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Assignment Cover Letter

(Individual Work)

Student Information :

Given Name	**: Nicholas**	**Student ID Number**	**: 2301890301**
Surname	**: Arthur**		
Course Code	**: COMP6510**	**Course Name**	**: Programming Languages**
Class	**: L2AC**	**Name of Lecturer**	**: Jude Joseph Lamug Martinez**
Major	**: Computer Science**		
Title of Assignment	**: Japanese Typing Game**		
Type of Assignment	**: Final Project**		
Due Date	**: 20 - 6 - 2020**	**Submission Date**	**: 20 - 6 - 2020**

The assignment should meet the below requirements.

1. Assignment (hard copy) is required to be submitted on clean paper, and (soft copy) as per lecturer's instructions.
2. Soft copy assignment also requires the signed (hardcopy) submission of this form, which automatically validates the softcopy submission.
3. The above information is complete and legible.
4. Compiled pages are firmly stapled.
5. Assignment has been copied (soft copy and hard copy) for each student ahead of the submission.

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Declaration of Originality

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Signature of Student :

Nicholas Arthur

Table of Contents:

File Zipper

I. Project Specification

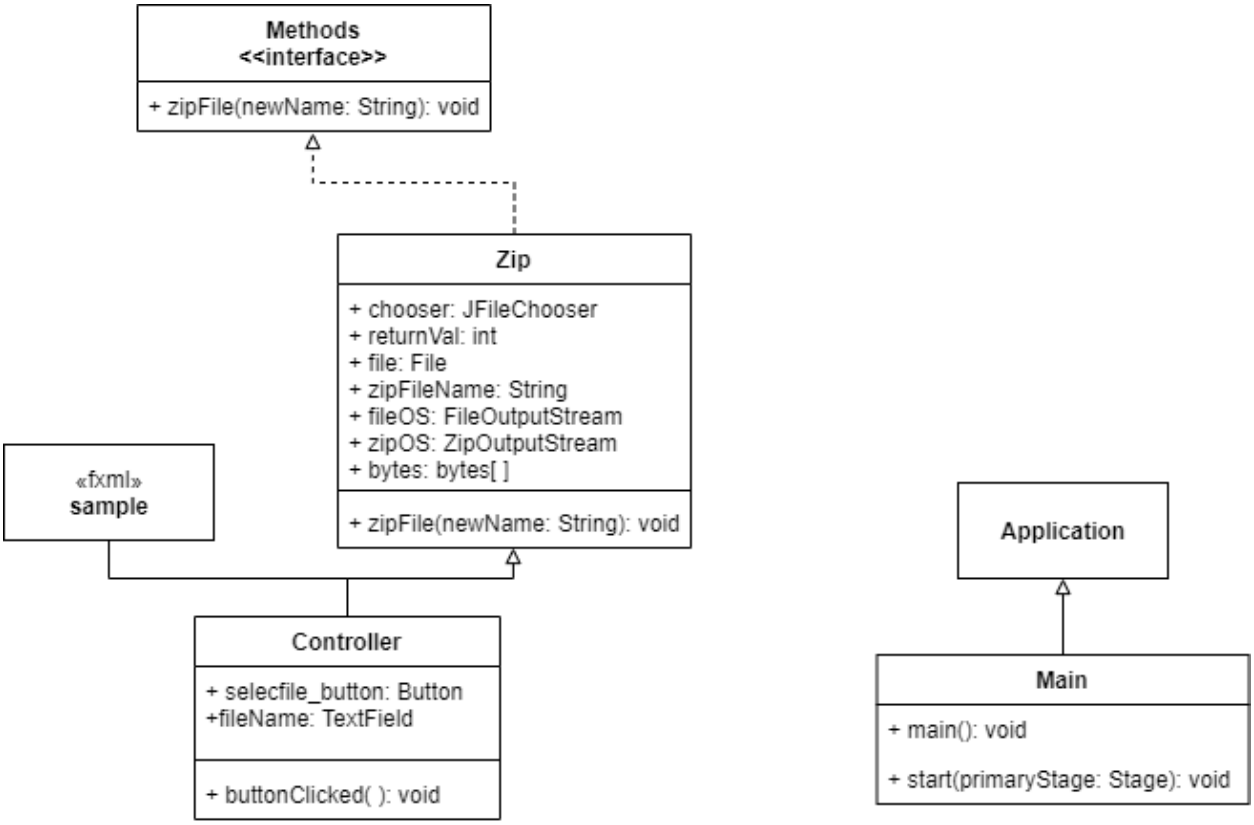
Function of this program:

The function of this program is to compress a selected file and turn it into a ZIP file. When the program runs the user will be able to set a name that they want the new ZIP file to have. When they press the “Select a File” button the program automatically runs and the file you have selected will be displayed in the console and be compressed into a ZIP file immediately.

The specific purpose of this program is to reduce the size of a single file, so it doesn’t take up much disk space. This program targets specifically single files for it’s compression.

