

Practical 6

Exercise

Q.1 Write a java program to access the files from your Google drive account and read and write the file contents from your program.

Code :

```
GDriveAccess34Application.java  
package in.ac.famt.GDriveAccess75;
```

```
import org.springframework.boot.SpringApplication;  
import org.springframework.boot.autoconfigure.SpringBootApplication;  
@SpringBootApplication  
public class GDriveAccess75Application {  
    public static void main(String[] args) {  
        SpringApplication.run(GDriveAccess75Application.class, args);  
    }  
}
```

```
package in.ac.famt.GdriveAccess;
```

```
import org.junit.jupiter.api.Test;  
import org.springframework.boot.test.context.SpringBootTest;  
import com.google.api.client.auth.oauth2.Credential;  
import com.google.api.client.extensions.java6.auth.oauth2.AuthorizationCodeInstalledApp;  
import com.google.api.client.extensions.jetty.auth.oauth2.LocalServerReceiver;  
import com.google.api.client.googleapis.auth.oauth2.GoogleAuthorizationCodeFlow;  
import com.google.api.client.googleapis.auth.oauth2.GoogleClientSecrets;  
import com.google.api.client.googleapis.javanet.GoogleNetHttpTransport;  
import com.google.api.client.http.AbstractInputStreamContent;  
import com.google.api.client.http.InputStreamContent;  
import com.google.api.client.http.javanet.NetHttpTransport;  
import com.google.api.client.json.JsonFactory;  
import com.google.api.client.json.jackson2.JacksonFactory;  
import com.google.api.client.util.store.FileDataStoreFactory;  
import com.google.api.services.drive.Drive;  
import com.google.api.services.drive.DriveScopes;  
import com.google.api.services.drive.model.File;  
import com.google.api.services.drive.model.FileList;  
  
import java.io.FileInputStream;
```

```

import java.io.FileNotFoundException;
import java.io.IOException;
import java.io.InputStream;
import java.io.InputStreamReader;
import java.security.GeneralSecurityException;
import java.util.Collections;
import java.util.List;
import java.util.Scanner;

//@SpringBootApplication
public class GdriveAccessApplicationTests {
    private static final JsonFactory JSON_FACTORY = JacksonFactory.getDefaultInstance();

    // Directory to store user credentials for this application.
    //private static final java.io.File CREDENTIALS_FOLDER = new
java.io.File(System.getProperty("user.home"), "credentials");
    private static final java.io.File CREDENTIALS_FOLDER = new
java.io.File("F:\\A230141_DSCC\\GdriveAccess");

    // Global instance of the scopes required by this program.
    private static final List<String> SCOPES = Collections.singletonList(DriveScopes.DRIVE);

    //https://developers.google.com/resources/api-libraries/documentation/drive/v2/java/latest/com/g
oogle/api/services/drive/DriveScopes.html

    private static Credential getCredentials(final NetHttpTransport HTTP_TRANSPORT) throws
IOException {
        java.io.File clientSecretFilePath = new java.io.File("F:\\DSCC_p5Docs\\credits.json");

        if (!clientSecretFilePath.exists()) {
            throw new FileNotFoundException("Please copy credentials.");
        }

        // Load client secrets.
        InputStream in = new FileInputStream(clientSecretFilePath);

        GoogleClientSecrets clientSecrets = GoogleClientSecrets.load(JSON_FACTORY, new
InputStreamReader(in));

        // Build flow and trigger user authorization request.
        GoogleAuthorizationCodeFlow flow = new
GoogleAuthorizationCodeFlow.Builder(HTTP_TRANSPORT, JSON_FACTORY,

