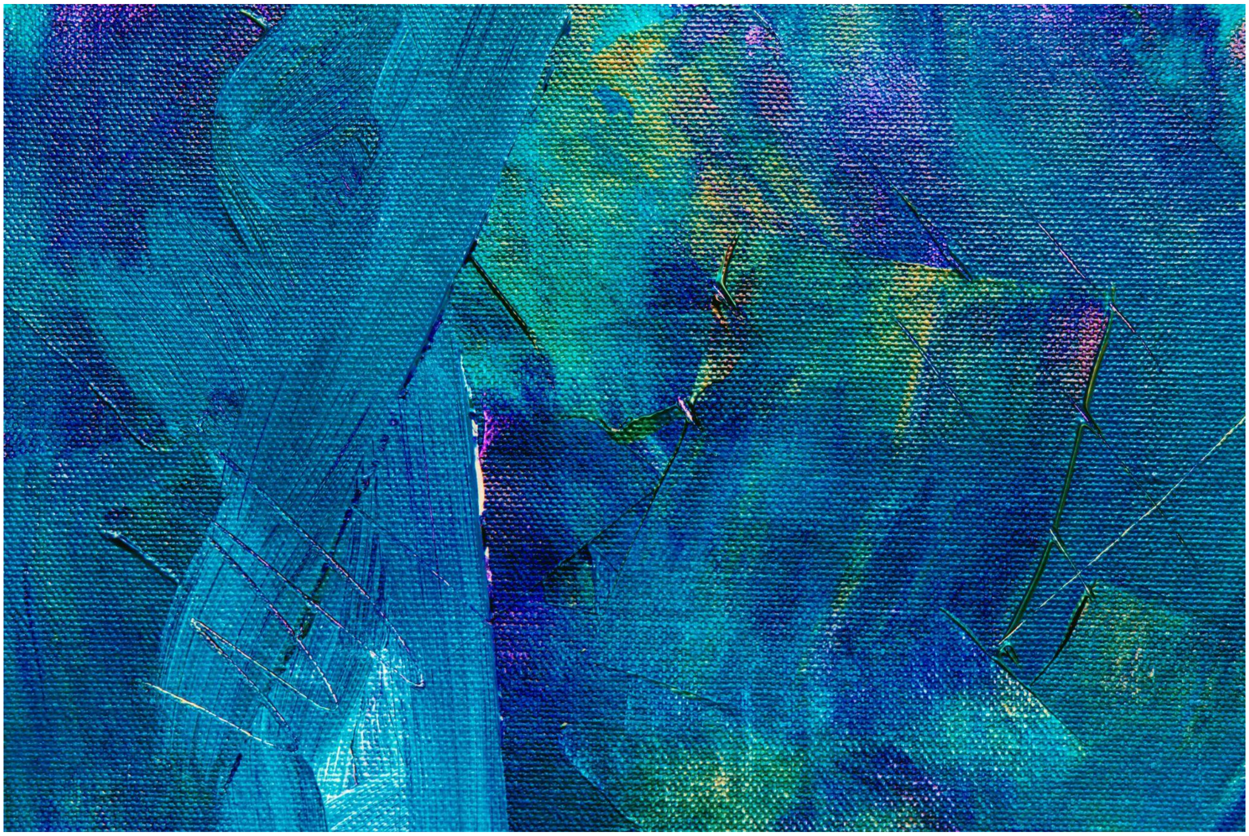

Tutor’s Nest

“A Project on Connecting the Bridge Between Teachers and Students”

Course Name : CSE - 2112 (Object Oriented Programming)

Submitted By :

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Department of Computer Science & Engineering

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Introduction

[1.1] The Concept

Tutor's Nest is a platform for providing a centralized hub where students can easily connect with private tutors who specialize in the subjects they are interested in. This platform will serve as a one-stop-shop for students looking for academic help outside of the traditional classroom setting. It will allow them to easily find, evaluate, and book private tutors who can provide them with the personalized instruction they need to succeed.

[1.2] Motivation & Intended Users

As students, we always felt the need to have a platform where we could find tutors at will. It has become rather strenuous to find a quality tutor nowadays in a world full of deceivers . Our project will serve as a connecting bridge between teachers and students , reducing the hassles of both teachers and students greatly and allowing tutors, especially university students like us to have an avenue of decent income.

The intended users of our platform are students of all ages who are seeking academic support, and tutors who are looking to offer their services to students. The platform will be designed to be user-friendly, making it easy for students to find the right tutor for their needs and for tutors to showcase their skills and expertise.

[1.3] Major Features

Some of the key options and features of our platform may include:

1. **Search functionality:** The platform included a search function where students can search for tutors based on subject matter, location, availability, price, and other relevant criteria. This will help students narrow down their options and find tutors who are a good fit for their needs.
2. **Tutor profiles**: Each tutor has their own profile where they can provide information about their qualifications, experience, teaching style, and availability. This will help students evaluate potential tutors and choose the one that best matches their learning style.
3. **Communication tools**: The platform also includes communication tools such as messaging, which will allow students to communicate with their tutors to know each other well and discuss schedules and remuneration.
4. **Portability:** We were able to host a server to store our data, hence the app can be run from any pc without the need to create MySQL data tables.

Overall, the purpose of our software is to provide a streamlined and efficient way for students to find private tutors who can help them achieve their academic goals. By providing a centralized hub where students can search for and book tutors, and by offering a range of communication our platform can help facilitate the learning process and improve outcomes for students.

