



OOP PROJECT REPORT

University system

Our Project Has

PostgreSql DataBase

Visual Interface

OOP Principles

Interfaces

Custom exceptions

Almost fully
functional program

Class inheritance

Password
Generator

Crew group

Leader

Moltabarov Amanzhol

Main programmer

Aidyn Nurzat

Class designer

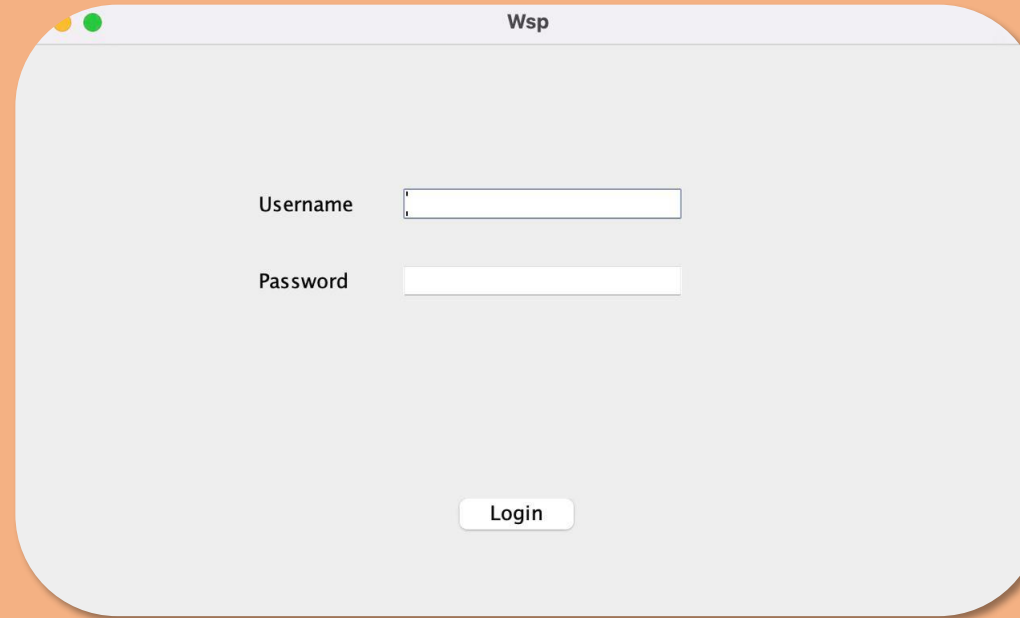
Bekdaulet Aklima

UI Master

Zhumagulov Arlan

Main Feature

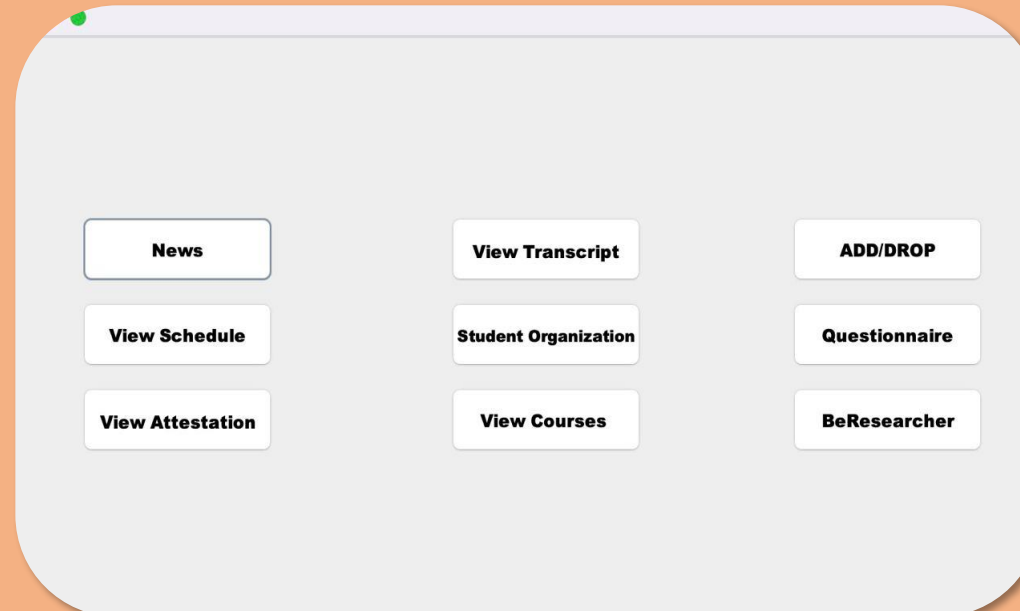
The main feature of our project is the presence of a visual interface. During the development of the project, we found using a regular console boring and decided to give a look to our project.



A screenshot of a login window titled "Wsp". It features two input fields: "Username" and "Password". Below the fields is a "Login" button.

