Department : CSE
Course Code : CSE 215
Course Title: Object Oriented Programming Lab

Project Title : Student Management System

Teacher Information :

Name : Mustofa Ahmed
Dept. : CSE
Designation : Lecturer
Daffodil International University

Student Information :

Name	ID
Prottasha Islam Nahid	0242220005101214
Mahmuda Islam	0242220005101215

Section : 63_D

Date of Submission : 24-11-2023

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Introduction:

The "Student Management System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and in some cases reduce the hardships faced by this existing system. Moreover this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides an error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus by this all it proves it is user-friendly. Student Management System, as described above, can lead to error free, secure, reliable and fast management systems. It can assist the user to concentrate on their other activities rather than concentrating on the record keeping. Thus it will help organizations in better utilization of resources.

Every organization, whether big or small, has challenges to overcome and manage the information of Teacher, Student, Attendance, Subject, Class. Every Student Management System has different Student needs, therefore we design exclusive employee management systems that are adapted to your managerial requirements. This is designed to assist in strategic planning, and will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy executives who are always on

the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources.

Feature Description:

SIGN UP: In this features,Allows for the registration of new users , including personal information , contact details, and academic records .Allows for the registration of new users , including personal information , contact details, and academic records .Allows for the registration of new users , including personal information , contact details, and academic records .

LOG IN : In this feature,Allows for the login of new / old users to use this application .

ADD FEES : In this feature,Payments made or received can also be managed and documented using the Student Management System .

PRINT MONEY RECEIPT : In this feature,After the Payment students get a money receipt use this feature .

VIEW RECORD : In this feature,This features show all student details whose are already payment their fees .

SEARCH RECORD : In this feature,This feature helps us to find a student details who paid his fees .

STUDENT ADMISSION : In this feature,Allows for the registration of new students , including personal information , contact details, and academic records.

EDIT RECORD : In this feature,Using these features update the student records.

Interfaces:

1

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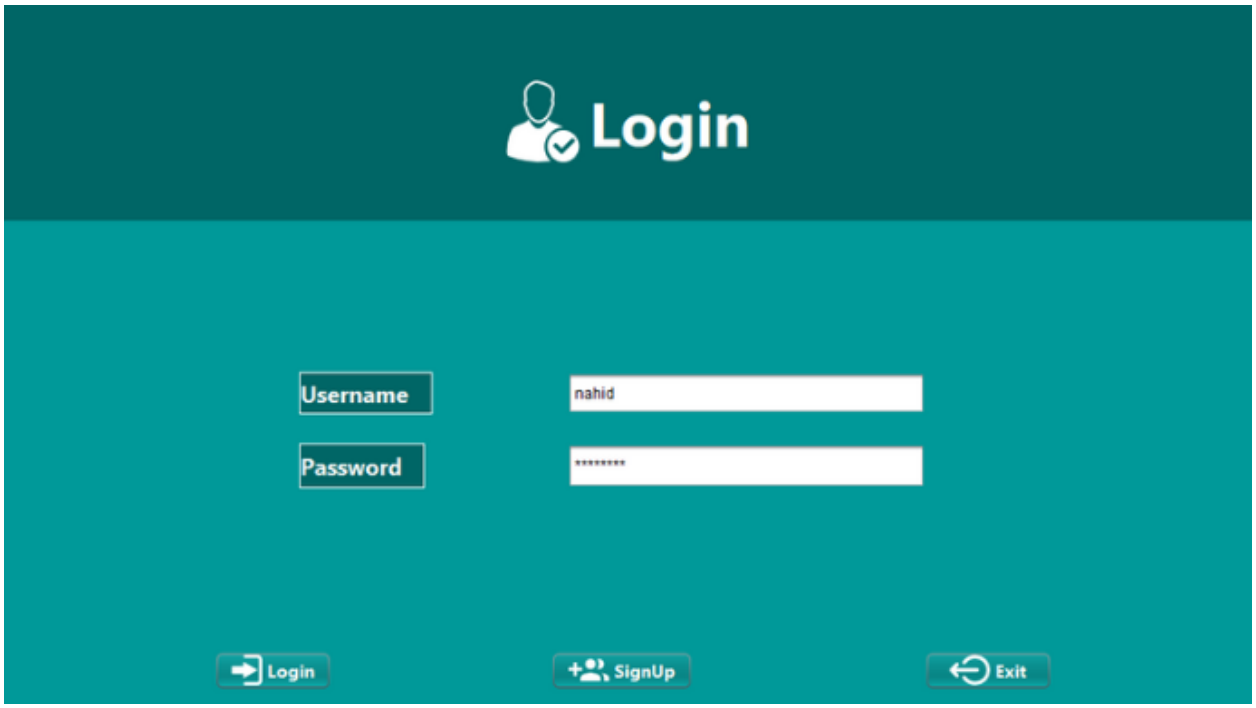