[1.4] Tools & Technologies

We intend on providing our customers with the best experience possible, hence we used the best tools and technologies for product development. The main code was based upon the Object-Oriented features of JAVA and JAVAFX was used as the GUI framework for rich graphical user interfaces and other visual applications. The tools and technologies we used are below:

1. *UI/UX design : Adobe Creative Suite*

2. *Code IDE : Intellij with SceneBuilder*

3. *Code Base : JAVA*

4. *Framework : JavaFX*

5. *Database : MySQL*

6. *Design Code Base : CSS*

7. *UX Code Base : FXML*

[1.5] Individual Responsibilites

[1.5.1] Ahaj Mahhin Faiak

1. *Graphical User Interface and JavaFX FXML Designer*
2. *Class Designer and Test*
3. *Logical Hierarchy of Classes*
4. *Documentation of Code*
5. *Build System and Version Control*

[1.5.2] Fahim Shakil

1. *Database Management and Encryption*

2. Logical Hierarchy of Classes

3. UI and Class Designer

[1.5.2] Md. Rokonuzaman Rokon

1. Data Communication

2. Code Debug and Test

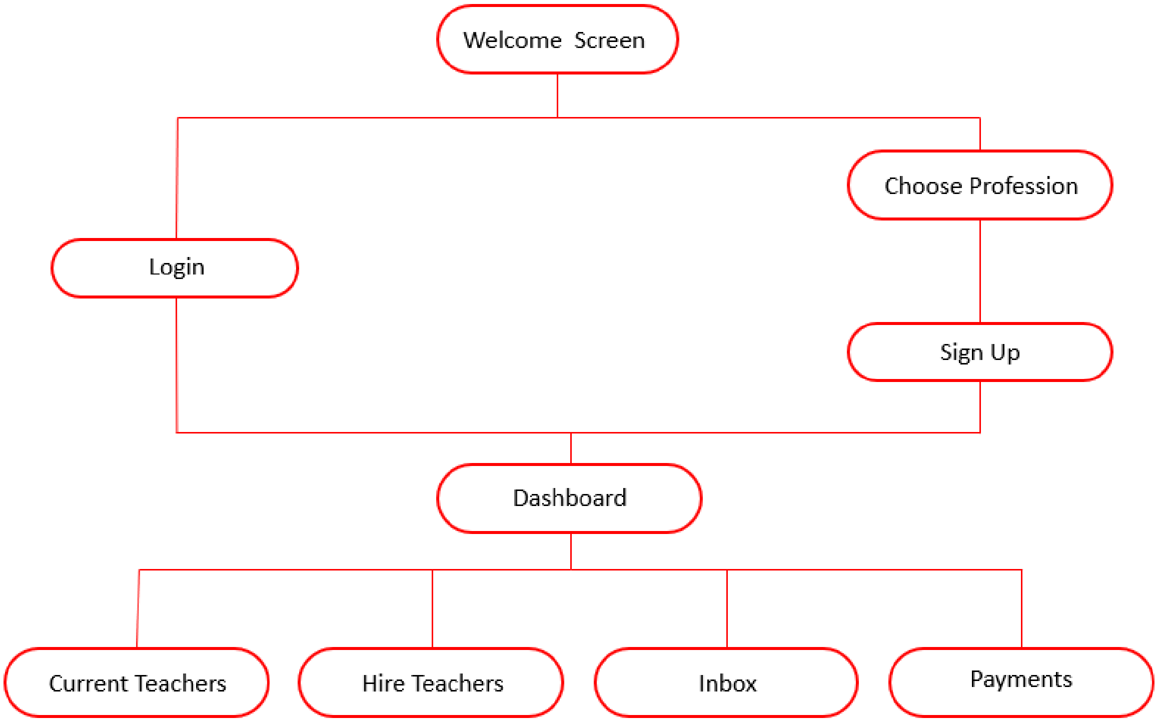
3. Class designer and Test

4. Documentation of Code

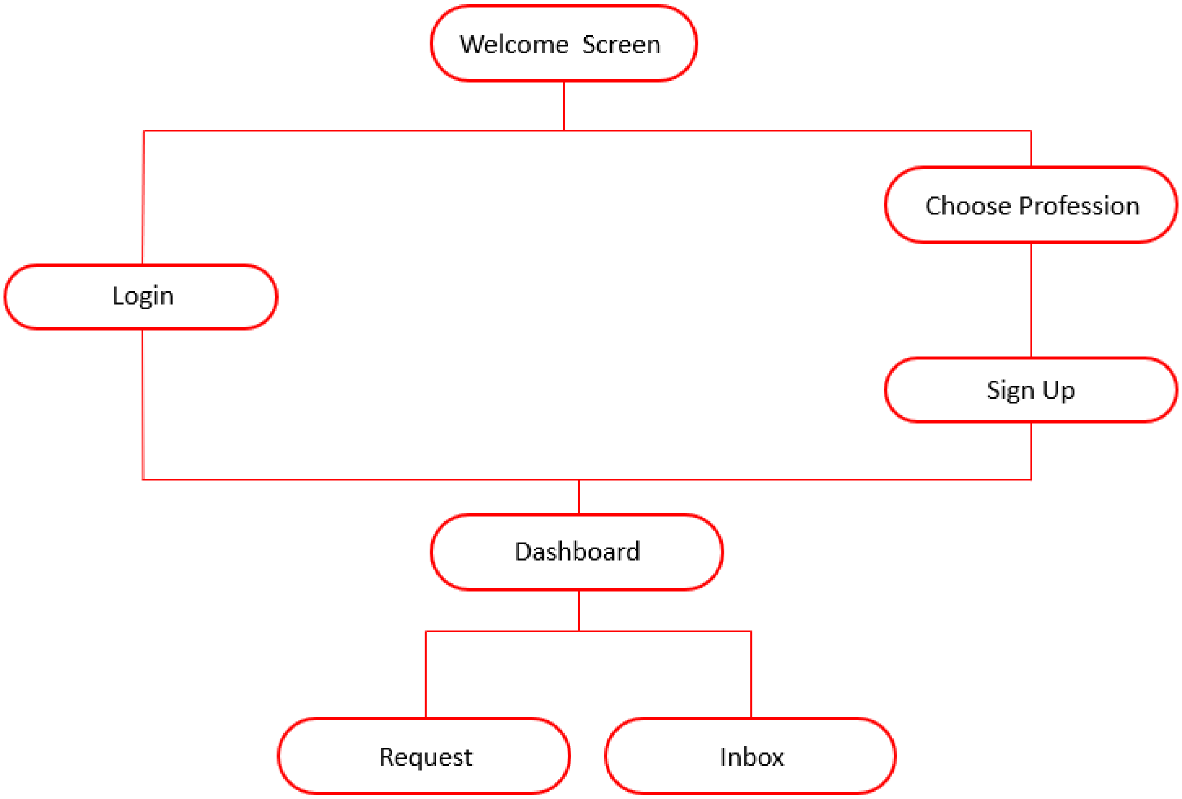
Design & Implementation

[2.1] UX Flow

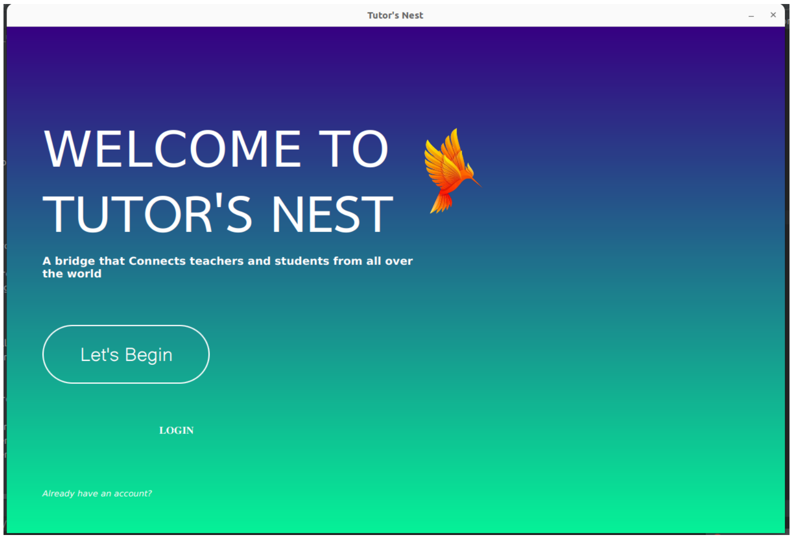
For Students :



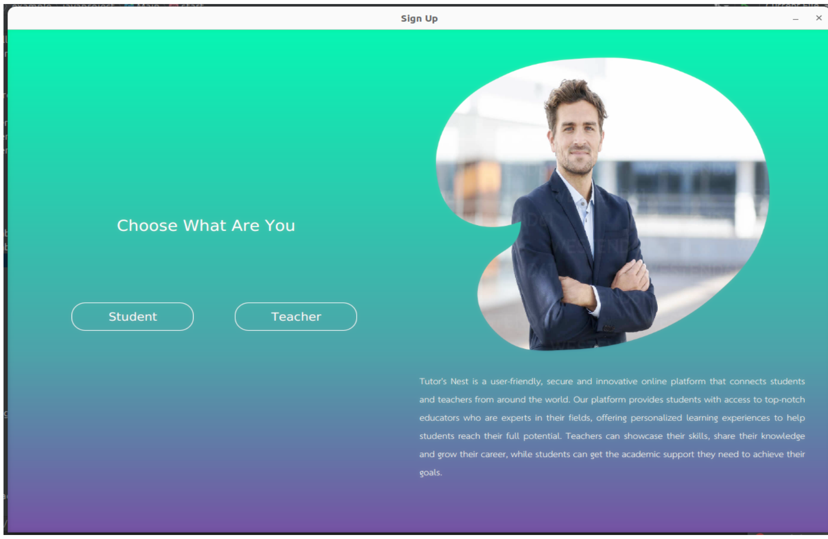
For Teachers :