UI Work

Arlan was the main one working with the visual interface. His goal in the team was to develop the design of the project and the implementation of functions. In order to visually position the visual elements on the window, the WindowBuilder extension was used.



A screenshot of a main menu window. It contains a grid of buttons: "News", "View Transcript", "ADD/DROP", "View Schedule", "Student Organization", "Questionnaire", "View Attestation", "View Courses", and "BeResearcher".

Student Organizations

View Members

View Organization News

Leave From Organization

eclipse-windowbuilder/
windowbuilder

Eclipse Windowbuilder



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DataBase

For our database, we used Postgresql and connected it to Eclipse using the DB Management Tools extension. Our database stores all users, student grades, and complaints.

While working on the project, we learned how to implement a database in Java.

Linking a real database to our project was a difficult task, because in addition to knowing Java and the principles of OOP, we had to relearn the SQL language.



```
console_5 x
Tx: Auto
Playground
wsp.public console_5
32 grade float4
33 );
34
35 INSERT INTO attestation VALUES ('ArLan', 'Zhumagulov', 'MIDTERM', 34.2);
36 SELECT * FROM attestation;
37
38 SELECT type, grade FROM attestation WHERE name = 'ArLan' AND surname = 'Zhumagulov';
39
40 UPDATE users SET user_type = 'STUDENT' where username = 'a_zhumagulov';
41 UPDATE users SET user_type = 'ADMIN' where username = 'admin';
```

name	surname	type	grade
ArLan	Zhumagulov	MIDTERM	30
ArLan	Zhumagulov	ENDTERM	25

```
btnAddUser = new JButton("Add user");
btnAddUser.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        try {
            Connection con = DatabaseUtils.connectToDB();
            String sql = "INSERT INTO users VALUES (2, ?, ?, ?, ?)";
            PreparedStatement query = con.prepareStatement(sql);
            query.setString(1, (nameField.getText().charAt(0) + "_" + surnameField.getText()).toLowerCase());
            query.setString(2, passwordGenerator());
            query.setObject(3, userType.getSelectedIndex(), Types.OTHER);
            query.setString(4, nameField.getText());
            query.setString(5, surnameField.getText());

            query.executeUpdate();
            Admin.createLogFile("Event_Add", (nameField.getText().charAt(0) + "_" + surnameField.getText()));
            statusLabel.setText("Success");
        } catch (Exception e1) {
            e1.printStackTrace();
            statusLabel.setText("Fail");
        }
    }
});
```

```
console_5 x
Tx: Auto
Playground
wsp.public console_5
20 CREATE TYPE "UserType" AS ENUM ('ADMIN', 'TEACHER', 'STUDENT', 'DEAN', 'MANAGER', 'GRADUATE');
21 DROP TYPE "UserType";
22
23 SELECT * FROM users;
24
25
26 DELETE FROM users WHERE username = 'A_molitarov';
27
28 CREATE TABLE attestation(
29     name VARCHAR(50),
30     surname VARCHAR(50),
31     type VARCHAR(10),
32     grade float4
33 );
34
```

username	password	user_type	name	surname
a_zhumagulov	qwerty458	STUDENT	ArLan	Zhumagulov
admin	admin	ADMIN	Admin	Adminov
a_askarov	0@7PL#5H	TEACHER	Aral	Askarov
a_janomov	KvaPd1J(DEAN	AkjoI	Janomov



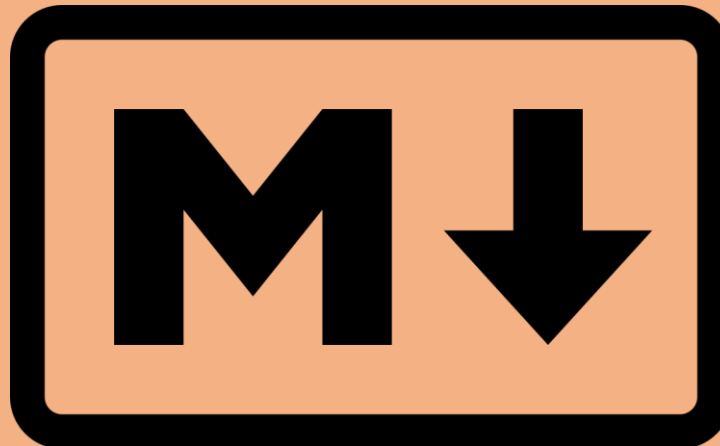
Working with Git and GitHub



Why GitHub

While we were working on the project, we faced the problem of working on the project at the same time. But the decision came quickly and it's GitHub. GitHub allows users to store, manage and collaborate on open source projects. That's why we chose him.

We also used the Markdown language for markup on GitHub. There we recorded what things and functions were added.



GitHub Page

