AMERICAN INTERNATIONAL UNIVERSITY–BANGLADESH (AIUB)

Dept. of Computer Science
Faculty of Science and Technology

CSC2210: OBJECT ORIENTED PROGRAMMING 2

Summer 2023-2024

Section: [F]

Group No: 04

Project Report On

*Project Name [**OSHOMOY**]*

Supervised By

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Submitted By:

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Obtained Marks for CO2 and CO3 (Description given in the following page)					
Assessment Criteria	**Not Attended/ Incorrect (0)**	**Inadequate (1-2)**	**Average (3)**	**Good (4)**	**Excellent (5)**
Evaluation Criteria (CO2)	**Total =**		**Evaluation Criteria (CO3)**		**Total =**
Requirement fulfillment			Organization of the application		
Validation			Representation and Integration of Database		
Verification			Graphical User Interface		

CO2: Display and verify the mean of a real-life Project using the concepts of C# Graphical User Interface based environment with database integration to depict a desktop-based application.

Assessment Criteria	Not Attended/ Incorrect (0)	Inadequate (1-2)	Average (3)	Good (4)	Excellent (5)
Evaluation Criteria	**Evaluation Definition**				
Requirement fulfillment	Fails to demonstrate any understanding of real-life scenario-based project development or functional requirement identification. There is no attempt to depict a project or identify functional requirements accurately.	Demonstrates limited understanding of real-life scenario-based project development and functional requirement identification. The project depicted lacks coherence or relevance to real-life scenarios, and functional requirements are inaccurately identified or insufficiently described.	Presents a basic depiction of a real-life scenario-based project and identifies some functional requirements. However, the project lacks depth or complexity, and some functional requirements may be vaguely defined or missing key details.	Effectively demonstrates a realistic scenario-based project and accurately identifies most functional requirements. The project is well-developed with appropriate complexity, and functional requirements are clearly articulated with relevant details.	Exhibits an exceptional understanding of real-life scenario-based project development and accurately identifies all functional requirements. The project is meticulously developed with thorough attention to detail, reflecting a comprehensive understanding of Object-Oriented Programming project development activities.
Validation	Fails to demonstrate any understanding or implementation of validation forms in their system. There is no attempt to deal with data validation, and validation requirements are completely ignored or incorrectly applied.	Demonstrates limited understanding of validation forms and data validation techniques. While some attempt may be made to implement validation, it is incomplete or poorly executed, leading to inadequate handling of data validation.	Shows a basic understanding of validation forms and data validation techniques. They attempt to implement validation, but some aspects may be missing or incorrectly implemented, resulting in partial or inconsistent handling of data validation.	Effectively demonstrates the use of validation forms and implements data validation techniques. Validation is mostly accurate and comprehensive, ensuring the proper handling of data input and verification in the system.	Exhibits an exceptional understanding and implementation of validation forms and data validation techniques. Validation is meticulously implemented with thorough attention to detail, ensuring robust data validation procedures and contributing to the overall reliability and integrity of the system.
Verification	Fails to demonstrate any attempt to verify the system data or functional requirements. There is no evidence of understanding or implementation of verification processes, and data	Demonstrates limited understanding of verification processes and data flow in the system. Verification attempts are incomplete or inaccurate, and	Shows a basic understanding of verification processes and attempts to verify system data. However, verification efforts may be inconsistent or lack	Identifies and verifies system data, ensuring proper functional requirements are met. Verification efforts are mostly accurate and thorough,	Exhibits an exceptional understanding of verification processes and meticulously verifies system data. Verification efforts are comprehensive and precise, with a keen

	flow is not considered.	there is insufficient consideration given to ensuring data integrity and functionality.	thoroughness, and there may be gaps in ensuring proper functional requirements and data flow.	with attention to ensuring data integrity and appropriate data flow within the system.	focus on ensuring all functional requirements are met and maintaining proper data flow throughout the system.

CO3: Prepare and Explain a real life desktop based application synthesizing several component of C# along with development tools to adhere the given requirements.