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1228
First Name
Shama Rani
Last Name
Saha
Username
shama
Password
Confirm Password
Date of Birth
12/02/2003
Email
shama
Phone
0123456789
Password should be 8 digit
Phone Number Must Be 11 Digit
SignUp
Exit

4


Daffodil International University
Student Management System
Project
Add Fees
View Record
Search Record
Admission
Attendence
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Logout

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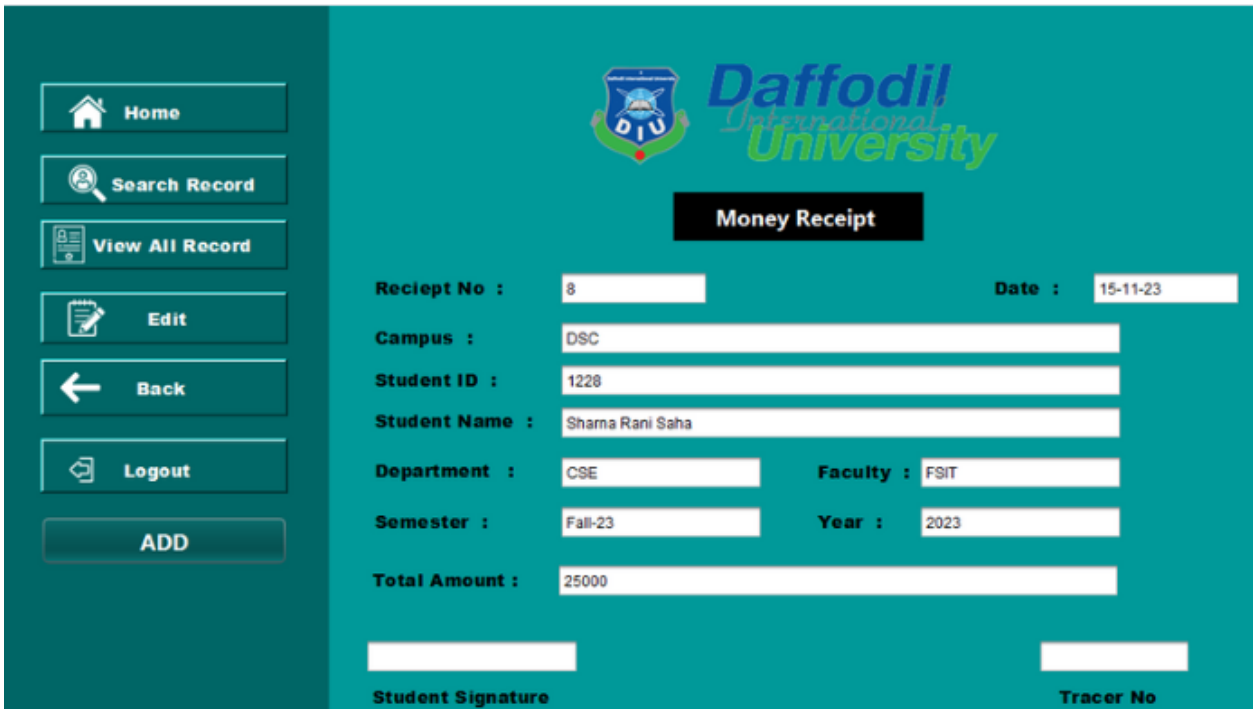
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Campus :
DSC
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1228
Student Name :
Sharna Rani Saha
Department :
CSE
Faculty :
FSIT
Semester :
Fall-23
Year :
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Total Amount :