II. Solution Design

A. UML Class Diagram



B. Code Explanation

- Zip.java:

```
public void zipFile(String newName) {
    try {
      //Initialising the file chooser
      JFileChooser chooser = new JFileChooser();
```

This line of code is just to initialise a JFileChooser object to be used later.

```
int returnVal = chooser.showOpenDialog(null);
```

This line is used to make the window for the file chooser to appear.

```
File file = new File(chooser.getSelectedFile().getAbsolutePath());
```

With hits line we initialised the file specified in the file chooser window to a class File so it can be accessed with methods from that class

```
FileOutputStream fileOS = new FileOutputStream(zipFileName);
ZipOutputStream zipOS = new ZipOutputStream(fileOS);
```

These 2 lines of code opens an output stream which allows the reading and writing of the files specified. These 2 classes are a part of library of java.io which whole library is specific for writing and reading files.

```
zipOS.putNextEntry(new ZipEntry(file.getName()));
```

This puts the file specified in the parameter into a queue to start the compression.

```
byte[] bytes = Files.readAllBytes(Paths.get(chooser.getSelectedFile().getAbsolutePath()));
```

This reads all the bytes inside of the file and puts it into an array of bytes.

```
zipOS.write(bytes, 0, bytes.length);
```

This starts the writing of the ZIP file, the write method has a parameter for what to write from, and the length of the writing.

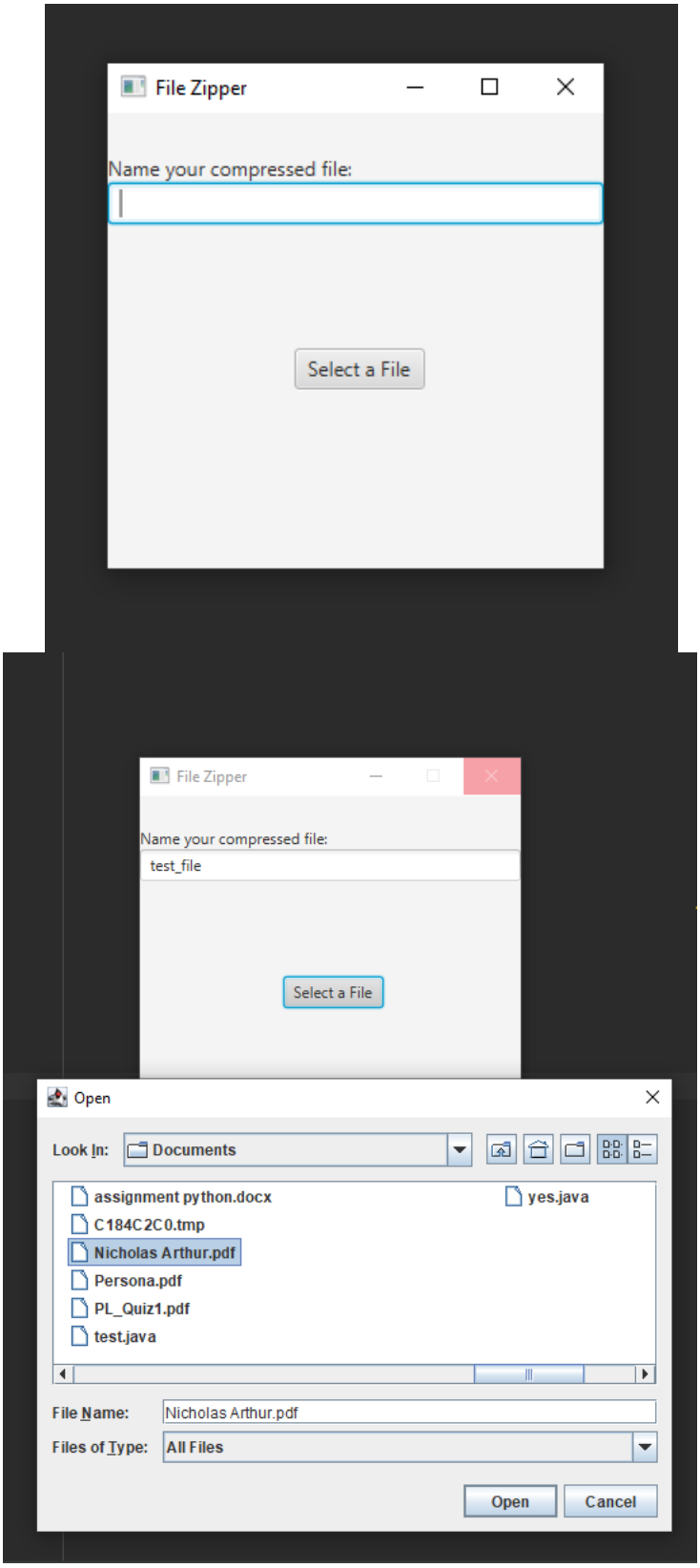
- Controller.java:

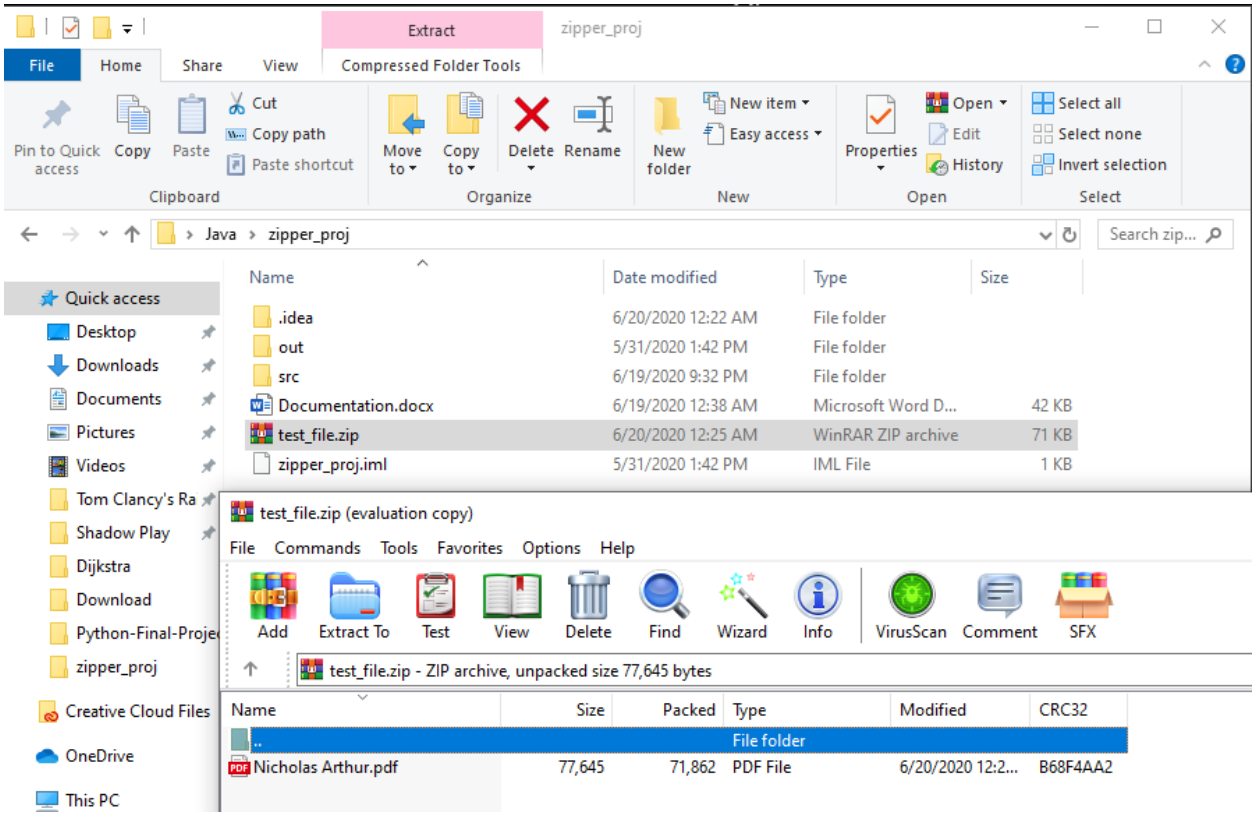
```
public Button selectFile_button = new Button();
public TextField fileName = new TextField();
```

This creates a Button and a TextField object, both objects are used in the GUI, TextField is used for the naming of the ZIP file and the Button is used for starting the compression process.

That's mostly it about the most important part of the code.

III. Working Program Evidence




Extract
zipper_proj
File
Home
Share
View
Compressed Folder Tools
Pin to Quick access
Copy
Paste
Cut
Copy path
Paste shortcut
Clipboard
Move to
Copy to
Delete
Rename
Organize
New folder
New item
Easy access
New
Properties
Open
Edit
History
Open
Select all
Select none
Invert selection
Select
Java
zipper_proj
Search zip...
Quick access
Desktop
Downloads
Documents
Pictures
Videos
Tom Clancy's Ra
Shadow Play
Dijkstra
Download
Python-Final-Proje
zipper_proj
Creative Cloud Files
OneDrive
This PC
Name
Date modified
Type
Size
.idea
6/20/2020 12:22 AM
File folder
out
5/31/2020 1:42 PM
File folder
src
6/19/2020 9:32 PM
File folder
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6/19/2020 12:38 AM
Microsoft Word D...
42 KB
test_file.zip
6/20/2020 12:25 AM
WinRAR ZIP archive
71 KB
zipper_proj.iml
5/31/2020 1:42 PM
IML File
1 KB
test_file.zip (evaluation copy)
File
Commands
Tools
Favorites
Options
Help
Add
Extract To
Test
View
Delete
Find
Wizard
Info
VirusScan
Comment
SFX
test_file.zip - ZIP archive, unpacked size 77,645 bytes
Name
Size
Packed
Type
Modified
CRC32
..
File folder
Nicholas Arthur.pdf
77,645
71,862
PDF File
6/20/2020 12:2...
B68F4AA2

IV. Resources

GUI Tutorial:
https://www.youtube.com/playlist?list=PL6gx4Cwl9DGBzfXLWLSYVy8EbTdpGbUIG
Idea:
Jason Christian H.

V. Source Code

https://github.com/n1c0201/Java_Final_Proj
Video Demo:
https://youtu.be/1NQkqMxhNeo