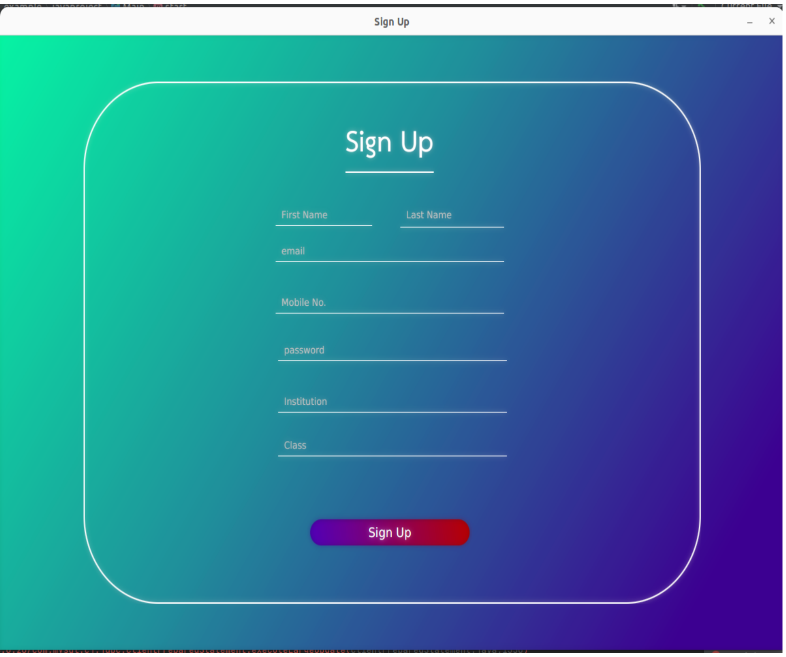
[2.2] UI

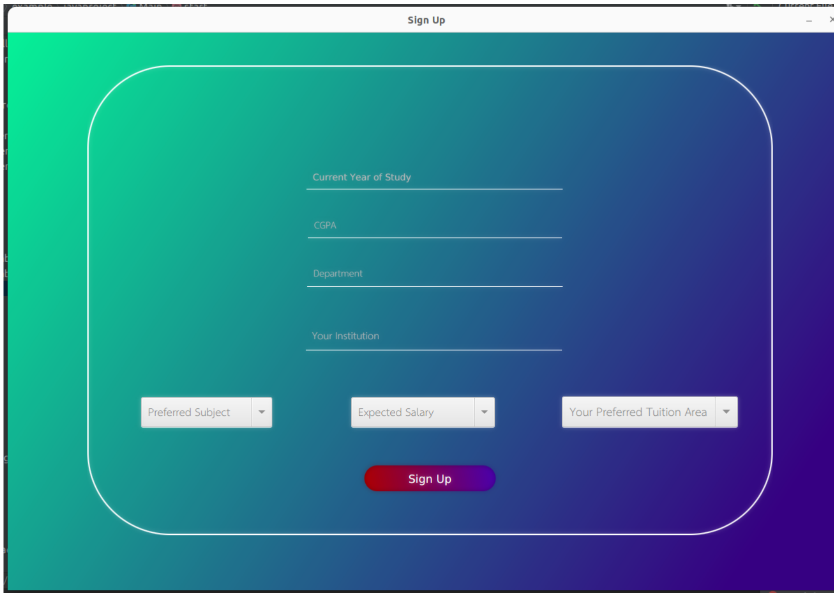


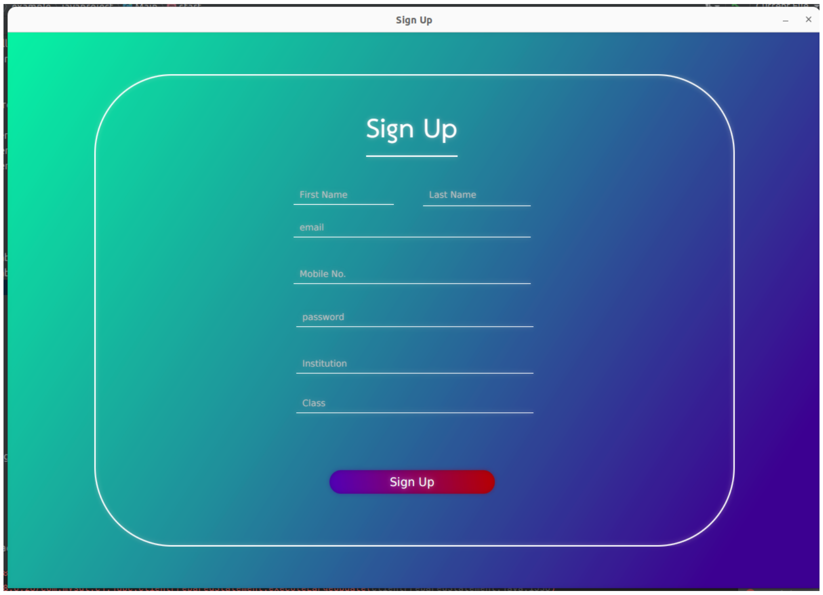
A bridge that Connects teachers and students from all over the world

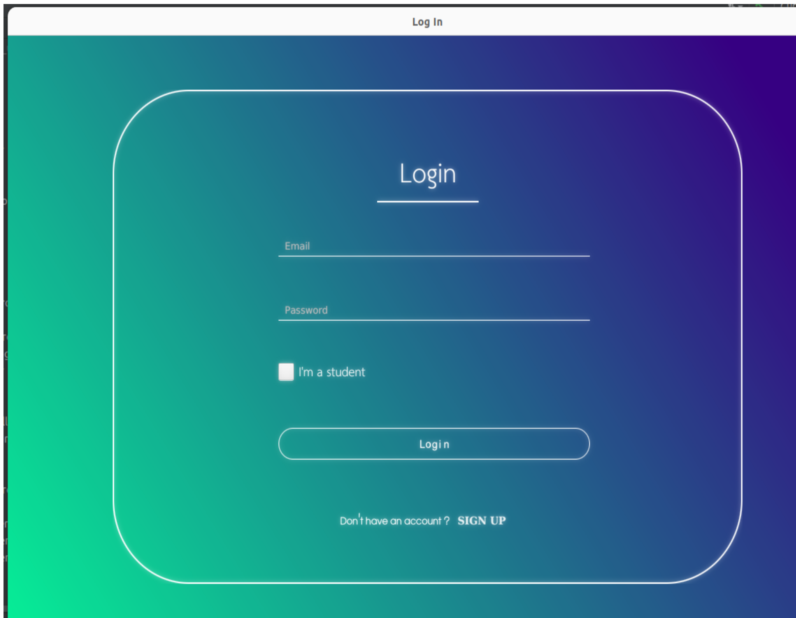


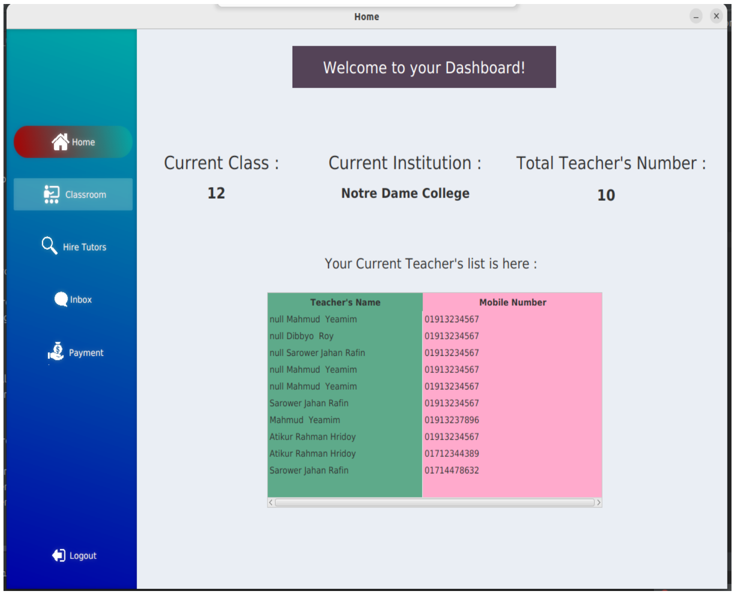
Tutor's Nest is a user-friendly, secure and innovative online platform that connects students and teachers from around the world. Our platform provides students with access to top-notch educators who are experts in their fields, offering personalized learning experiences to help students reach their full potential. Teachers can showcase their skills, share their knowledge and grow their career, while students can get the academic support they need to achieve their goals.