Assessment Criteria	Not Attended/ Incorrect (0)	Inadequate (1-2)	Average (3)	Good (4)	Excellent (5)
Evaluation Criteria	**Evaluation Definition**				
Organization of the application	Fails to identify any suitable real time application or requirements for project development activities related to OOP.	Limited understanding about the project scopes and scenarios or identification of functional requirements.	Lacks depth or relevance to OOP project development activities and may contain inaccuracies. Real-life scenarios are mentioned, but the discussion lacks depth or clarity.	Consider and integrate the idea of several core aspects of the project along with relevance to real-life scenarios. Demonstrating a solid understanding of the application presentation.	Generalize and exhibits an exceptional understanding of project preparation according to a to real-life scenarios. Also contains proper and insightful identification of the system which is comprehensive and precise.
Representation and Integration of Database	Fails to identify and present any understanding or implementation of database. Also failed to integrate the data with the project itself.	Limited understanding of the database concepts or their proper way of using in a real time project. While some attempt may be made to implement but it is incomplete or poorly executed, leading to inadequate design.	Lacks depth or relevance to database integration with the application. Shows a basic understanding but some aspects may be missing or incorrectly implemented, resulting in partial or inconsistency. May lack proper normalization.	Integrate the database with the forms properly and implements it with proper validation which is mostly accurate and comprehensive, ensuring the proper handling of data input and verification along with general normalization.	Exhibits an exceptional understanding and implementation of database ensuring attention to detail, and robust data manipulation procedures and contributing to the overall clarity.
Graphical User Interface	Fails to present or prepare GUI based application interfaces. There is no evidence of creating or integrating such things according to their usefulness.	Limited understanding of graphical user interfaces. Lack of design knowledge. Very poor attempt to make such things which are currently obsolete or can't be identified as coherent.	Shows a basic understanding of creating user interfaces. Most of them are interconnected but maybe some of them lack it. However, most of it can be described as user friendly.	Effectively identifies and meet the consider the simplicity. Design related works are mostly accurate and taken proper attention to ensuring a user-friendly coherent system.	Exhibits an exceptional work design following a high standard of simple and elegant work. Several controls and mechanism has been organized in a preferred way according to the coherent usage .

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Chapter 01: (Introduction)

"Oshomoy" is a dedicated social welfare application designed to bring communities together for the greater good. It provides users with an easy way to donate funds for natural disasters and social causes, contributing directly to relief efforts and charitable activities. Beyond financial support, users can volunteer for various social events, such as blood donation drives, road cleaning campaigns, and community outreach programs. The app also serves as a hub for important updates and information on ongoing social welfare events, empowering users to make a difference and stay engaged in community initiatives.

At its core, Oshomoy aims to empower users by providing them with the tools and opportunities to support those in need. Whether through financial donations or volunteer efforts, every contribution plays a significant role in fostering community solidarity and resilience. Our vision is to create a compassionate society where individuals actively engage in addressing social challenges, thus enriching their communities.

By using Oshomoy, you are not just making a donation; you are becoming part of a movement that seeks to uplift and support those in need. Every contribution, no matter how small, adds to a larger effort to create a world where compassion and kindness lead the way toward a better tomorrow.

Chapter 02: (User Story)

Admin:

1. User Management
   As an admin,
   I want to manage user accounts, including registration and roles,
   So that I can maintain a secure and organized user environment within the app.

2. Organizing Volunteer Events
   As an admin,
   I want to create and manage volunteer opportunities and events,
   So that users can easily find ways to contribute their time and skills to social causes.

3. Managing Donations
   As an admin,
   I want to oversee and manage the donations made through the app,
   So that I can ensure funds are allocated effectively and transparently.

User:

1. Donating to Natural Disasters
   As a user,
   I want to donate money to support victims of natural disasters,
   So that my contributions can help provide immediate relief to those in need.

2. Contributing to Social Causes
   As a user,
   I want to view and contribute to various social causes,
   So that I can support initiatives that resonate with my values.

3. Volunteering for Events
   As a user,
   I want to find and sign up for volunteer opportunities in my area,
   So that I can actively participate in community service and make a positive impact.

4. Receiving Updates on Events
   As a user,
   I want to receive notifications and updates about upcoming social events and donation drives,
   So that I can stay informed and participate actively.

5. Accessing Information
   As a user,
   I want to access information about various social events and initiatives,
   So that I can understand how my contributions are making a difference.