25000
Student Signature
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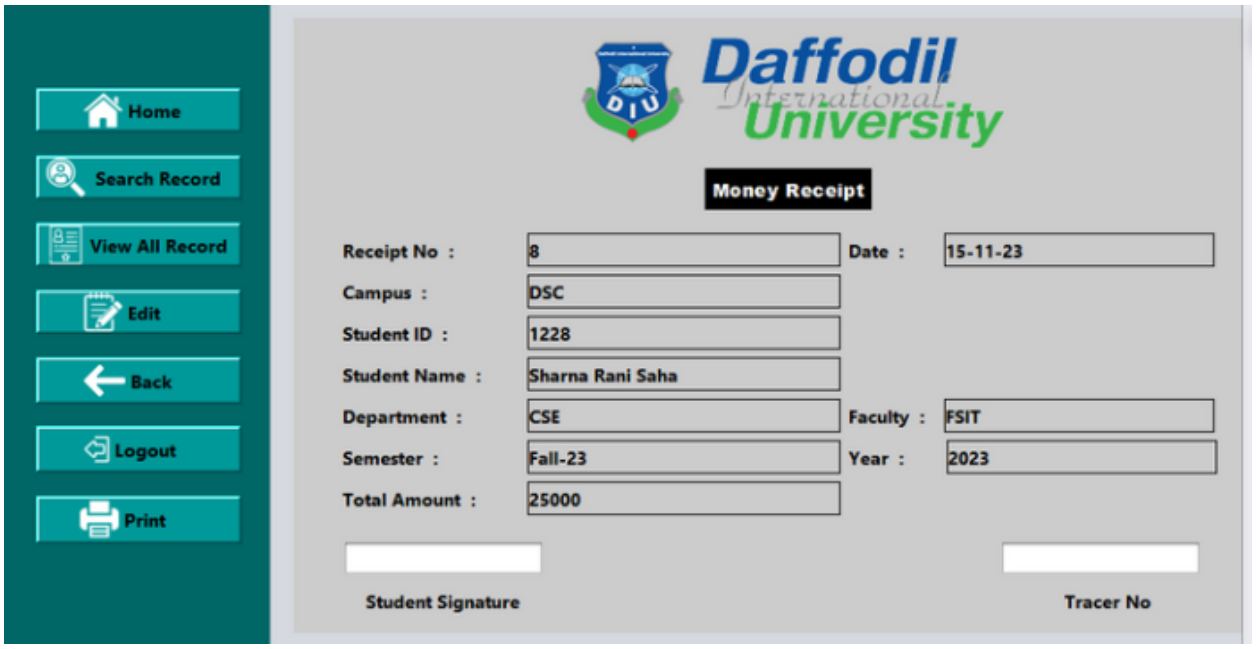
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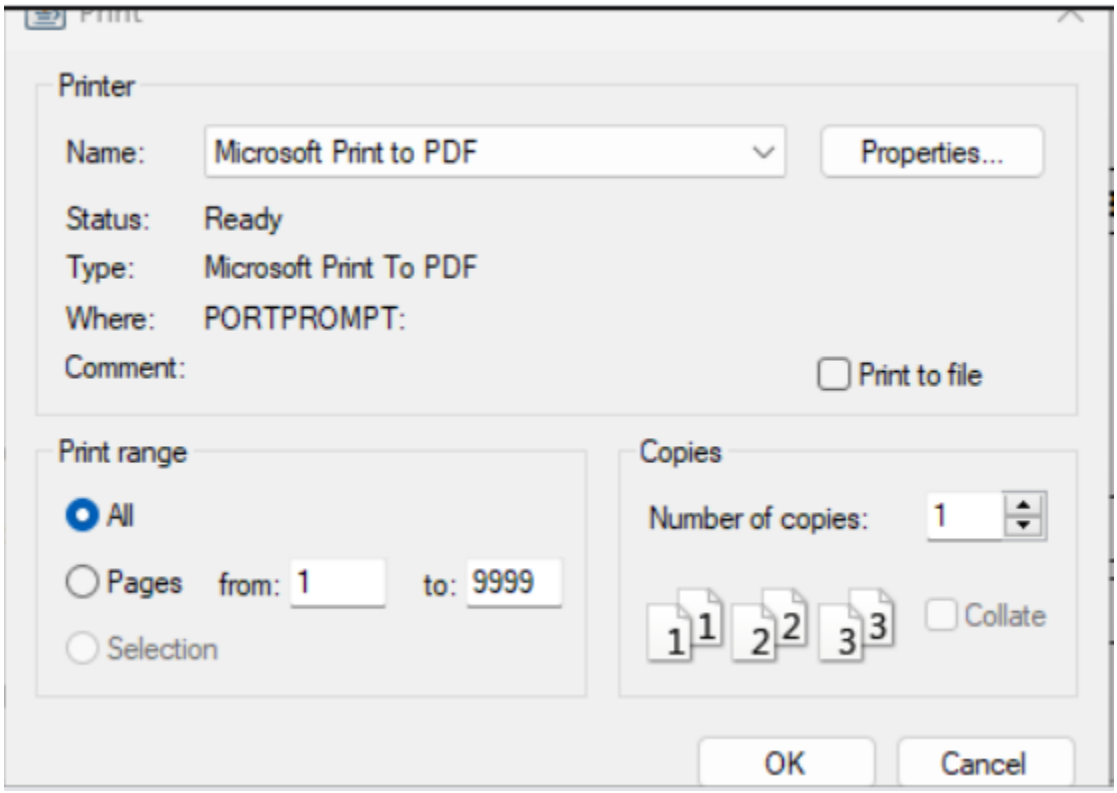
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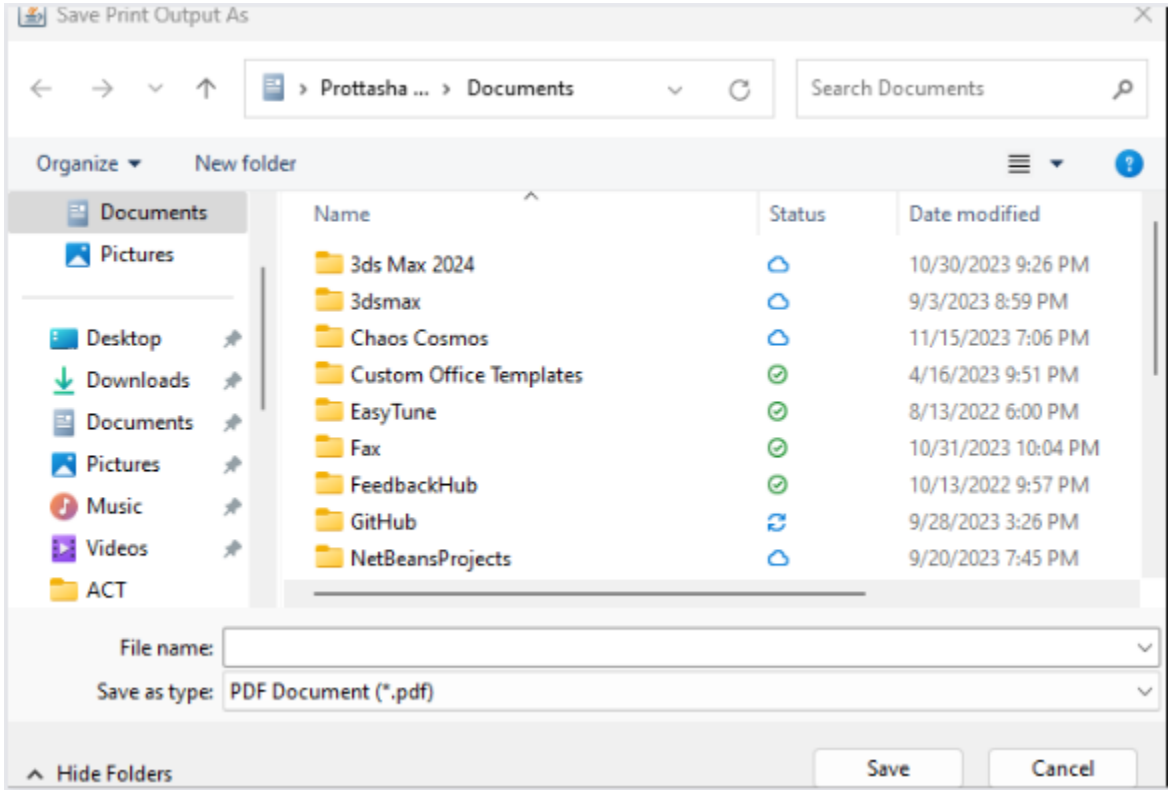
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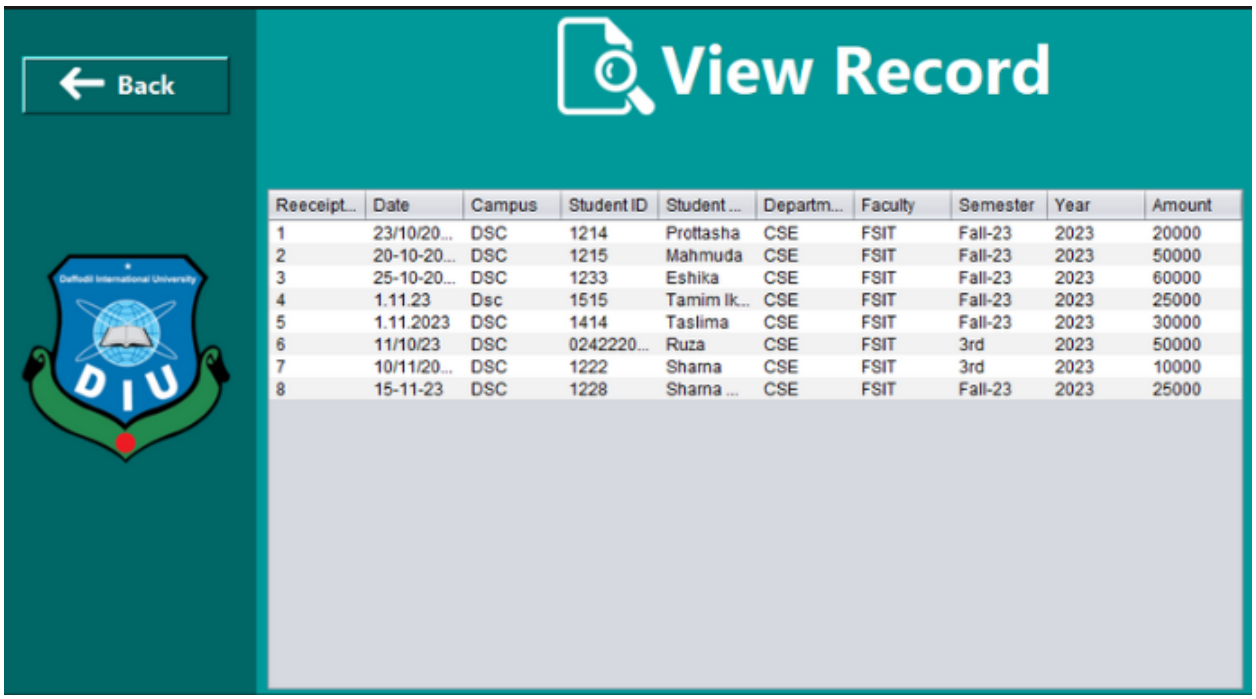