Welcome to your Dashboard!

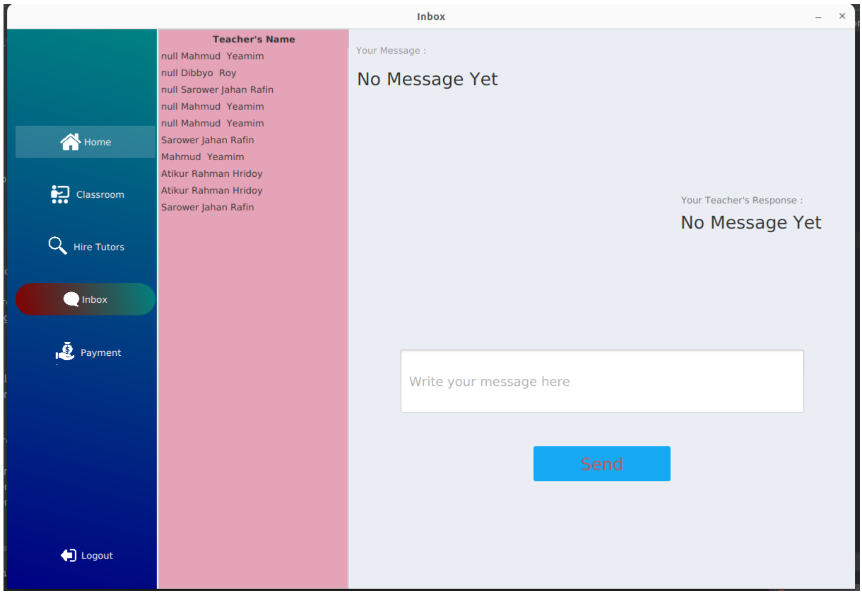
Current Class : 12

Current Institution : Notre Dame College

Total Teacher's Number : 10

Your Current Teacher's list is here :

Teacher's Name	Mobile Number
null Mahmud Yeamim	01913234567
null Dibbyo Roy	01913234567
null Sarower Jahan Rafin	01913234567
null Mahmud Yeamim	01913234567
null Mahmud Yeamim	01913234567
Sarower Jahan Rafin	01913234567
Mahmud Yeamim	01913237896
Atikur Rahman Hridoy	01913234567
Atikur Rahman Hridoy	01712344389
Sarower Jahan Rafin	01714478632



Teacher's Name
null Mahmud Yeamim
null Dibbyo Roy
null Sarower Jahan Rafin
null Mahmud Yeamim
null Mahmud Yeamim
Sarower Jahan Rafin
Mahmud Yeamim
Atikur Rahman Hridoy
Atikur Rahman Hridoy
Sarower Jahan Rafin

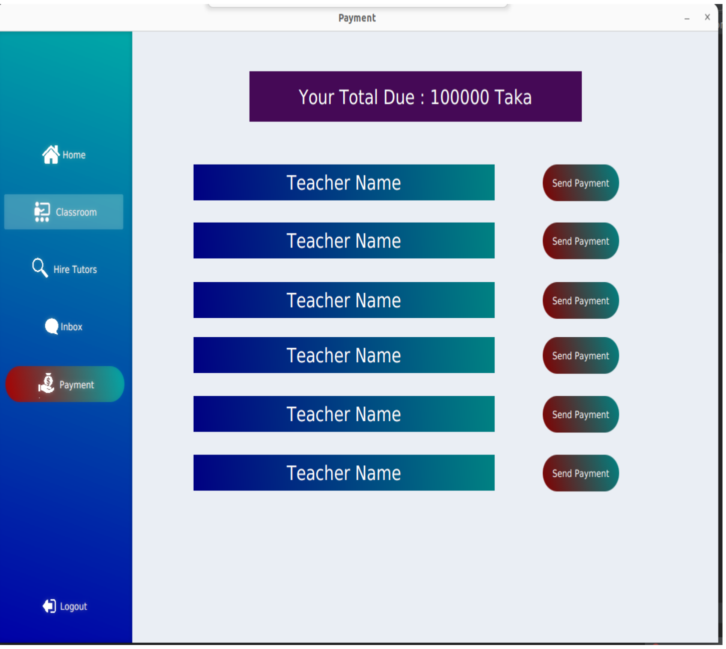
Your Message :

No Message Yet

Your Teacher's Response :