Chapter 03: (ER Diagram)

Indicators:

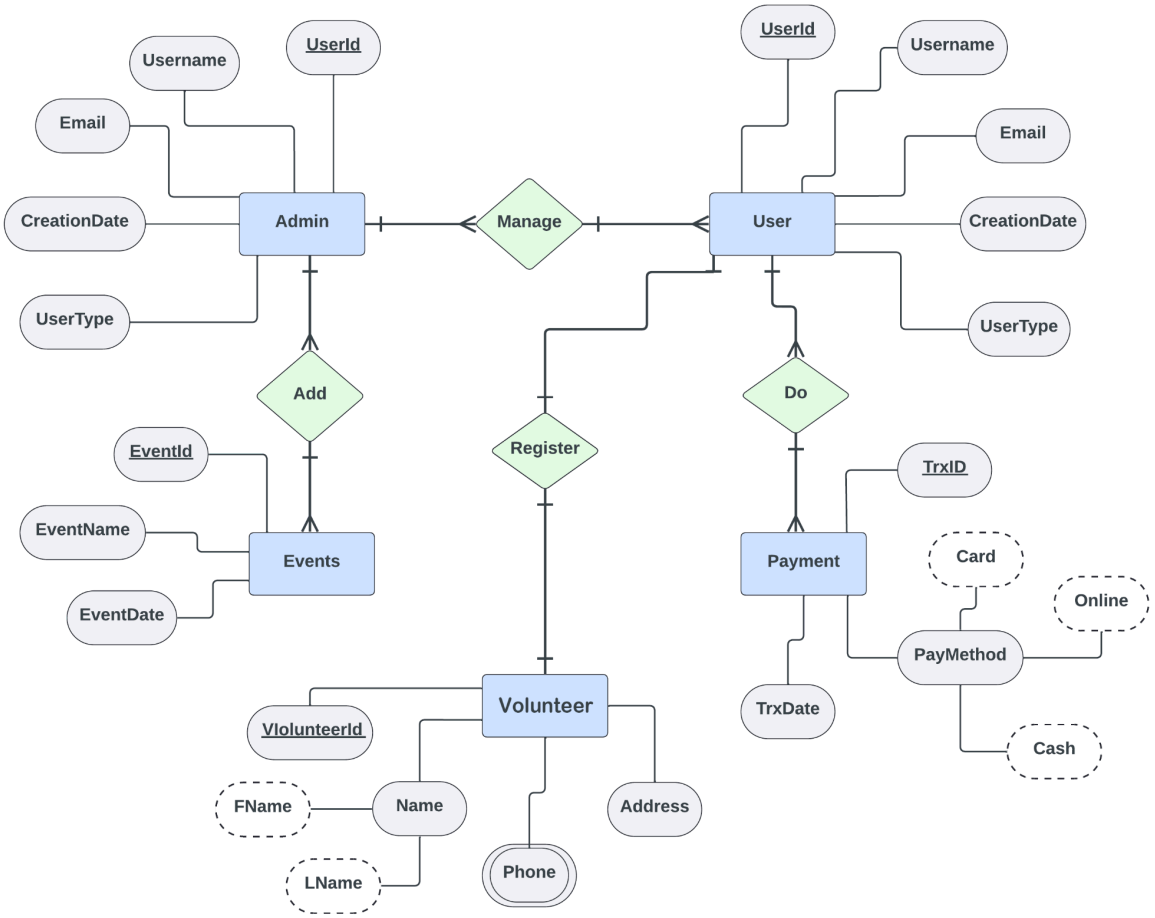

Figure 1: Entity-Relationship Diagram

Final table after Optimization:

i. User : UserId, Username, Email, Password, UserType, CreationDate

ii. Payment : TrxId, Card, Online, Cash, TrxDate, UserId

iii. Volunteer : VolunteerId, FName, LName, Phone, Address, UserId

iv. Events : EventId, EventName, EventDate

Chapter 04: (SQL Queries)

User table Creation:

```
CREATE TABLE User (
        UserId INT IDENTITY(1,1) PRIMARY KEY,
        Username NVARCHAR(255) NOT NULL,
        Email NVARCHAR(255) NOT NULL,
        Password NVARCHAR(255) NOT NULL,
        UserType NVARCHAR(50) NOT NULL,
        CreationDate DATETIME DEFAULT GETDATE()
);
```

Payment table Creation:

```
CREATE TABLE Payment (
        TrxId INT IDENTITY(1,1) PRIMARY KEY,
        Card INT,
        Online INT,
        Cash INT,
        CreationDate DATETIME DEFAULT GETDATE()
        UserId INT,
        FOREIGN KEY (UserId) REFERENCES [User](UserId)
);
```