```

```

        clientSecrets, SCOPES).setDataStoreFactory(new
FileDataStoreFactory(CREDENTIALS_FOLDER))
        .setAccessType("offline").build();
        //System.out.println("Flow info - " + flow.toString());

        return new AuthorizationCodeInstalledApp(flow, new
LocalServerReceiver()).authorize("user");
    }

    public static void main(String[] args)throws IOException, GeneralSecurityException {
        // 1: Build a new authorized API client service.
        final NetHttpTransport HTTP_TRANSPORT =
GoogleNetHttpTransport.newTrustedTransport();

        // 2: Read client_secret.json file & create Credential object.
        Credential credential = getCredentials(HTTP_TRANSPORT);

        // 3: Create Google Drive Service.
        Drive service = new Drive.Builder(HTTP_TRANSPORT, JSON_FACTORY,
credential).setApplicationName("GDrive Access").build();
        System.out.println("----" + service.getApplicationName() + "----");

        // Print the names and IDs for up to 10 files.
        FileList result = service.files().list().setPageSize(2).setFields("nextPageToken, files(id,
name)").execute();
        String lastFile = "";
        List<File> files = result.getFiles();
        if (files == null || files.isEmpty()) {
            System.out.println("No files found.");
        } else {
            System.out.println("Files:");
            for (File file : files) {
                System.out.printf("%s (%s)\n", file.getName(), file.getId());
                lastFile = file.getId();
            }
        }
    }

    //Create Folder on Google Drive
    File fileMetadata = new File();
    fileMetadata.setName("MyFolderUsingJava");
    fileMetadata.setMimeType("application/vnd.google-apps.folder");
    //fileMetadata.setParents(folderIdParent);

    File file = service.files().create(fileMetadata).setFields("id, name").execute();

```

```

if(file != null)
    System.out.println("Folder Created..");

//Creating a file on GDrive
java.io.File uploadFileContent = new java.io.File("F:\\DSCC_p5Docs\\TestUploadFile.txt");
String contentType = "text/plain";

AbstractInputStreamContent uploadStreamContent = new
InputStreamContent(contentType,new FileInputStream(uploadFileContent));
fileMetadata = new File();
fileMetadata.setName("MyGDriveJavaFile.txt");
file = service.files().create(fileMetadata, uploadStreamContent).setFields("id,
webContentLink, webViewLink, parents").execute();

if(file != null) {
    System.out.println("File Created..");
    System.out.println("WebContentLink: " + file.getWebContentLink() );
    System.out.println("WebViewLink: " + file.getWebViewLink() );
}

}

}

```

Pom.xml

```

<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <parent>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-parent</artifactId>
        <version>3.3.4</version>
        <relativePath/> <!-- lookup parent from repository -->
    </parent>
    <groupId>in.ac.famt</groupId>
    <artifactId>GdriveAccess</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <name>GdriveAccess</name>

```

```

<description>Demo project for Google drive access</description>
<url/>
<licenses>
    <license/>
</licenses>
<developers>
    <developer/>
</developers>
<scm>
    <connection/>
    <developerConnection/>
    <tag/>
    <url/>
</scm>
<properties>
    <java.version>17</java.version>
</properties>
<dependencies>

```

```

    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter</artifactId>
    </dependency>

```

```

    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-test</artifactId>
        <scope>test</scope>
    </dependency>

```

```

        <!-- https://mvnrepository.com/artifact/com.google.apis/google-api-services-drive
-->
    <dependency>
        <groupId>com.google.apis</groupId>
        <artifactId>google-api-services-drive</artifactId>
        <version>v3-rev105-1.23.0</version>
    </dependency>

```

```
<!-- https://mvnrepository.com/artifact/com.google.api-client/google-api-client -->
```

```
<dependency>
```

```
  <groupId>com.google.api-client</groupId>
```

```
  <artifactId>google-api-client</artifactId>
```

```
  <version>1.23.0</version>
```

```
</dependency>
```

```
<!-- https://mvnrepository.com/artifact/com.google.oauth-client/google-oauth-client-jetty -->
```

```
<dependency>
```

```
  <groupId>com.google.oauth-client</groupId>
```

```
  <artifactId>google-oauth-client-jetty</artifactId>
```

```
  <version>1.23.0</version>
```

```
</dependency>
```

```
</dependencies>
```

```
<build>
```

```
  <plugins>
```

```
    <plugin>
```

```
      <groupId>org.springframework.boot</groupId>
```

```
      <artifactId>spring-boot-maven-plugin</artifactId>
```