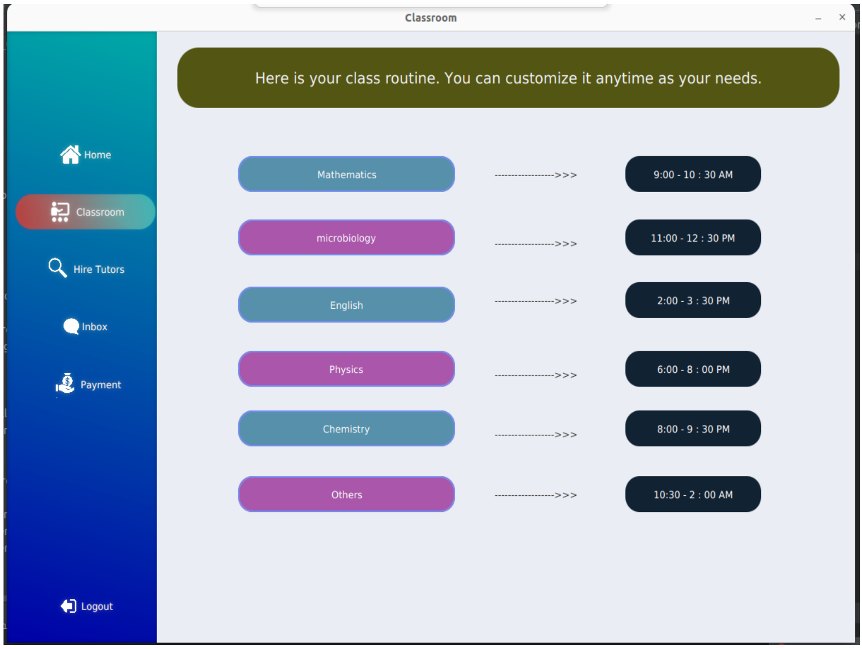
No Message Yet

Write your message here



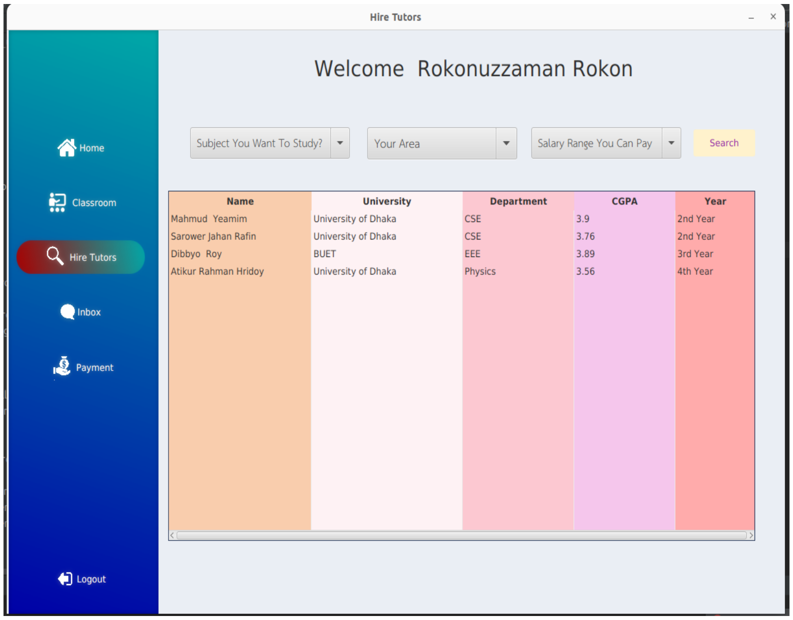
Your Total Due : 100000 Taka

Teacher Name	Send Payment
Teacher Name	Send Payment
Teacher Name	Send Payment
Teacher Name	Send Payment
Teacher Name	Send Payment
Teacher Name	Send Payment



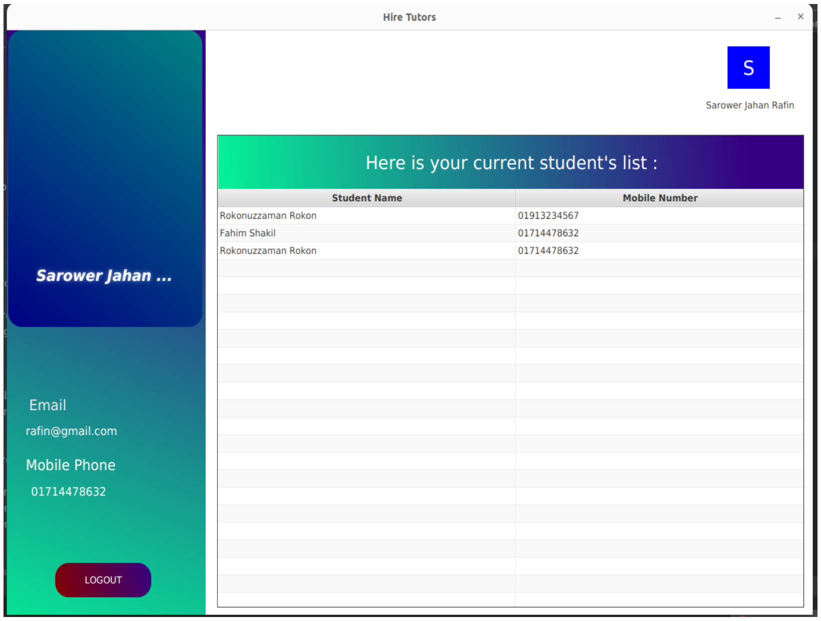
Here is your class routine. You can customize it anytime as your needs.

Mathematics	------------------>>>	9:00 - 10 : 30 AM
microbiology	------------------>>>	11:00 - 12 : 30 PM
English	------------------>>>	2:00 - 3 : 30 PM
Physics	------------------>>>	6:00 - 8 : 00 PM
Chemistry	------------------>>>	8:00 - 9 : 30 PM
Others	------------------>>>	10:30 - 2 : 00 AM



Welcome Rokonuzzaman Rokon

Name	University	Department	CGPA	Year
Mahmud Yeamim	University of Dhaka	CSE	3.9	2nd Year
Sarower Jahan Rafin	University of Dhaka	CSE	3.76	2nd Year
Dibbyo Roy	BUET	EEE	3.89	3rd Year
Atikur Rahman Hridoy	University of Dhaka	Physics	3.56	4th Year