Volunteer table Creation:

```
CREATE TABLE Volunteer (
        VolunteerId INT IDENTITY(1,1) PRIMARY KEY,
        FName NVARCHAR(255) NOT NULL,
        LName NVARCHAR(255) NOT NULL,
        Phone NVARCHAR(15) NOT NULL,
        Address NVARCHAR(255),
        UserId INT,
        FOREIGN KEY (UserId) REFERENCES [User](UserId)
);
```

Event tableCreation:

```
CREATE TABLE Event(
        Event INT IDENTITY(1,1) PRIMARY KEY,
        EventName NVARCHAR(255) NOT NULL,
        EventDate DATETIME(255),
);
```

User Data Insert:

```
INSERT INTO Users (Username, Email, Password, UserType)
        Values ('your_username', 'your_email@example.com', 'your_password',
                 ‘your_user_type')
);
```

User Data Selection:

```
SELECT UserId, UserType
FROM Users
WHERE Username = 'your_username'
WHERE Password = 'your_password'
;
```

User Data Modify/Update:

```
UPDATE Users
SET
      Username = 'new_username'
      Password = 'new_password'
      Email = 'new_password'

WHERE UserId = given_user_Id ;
```

User Data Delete:

```
DELETE FROM Users
WHERE UserId = given_user_Id
;
```

User Role Change

```
UPDATE Users
SET
      UserType = 'User/Admin’'

WHERE UserId = given_user_Id ;
```

Chapter 05: (Screenshots)

