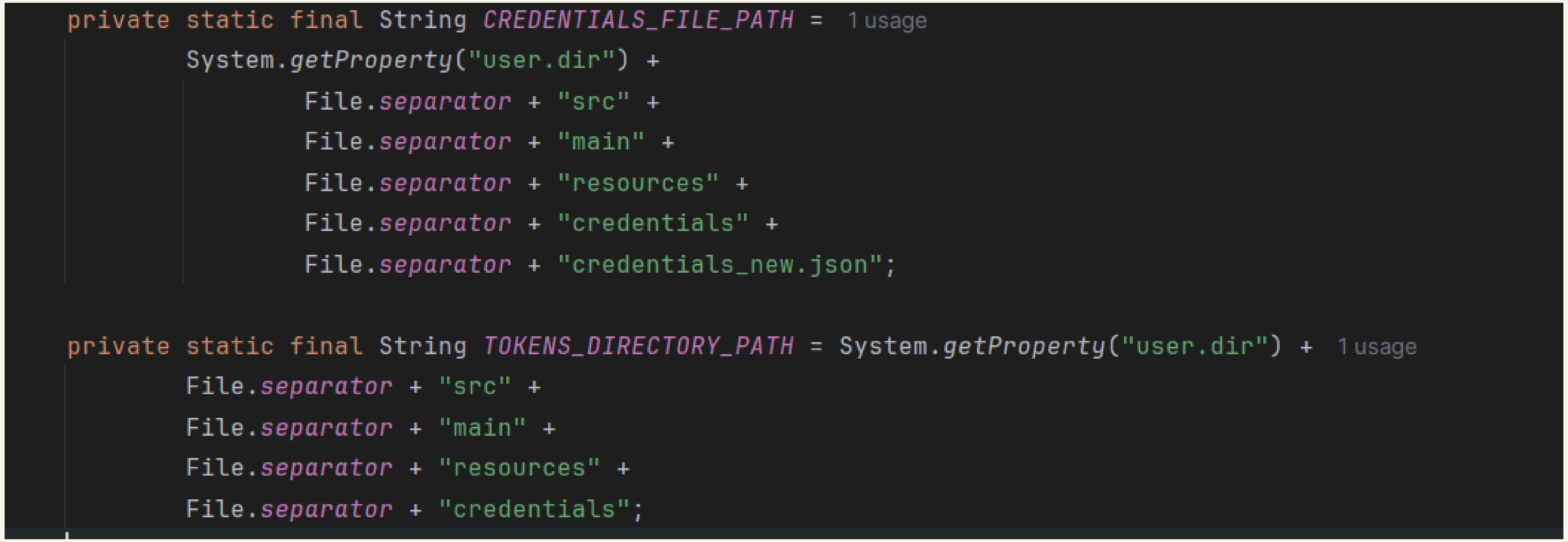
1. Create a new project on IntelliJ Community 2024 named Trial-Maven using Maven build.
2. Here, file and directory order for this project.
3. Starting by editing **GMail.java** file in **src/main/java/org.example/GMail.java**
4. In the **src/main/resources/** directory, copy the credentials.json
5. Installed various dependencies and imported numerous libraries.
6. Inspired from Java quickstart guide for writing the code.

1. Connecting with New Project on Google Cloud



```
public class GMail {
    private static final String APPLICATION_NAME = "Fetching Emails";  3 usages
```