Sarower Jahan Rafin

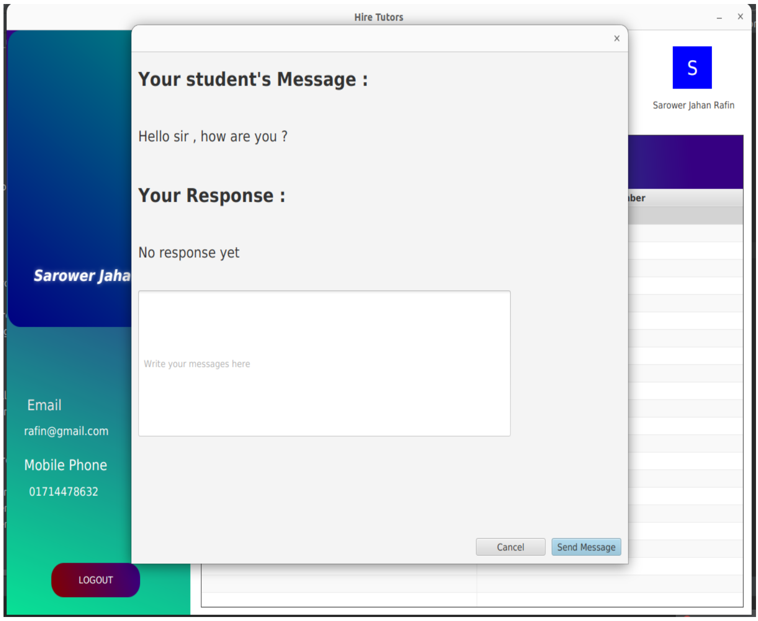
Sarower Jahan ...

Email
rafin@gmail.com

Mobile Phone
01714478632

Here is your current student's list :

Student Name	Mobile Number
Rokonuzzaman Rokon	01913234567
Fahim Shakil	01714478632
Rokonuzzaman Rokon	01714478632



Sarower Jahan Rafin

Sarower Jaha

Email
rafin@gmail.com

Mobile Phone
01714478632

Your student's Message :

Hello sir , how are you ?

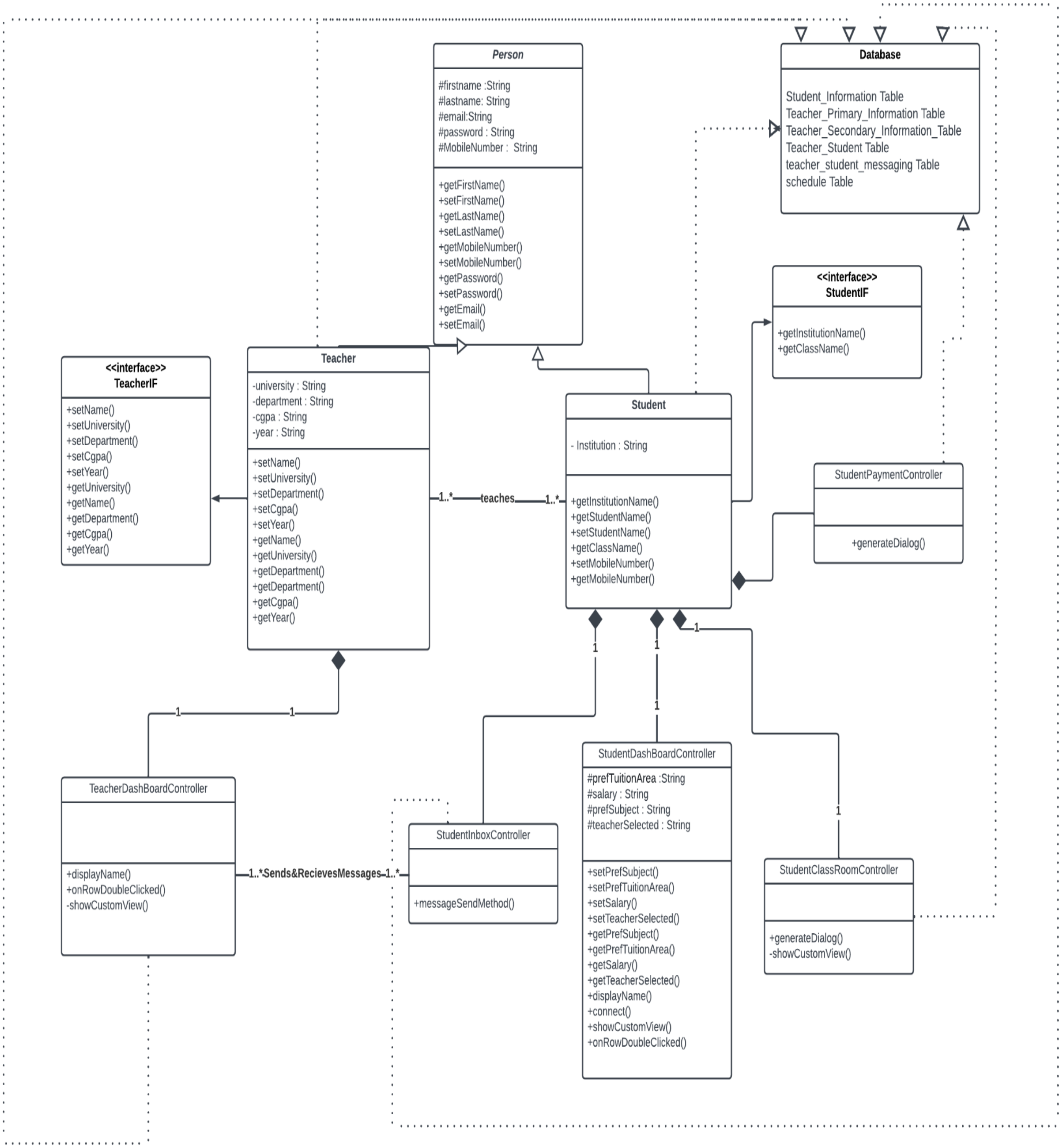
Your Response :

No response yet

Write your messages here

[2.3] System Design

UML Diagram



We have divided the whole codebase into two main folders. The java folder

for all the java files and the resources folder for the fxml scenebuilder files and images. The java folder is divided into two packages. They are described below:

Java

All the classes and interfaces here are made in this package following the provided UML diagram. The extra classes used here outside the UML are driver classes or classes used for changing scenes or to run the application. They are described below:

Main

Our main driver function is called here which will launch the program.