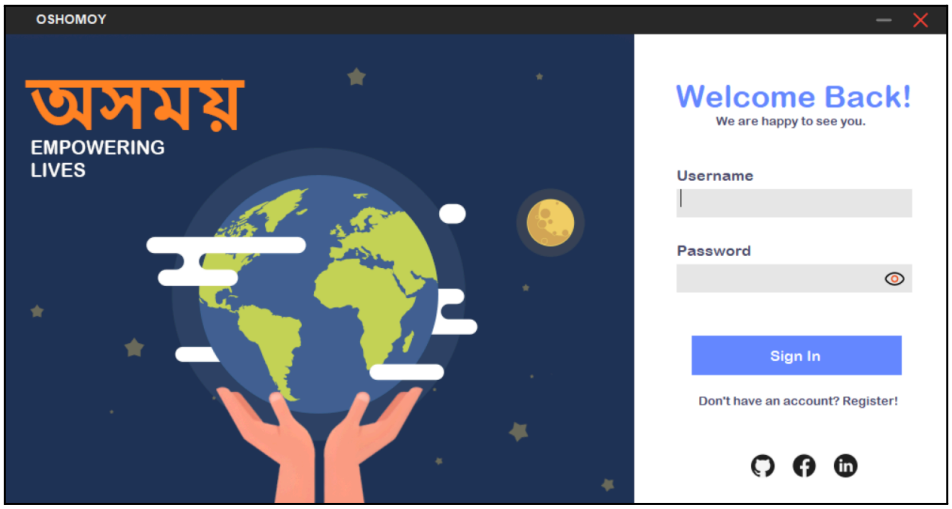

Image 1: Login Page

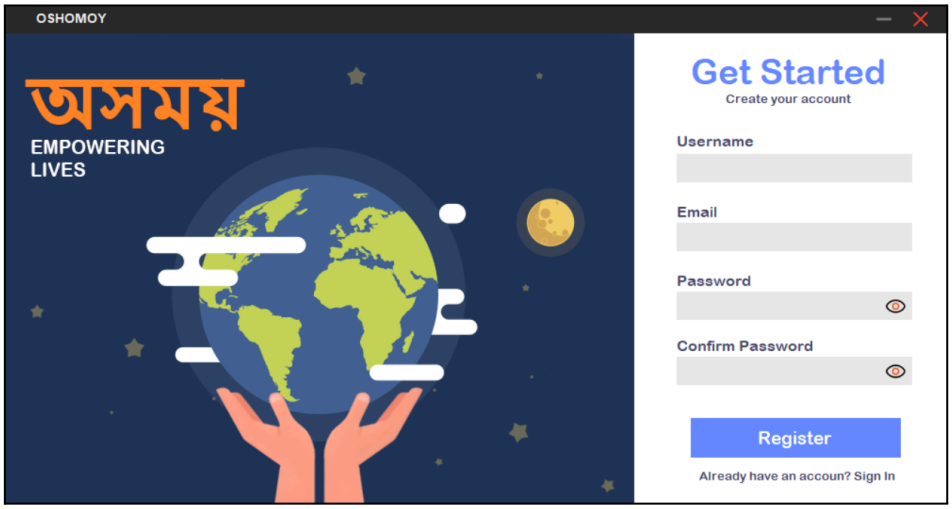

Image 2: Register Page

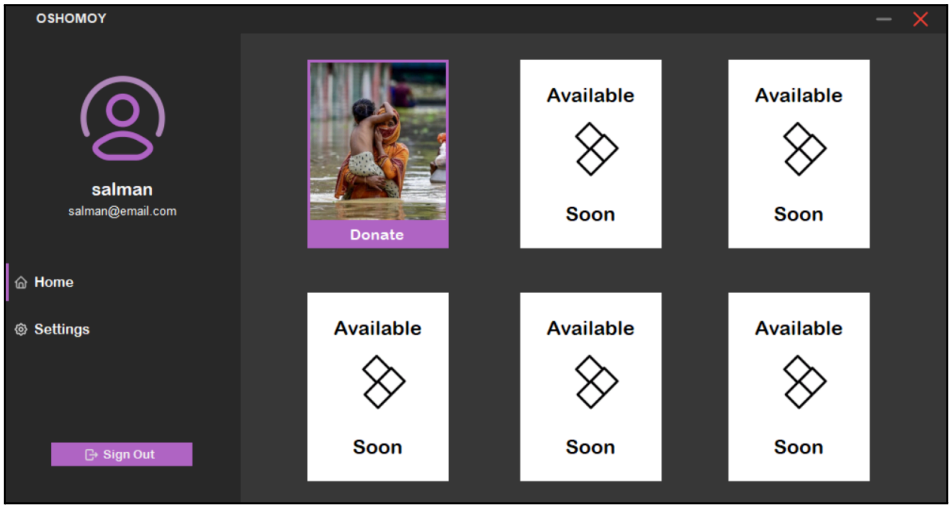

Image 3: User Home Page

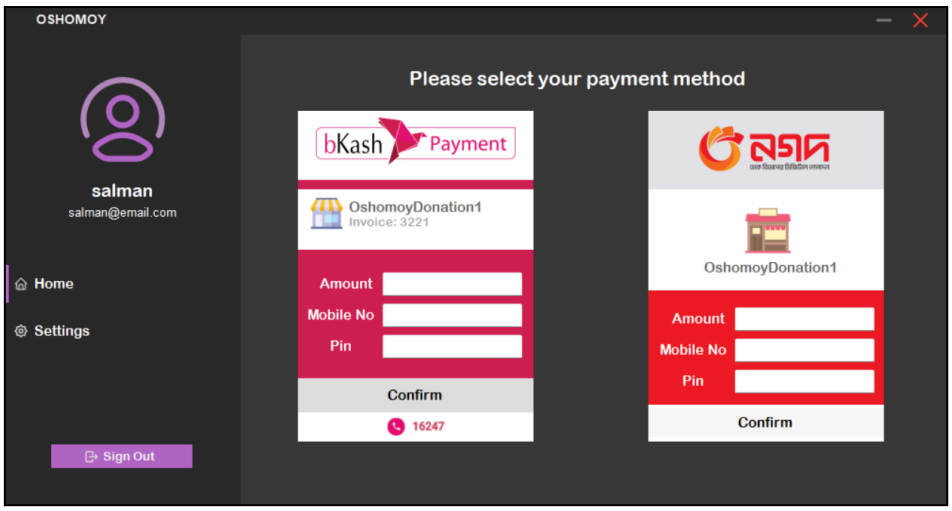