2. Wrote credentials_file_path and tokens_directory_path

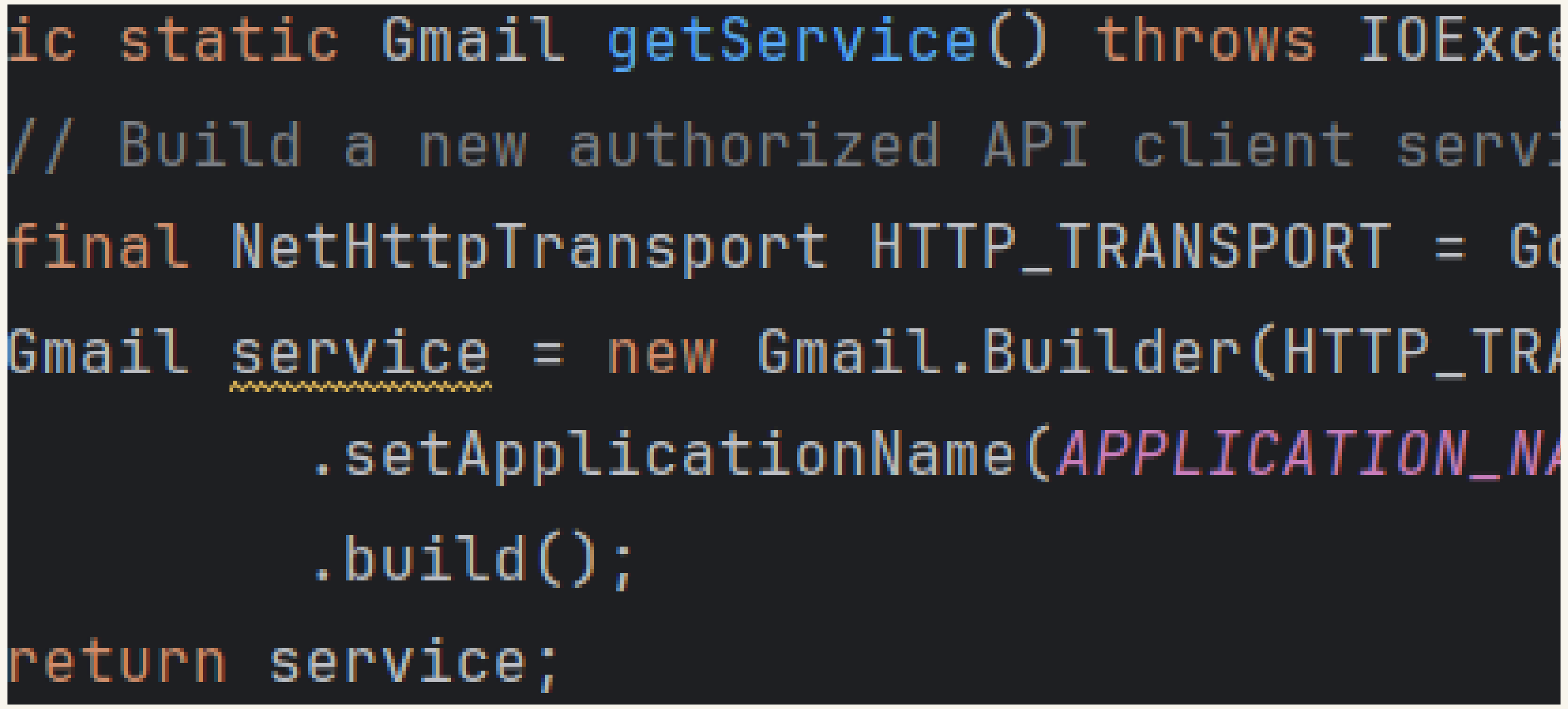


```
private static final String CREDENTIALS_FILE_PATH =  1 usage
        System.getProperty("user.dir") +
                File.separator + "src" +
                File.separator + "main" +
                File.separator + "resources" +
                File.separator + "credentials" +
                File.separator + "credentials_new.json";

private static final String TOKENS_DIRECTORY_PATH = System.getProperty("user.dir") +  1 usage
        File.separator + "src" +
        File.separator + "main" +
        File.separator + "resources" +
        File.separator + "credentials";
```