TutorsNestUtils

Changing between scenes and signup or login function is created here.

DataHub

A class which contains static variables of the information related to the database server.

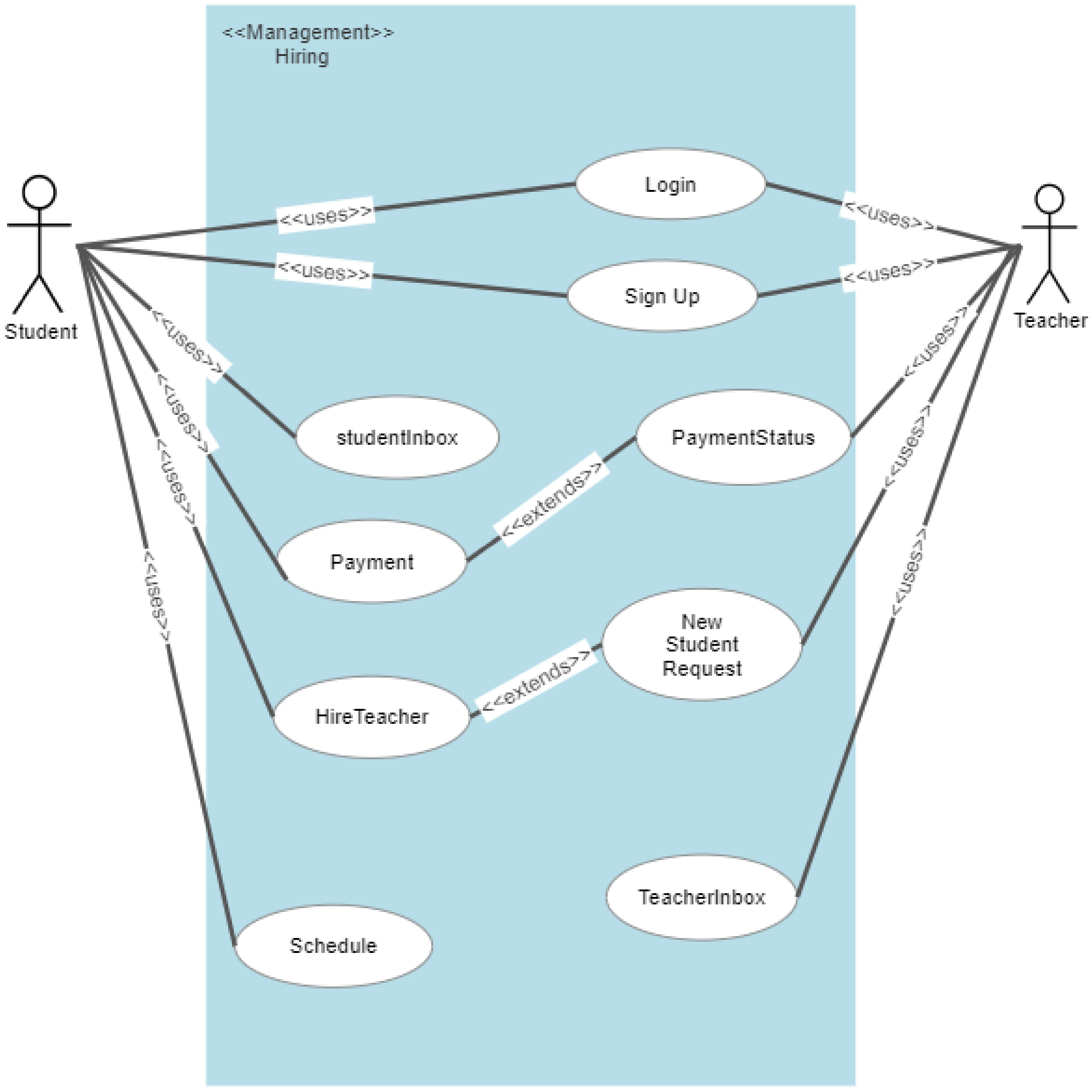
DataHandler

Contains some methods to send to and retrieve data from the database.

NavigationHandler

A class to handle all the navigation bar procedures.

Use Case Diagram



[2.4] Code Repository:

https://github.com/fahim33-eng/tutorsNest2

(We had to change our repository because it was not allowing the branches to merge….if you are willing to see our progress over time then our initial repository is: https://github.com/TerrorBlood47/TutorsNest2)

Final Thoughts & Future Work

[3.1] Limitations :

- Messaging : We use a database server to communicate between tutors and students . But when a student sends a message to the teacher, then previous messaging automatically deletes . that is not user friendly .

- Payment System : We don’t show individual tutors due . So students can not see who will get money from them .

- There is no option to remove the teacher . And there is also a problem , when a student adds a teacher , we treat that student selected as tutors . But this thing doesn’t match real life .

- The app runs too slow because of slow internet connection.

[3.2] Conclusion

Throughout the development of this desktop application, we have gained a wealth of knowledge and experience in software development. We have learned about various programming languages, libraries, and frameworks, and have developed skills in designing, building, testing, and deploying desktop applications.

One of the major challenges we faced in this project was creating a user-friendly and intuitive interface. Through user testing and feedback, we were able to improve the interface and ensure that it meets the needs of our target users. We also learned about the importance of documentation and version control in software development, and how they can improve the reliability and maintainability of the application.

Overall, this project has been an excellent opportunity for us to apply our software development skills in a real-world context. We are proud of the progress we have made and the knowledge we have gained, and we believe that the application we have developed will be useful to our target audience. We look forward to continuing to refine and improve the application, and to using the skills and expertise we have developed in future software development projects.