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3 25-10-20... DSC 1233 Eshika CSE FSIT Fall-23 2023 60000
4 1.11.23 Dsc 1515 Tamim Ik... CSE FSIT Fall-23 2023 25000
5 1.11.2023 DSC 1414 Taslima CSE FSIT Fall-23 2023 30000
6 11/10/23 DSC 0242220... Ruza CSE FSIT 3rd 2023 50000
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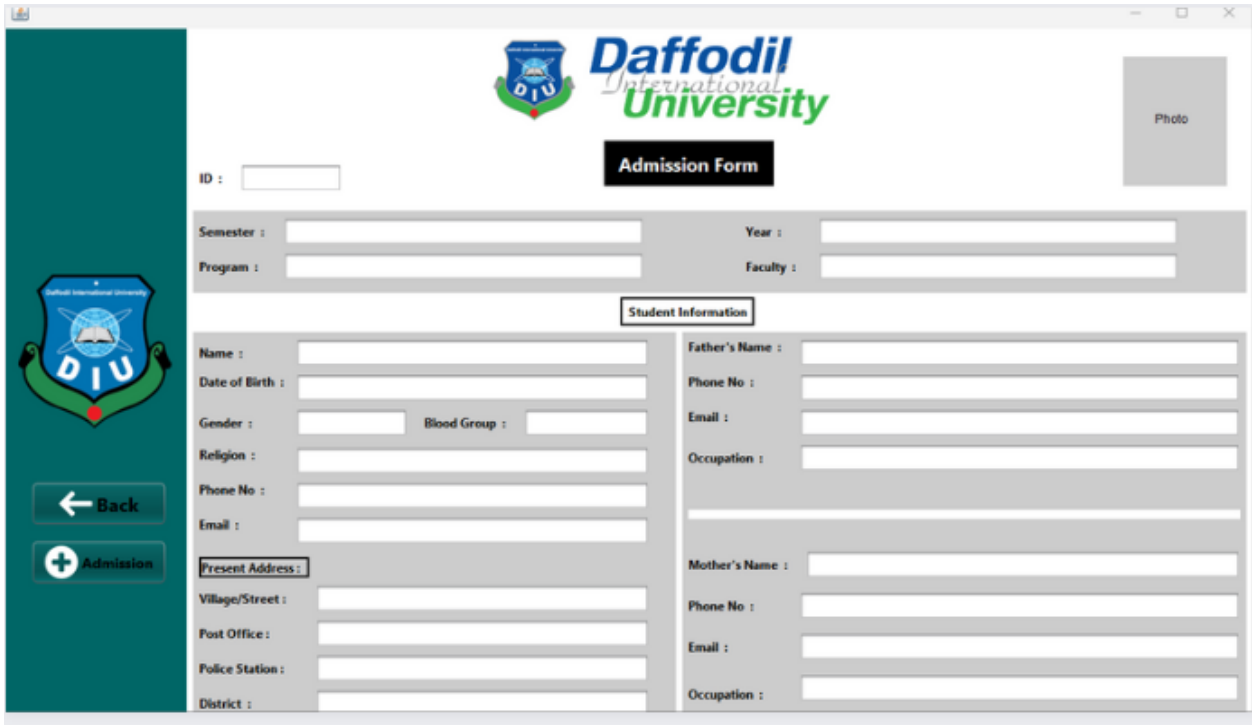