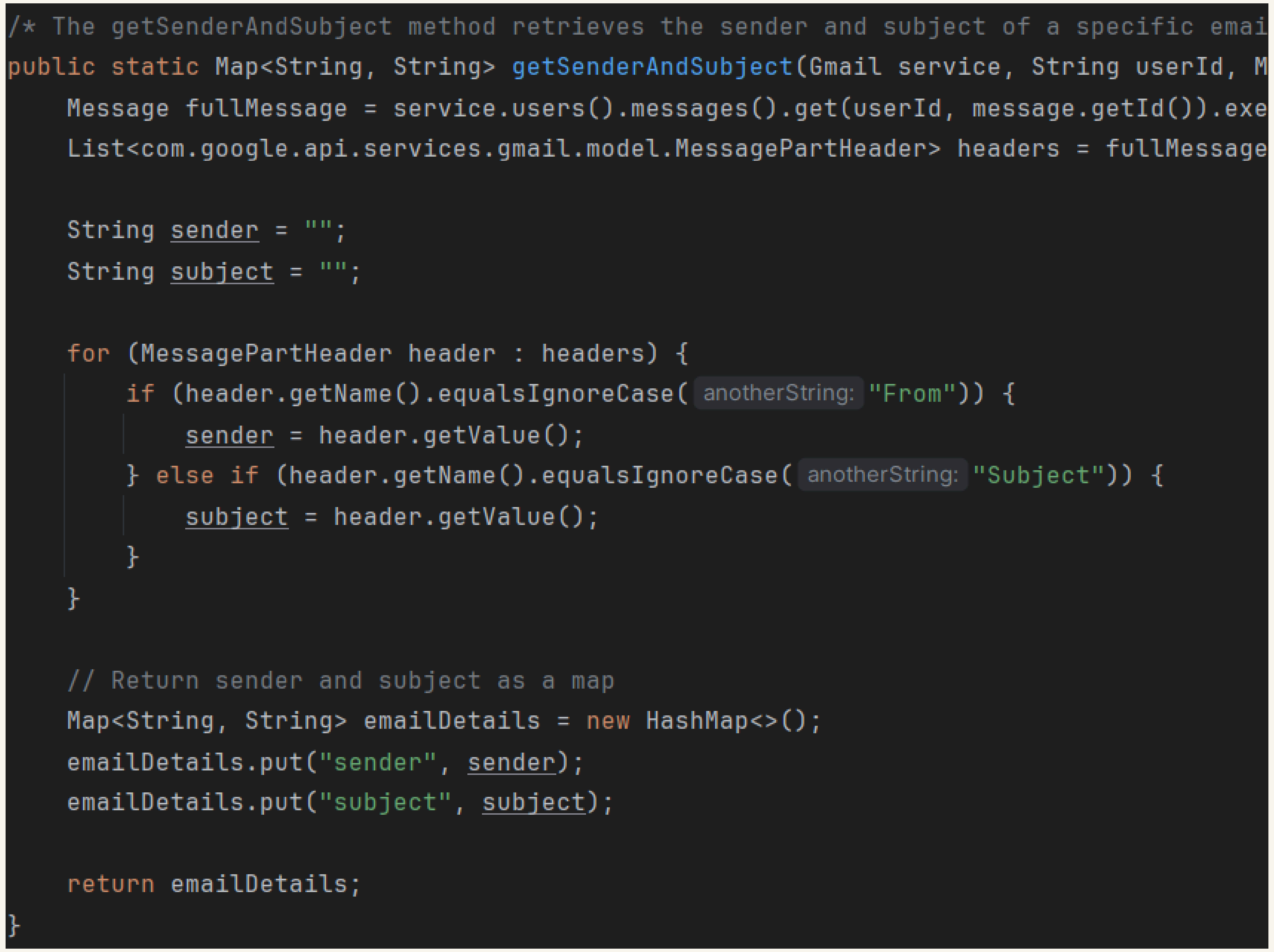
My Changes in the Source Code...

3. getService(): Returns an authorized Gmail API client that you can use to perform actions like reading, sending, or modifying emails in a user's Gmail account.



```
ic static Gmail getService() throws IOExce
// Build a new authorized API client servi
final NetHttpTransport HTTP_TRANSPORT = Go
Gmail service = new Gmail.Builder(HTTP_TRA
        .setApplicationName(APPLICATION_NA
        .build();
return service;
```

4. getSenderAndSubject(): retrieves the sender and subject of a specific email message from Gmail upto 200 latest emails.



```
/* The getSenderAndSubject method retrieves the sender and subject of a specific emai
public static Map<String, String> getSenderAndSubject(Gmail service, String userId, M
    Message fullMessage = service.users().messages().get(userId, message.getId()).exe
    List<com.google.api.services.gmail.model.MessagePartHeader> headers = fullMessage

    String sender = "";
    String subject = "";

    for (MessagePartHeader header : headers) {
        if (header.getName().equalsIgnoreCase( anotherString: "From")) {
            sender = header.getValue();
        } else if (header.getName().equalsIgnoreCase( anotherString: "Subject")) {
            subject = header.getValue();
        }
    }

    // Return sender and subject as a map
    Map<String, String> emailDetails = new HashMap<>();
    emailDetails.put("sender", sender);
    emailDetails.put("subject", subject);

    return emailDetails;
}
```

My Changes in the Source Code...

Github

1. Please find the github repository, here. (Link -> https://github.com/Tanvi-Chaudhari/Fetching-Emails)

2. I have provided requirements, steps to follow, github link, and resources in this presentation.

Resources

1. Java Quickstart Quide: https://developers.google.com/gmail/api/quickstart/java
2. Gmail OAuth 2.0 APIs: https://www.youtube.com/watch?v=PVCEPmcFA38
3. How to Configure Gmail API: https://www.youtube.com/watch?v=GtGLlay45cE