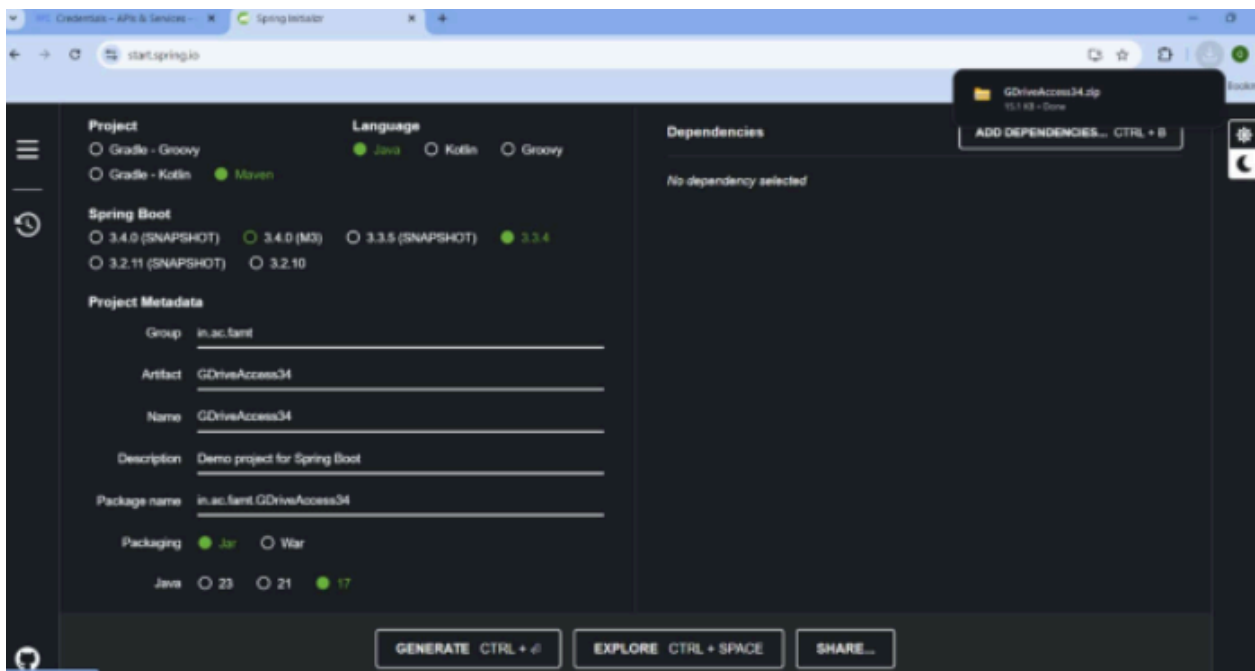
```
    </plugin>
```

```
  </plugins>
```

```
</build>
```

```
</project>
```

Output:



home » com.google.apis » google-api-services-drive



Drive API V3 Rev197 1.25.0

Drive API V3 Rev197 1.25.0

License	Apache 2.0
Tags	google service api
Ranking	#4226 in MvnRepository (See Top Artifacts)
Used By	111 artifacts

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Credentials

+ CREATE CREDENTIALS

DELETE

RESTORE DELETED CREDENTIALS

Create credentials to access your enabled APIs. [Learn more](#)

API Keys

<input type="checkbox"/>	Name	Creation date	Restrictions	Actions
No API keys to display				

OAuth 2.0 Client IDs

<input type="checkbox"/>	Name	Creation date	Type	Client ID	Actions
<input type="checkbox"/>	Desktop client 1	Oct 24, 2024	Desktop	1088174696225-uan...	<div></div> <div></div> <div></div>

Service Accounts

[Manage service accounts](#)

<input type="checkbox"/>	Email	Name	Actions
No service accounts to display			

OAuth client created

The client ID and secret can always be accessed from Credentials in APIs & Services



OAuth access is restricted to the [test users](#) listed on your [OAuth consent screen](#)

Client ID	1088174696225-uanha17lajdkkj0lrlee3ptkis6mq3f.apps.googleusercontent.com
-----------	--

Client secret	GOCSPX-22DU6NgNRPpRCBqKlf6UGCxdKwW
---------------	------------------------------------

Creation date	October 24, 2024 at 9:42:44 AM GMT+5
---------------	--------------------------------------

Status	Enabled
--------	---------

[Download JSON](#)

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Edit app registration

✔️ OAuth consent screen

✔️ Scopes

✔️ Test users

4 Summary

OAuth consent screen

User type

External

App name

GoogleDrive2024AB

Support email

a230157@famt.ac.in

App logo

Not provided

Application homepage link

Not provided

Application privacy policy link

Not provided

Application terms of service link

Not provided

Test users

While publishing status is set to "Testing", only test users are able to access the app. Allowed user cap prior to app verification is 100, and is counted over the entire lifetime of the app. [Learn more](#)

+ ADD USERS

Filter

Enter property name or value

?