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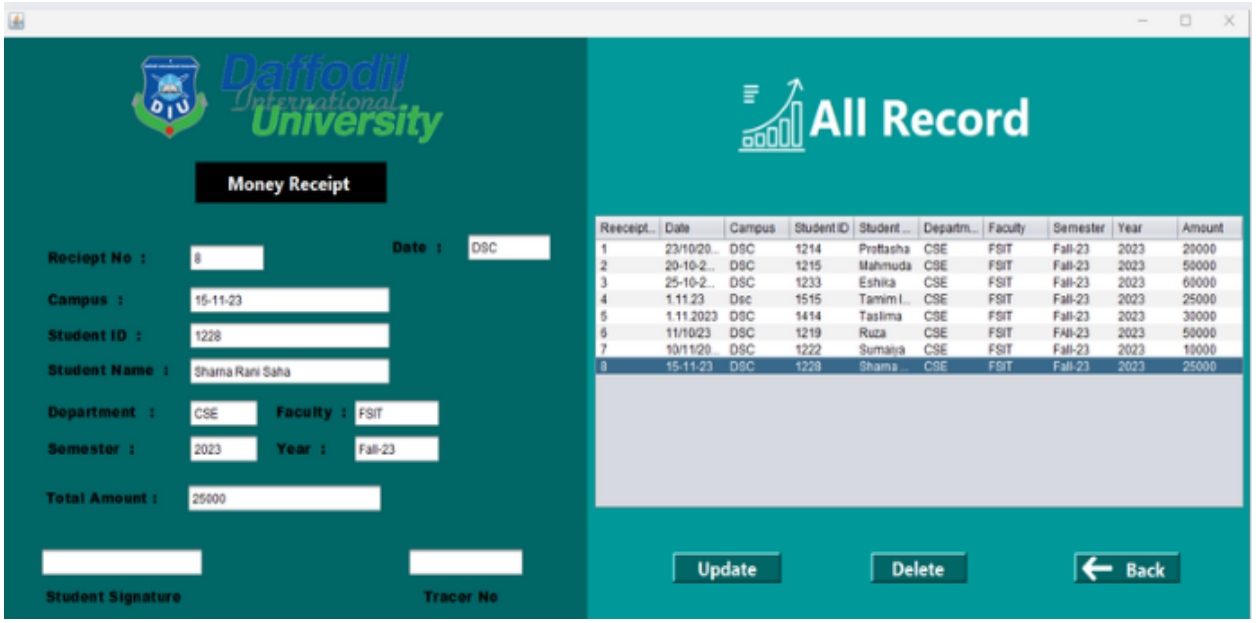