Image 4:User Payment Page

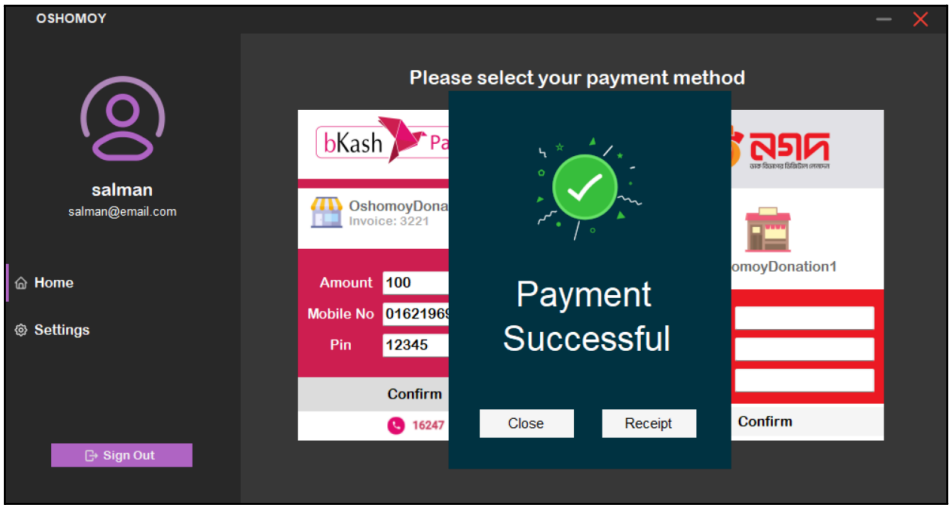

Image 5: User Payment Successful Message

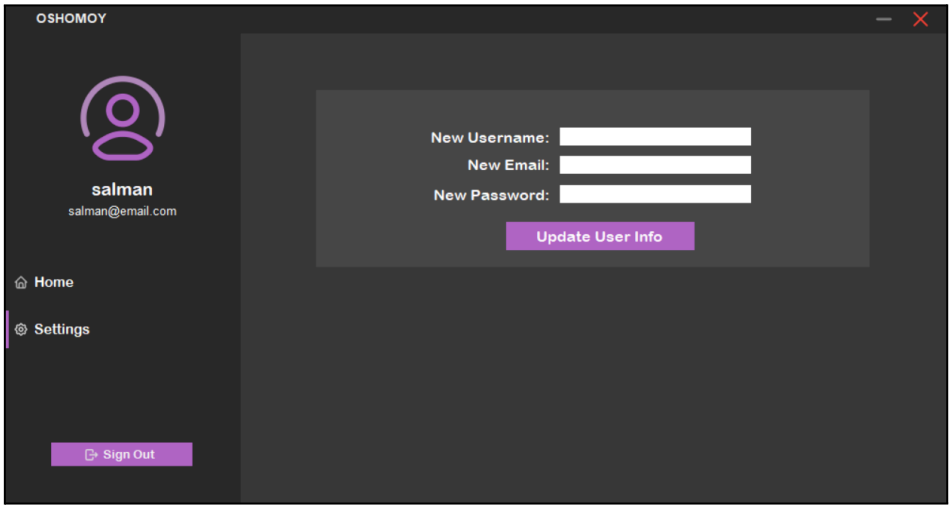

Image 6: User Settings Page

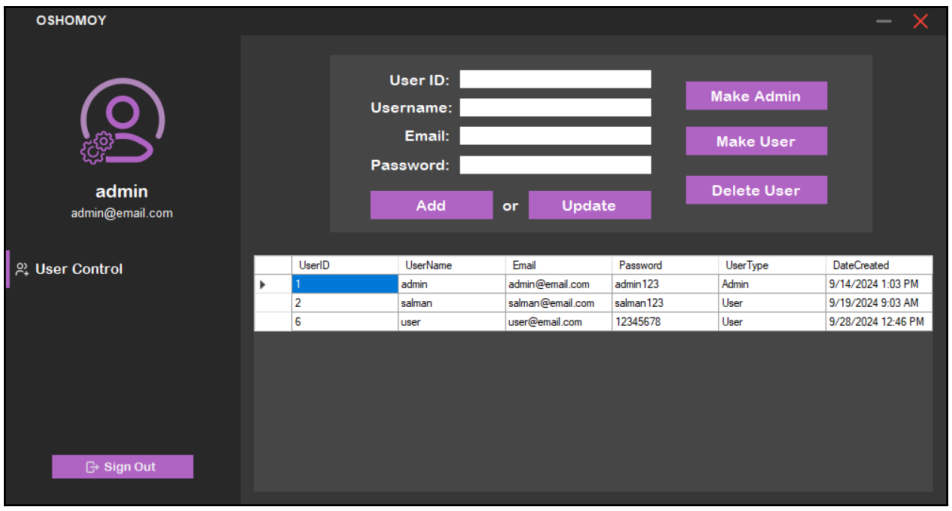

Image 7: Admin Dashboard Page