User information

a230157@famt.ac.in

SAVE AND CONTINUE

CANCEL

[Console](#) to check if your domains are authorized. [Learn more](#) about the authorized domain limit.

+ ADD DOMAIN

Developer contact information

Email addresses *

a230157@famt.ac.in

These email addresses are for Google to notify you about any changes to your project.

SAVE AND CONTINUE

CANCEL

Google Cloud

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RPI

APIs & Services

Enabled APIs & services

Library

Credentials

OAuth consent screen

Page usage agreements

OAuth consent screen

Choose how you want to configure and register your app, including your target users. You can only associate one app with your project.

User Type

Internal

Only available to users within your organization. You will not need to submit your app for verification. [Learn more about user type](#)

External

Available to any test user with a Google Account. Your app will start in testing mode and will only be available to users you add to the list of test users. Once your app is ready to push to production, you may need to verify your app. [Learn more about user type](#)

CREATE

Let us know what you think about our OAuth experience

```

Problems Javadoc Declaration Console X
<terminated> GdriveAccessApplicationTests [Java Application] C:\Users\student\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.10.v20240120-1143\jre\bin\javaw.exe (Oct 22, 2024
Oct 22, 2024 10:47:46 AM com.google.api.client.util.store.FileDataStoreFactory setPermissionsToOwnerOnly
WARNING: unable to change permissions for everybody: F:\A230141_DS\CC\GdriveAccess
Oct 22, 2024 10:47:46 AM com.google.api.client.util.store.FileDataStoreFactory setPermissionsToOwnerOnly
WARNING: unable to change permissions for owner: F:\A230141_DS\CC\GdriveAccess
10:47:46.573 [main] INFO org.mortbay.log -- Logging to Logger[org.mortbay.log] via org.mortbay.log.Slf4jLog
10:47:46.577 [main] INFO org.mortbay.log -- jetty-6.1.26
10:47:46.599 [main] INFO org.mortbay.log -- Started SocketConnector@localhost:51893
Please open the following address in your browser:
https://accounts.google.com/o/oauth2/auth?access_type=offline&client_id=209514514964-20c3qc2t85e83g01pcp50lr6vgqvs5m1.apps.googleusercontent.com&redirect_ur
Attempting to open that address in the default browser now...
10:48:28.646 [main] INFO org.mortbay.log -- Stopped SocketConnector@localhost:51893
----GDrive Access----
Files:
Tut3 (15wDilJzdd3eLNYTOgojpod-LsBjlbvVxS6Z8hG1JPbU)
Document from BHUSHAN DDS (1HD8Qcy1brLI4qfuGeMRRbwSOVA9cTe1)
Folder Created..
File Created..
WebContentLink: https://drive.google.com/uc?id=1W0f6Db6MxzhI3VBcn1L6wY1VgY69VkdP&export=download
WebViewLink: https://drive.google.com/file/d/1W0f6Db6MxzhI3VBcn1L6wY1VgY69VkdP/view?usp=drivesdk

Please open the following address in your browser:
https://accounts.google.com/o/oauth2/auth?access_type=offline&client_id=209514514964-20c3qc2t85e83g01pcp50lr6vgqvs5m1.apps.googleusercontent.com&redirect_ur
Attempting to open that address in the default browser now...
10:48:28.646 [main] INFO org.mortbay.log -- Stopped SocketConnector@localhost:51893
----GDrive Access----
Files:
Tut3 (15wDilJzdd3eLNYTOgojpod-LsBjlbvVxS6Z8hG1JPbU)
Document from BHUSHAN DDS (1HD8Qcy1brLI4qfuGeMRRbwSOVA9cTe1)
Folder Created..
File Created..
WebContentLink: https://drive.google.com/uc?id=1W0f6Db6MxzhI3VBcn1L6wY1VgY69VkdP&export=download
WebViewLink: https://drive.google.com/file/d/1W0f6Db6MxzhI3VBcn1L6wY1VgY69VkdP/view?usp=drivesdk

```