Reeceipt...	Date	Campus	Student ID	Student ...	Departm...	Faculty	Semester	Year	Amount
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2	20-10-2...	DSC	1215	Mahmuda	CSE	FSIT	Fall-23	2023	50000
3	25-10-2...	DSC	1233	Eshika	CSE	FSIT	Fall-23	2023	60000
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6	11/10/23	DSC	1219	Ruza	CSE	FSIT	Fall-23	2023	50000
7	10/11/20...	DSC	1222	Sumaiya	CSE	FSIT	Fall-23	2023	10000
8	15-11-23	DSC	1228	Shama ...	CSE	FSIT	Fall-23	2023	25000

Future Enhancements:

A student management system is a comprehensive tool that can be enhanced in various ways to improve its functionality, usability, and adaptability. Here are some potential future enhancements for a student management system Java project:

1. User Roles and Permissions: - Implement a role-based access control system to restrict access based on user roles (e.g., administrator, teacher, student).
- Define permissions for different roles to control who can view, edit, or delete specific information.

2. Attendance Tracking: - Enhance the system to include an attendance tracking module. Teachers can mark attendance, and students can view their attendance records.

3. Grading System: - Integrate a grading system to allow teachers to input and calculate grades for assignments, exams, and overall course performance.
- Provide students with the ability to view their grades and performance over time.

4. Communication Module: - Implement a communication module, such as a messaging system or discussion forum, to facilitate communication between students, teachers, and administrators.

5. Class Scheduling: - Include a feature for class scheduling, allowing administrators and teachers to manage class timetables, room assignments, and other scheduling aspects.

6. Automated Notifications: - Integrate a notification system to send automated emails or messages for important events, such as upcoming exams, assignment due dates, or announcements.

7. Data Analytics and Reporting: - Develop a robust reporting system to generate various reports, such as student performance reports, attendance summaries, and demographic analyses.

- Implement data analytics to derive insights from the accumulated data.

8. Mobile Application Support: - Create a mobile application to provide on-the-go access for students, teachers, and administrators.
- Ensure that the application is responsive and user-friendly on various devices.

9. Integration with Learning Management Systems (LMS): - Enable integration with popular learning management systems to streamline the transfer of course materials, assignments, and grades.

10. Multi-language Support: - Implement multi-language support to cater to users from diverse linguistic backgrounds.

11. Financial Module: - Integrate a financial module to manage fees, scholarships, and other financial aspects related to student enrollment.

12. Document Management: - Include a document management system to upload, share, and organize educational resources, documents, and other relevant files.

13. Integration with Student Information Systems (SIS): - Ensure compatibility and integration with broader student information systems used by educational institutions.

14. Feedback and Survey Module: - Implement a module for collecting feedback from students about courses, teachers, and the overall learning experience.
- Conduct surveys to gather valuable insights for continuous improvement.

15. Security Enhancements: - Regularly update security protocols to protect sensitive student information.
- Implement secure authentication mechanisms and data encryption.

16. Social Media Integration: - Allow users to share achievements, updates, and other information on social media platforms.

When implementing these enhancements, it's essential to gather feedback from users, stay updated with educational trends, and ensure that the system complies with privacy and data protection regulations. Additionally, agile development practices can be employed to incrementally introduce and test new features.

Individual contribution:

Individual contributions to a project can vary depending on the team structure, project scope, and the specific roles and responsibilities assigned to each team member. Below is a generic example of how individual contributions could be summarized for a student management system Java project. Please adapt this example based on your actual involvement and responsibilities in the project:

Prottasha Islam Nahid:

1.SIGN UP
2.ADD FEES
3.PRINT MONEY RECEIPT
4.EDIT RECORD

Mahmuda Islam:

1.LOG IN
2.VIEW RECORD
3.SEARCH RECORD
4.STUDENT ADMISSION

Key Responsibilities:

1. Database Design and Integration:

- Led the design of the database schema, ensuring it aligned with the requirements of the student management system.
- Implemented database interactions using JDBC to enable seamless storage and retrieval of student information.

2. Object-Oriented Design (OOD):

- Played a pivotal role in the object-oriented design of the system, contributing to the creation of modular and extensible classes.
- Applied inheritance and encapsulation principles to enhance code readability and maintainability.

3. User Interface Development:

- Designed and implemented several key components of the user interface using JavaFX, ensuring a responsive and user-friendly experience.
- Collaborated with the UI/UX team to integrate design elements into the Java application.

In conclusion, our individual contributions are same to the Student Management System Java project were centered around database design, object-oriented programming, user interface development.The project provided valuable insights into real-world Java development challenges and offered opportunities for continuous learning and growth.

Learning Things:

It seems like you're interested in learning how to implement a student management system Java project. Developing a project like this can be a great way to enhance your programming skills and gain hands-on experience with Java. Below is a step-by-step guide to help you get started:

1. Define Requirements:

- Identify the key features and functionalities your student management system should have. This could include student registration, course management, attendance tracking, and grading.

2. Design Database Schema:

- Design the database schema to store information such as student details, courses, attendance records, and grades. Decide on the relationships between different entities.

3. Choose a Development Environment:

- Set up your development environment with a Java IDE (Integrated Development Environment) like Eclipse, IntelliJ IDEA, or NetBeans.

4. Create the Project Structure:

- Organize your project into packages to manage different components such as models, views, controllers, and utilities.

5. Database Connectivity:

- Use JDBC (Java Database Connectivity) to connect your Java application to the database. Implement CRUD (Create, Read, Update, Delete) operations for the relevant entities.

6. User Interface (UI):

- Design the user interface using Java Swing or JavaFX. Create forms for student registration, course management, and other necessary functionalities.

7. User Authentication:

- Implement a simple authentication system to secure access to the application. You may use username/password-based authentication.

8. Implement Core Functionalities:

- Write code to handle student registration, course enrollment, attendance tracking, and grading. Ensure that the business logic is well-implemented.

9. Testing:

- Perform unit testing for individual components and integration testing to ensure that different parts of the system work together seamlessly.

10. Error Handling:

- Implement robust error-handling mechanisms to gracefully handle unexpected situations and provide meaningful error messages to users.

11. Documentation:

- Document your code, including comments and user documentation. This will make it easier for others (or yourself) to understand and maintain the code.

Conclusion:

In conclusion,the development of the Student Management System in Java has been an enriching journey that has allowed us to apply and expand our knowledge in various domains of software development. The primary goal of this project was to create a comprehensive system that efficiently manages student-related information and facilitates the tasks of administrators, teachers, and students alike. The Student Management System in Java has not only met the initial project objectives but has also provided a foundation for future enhancements and improvements. The development process has reinforced our understanding of software engineering principles, from design and implementation to testing and documentation. This project stands as a testament to our commitment to delivering efficient and user-friendly solutions in the field of educational technology.