Software Requirements Specification

for

Online Student Fees Payment System

Prepared by group - A

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1) Introduction:

1.1 Purpose:

The aim of this Online Student Fees System project is to automate the fee collection process of students and management of online fee payment for the university. It has a very user-friendly interface which enables the user to easily make fee payments online. The purpose of this document is to present a detailed description of the Online Fees Payment System for students. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the students and the authorities of the university and will be liable for the approval or disapproval of the project by the authority of the university.

1.2. Scope:

Our online payment system is designed to help the students to pay fees regarding admission, form fill-up and other activities.We know that the traditional method of fee payment is quite troublesome. Every student will prefer the online banking system instead of the traditional banking system as it contains many useful

features and fastest methods for the transactions. This system will save time and also the paper works.

1.3. Definitions and Abbreviations:

Following are the definitions for the jargoned words.

TERMS	DEFINITION
SQL Server	Structure query language for the database purposes.Used to define procedures to store and retrieve data.
User	A person who needs the system to do his task efficiently and effectively. Students.
Database	Collection of all the information monitored by this system.
SRS	A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document.

1.4. References:

This web application has been prepared on the basis of discussion with Team members, faculty members and also taken information from following books & website.

1.4.1. Websites:

1.4.1.1. www.google.com

1.4.1.2. www.wikipedia.org

1.4.2. Books:

1.4.2.1. Software Engineering : A practitioner’s approach Ed. By Pressman, Roger.

2. Overall Description

2.1 Product Perspective:

This product is designed for students who do not want to visit a bank because they do not have time or are not interested in dealing with a lot of paperwork. It will also relieve the strain on local banks during exam season.

2.2 Product Features

- Students (General User)
- Department (Admin)
- Hall Administrator (Admin)
- University Administrator (Pro Admin)
- Developer & Maintenance Engineer (Super Admin)

Features for students:

1. Students can log in to our system with their student ID and password.

2. Students can see all the fees regarding admission fees, exam fees, hostel fees, and other fees

3. Students will see a detailed breakdown of fees like exam fees with deadlines.

4. After filling the form students will get a choice of payment methods such as mobile banking (Bkash, Rocket, etc) as well as e-banking.

5. After completing the payment student will get confirmation and it will also show paid in the app.

Features for Department:

1. Department can log in with an id and password.

2. Department will insert the fees for exams and late fees also.

3. Department will give permission to the student to take exams as well as year admission based on their result and attendance for both regular and improvements.

4. Department will see a dashboard where it will show how many students paid their fees based on specific semester and year.

5. Department can also see the details of paid students and due students by entering a semester or year.

Features for Hall Administrator:

1. Hall administrator can see two categories of students
a. Resident
b. Non-Resident
They will give a hall room fee every 6 months.

2. For resident students they will provide an entry fee for once. After that, they will give a hall room fee every 6 months.

3. Residents but dormitory students have to pay different fees with different systems.

4. Non-resident students will pay a yearly fee.

5. Hall officials will get a dashboard where every student's information will be shown.

Features for University Administrator:

1. The University Administrator can log in with an id and password

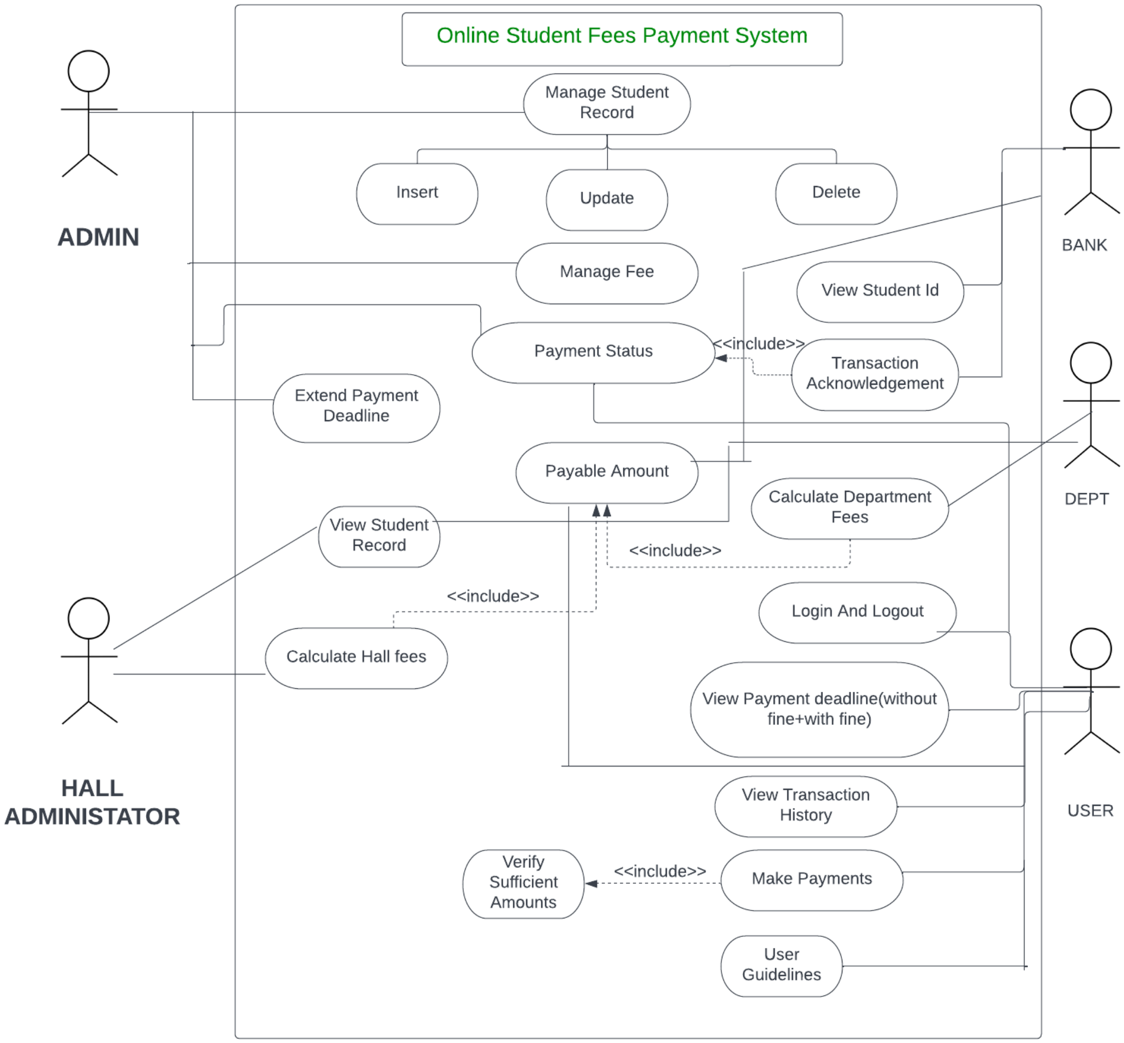
2. The University Administrator will see the payment history of all the students.
3. They can see every detail of a student and payment history regarding due or fine.

4. According to faculty, they will provide notice for exam fees, year admission fees, etc.
5. There will be a section for other fees like:
i) withdrawing certification
ii) taking a new student id card
iii) name or anything correction information iv) Convocation fees

Features for Developer & Maintenance Engineer:

1. Developer & Maintenance Engineer can log in with Id and password
2. Developer & Maintenance Engineer maintain all users & admins.
3. Developer & Maintenance Engineer provide IT supports such as password recovery etc.

2.3 User classes and Characteristics(UML)



2.4 Operating Environment

Client Operating Systems:

- UNIX (any flavor)
- MAC
- Windows
- Android

Java and JavaScript compatible browser:

- Netscape
- IE
- Opera
- Chrome

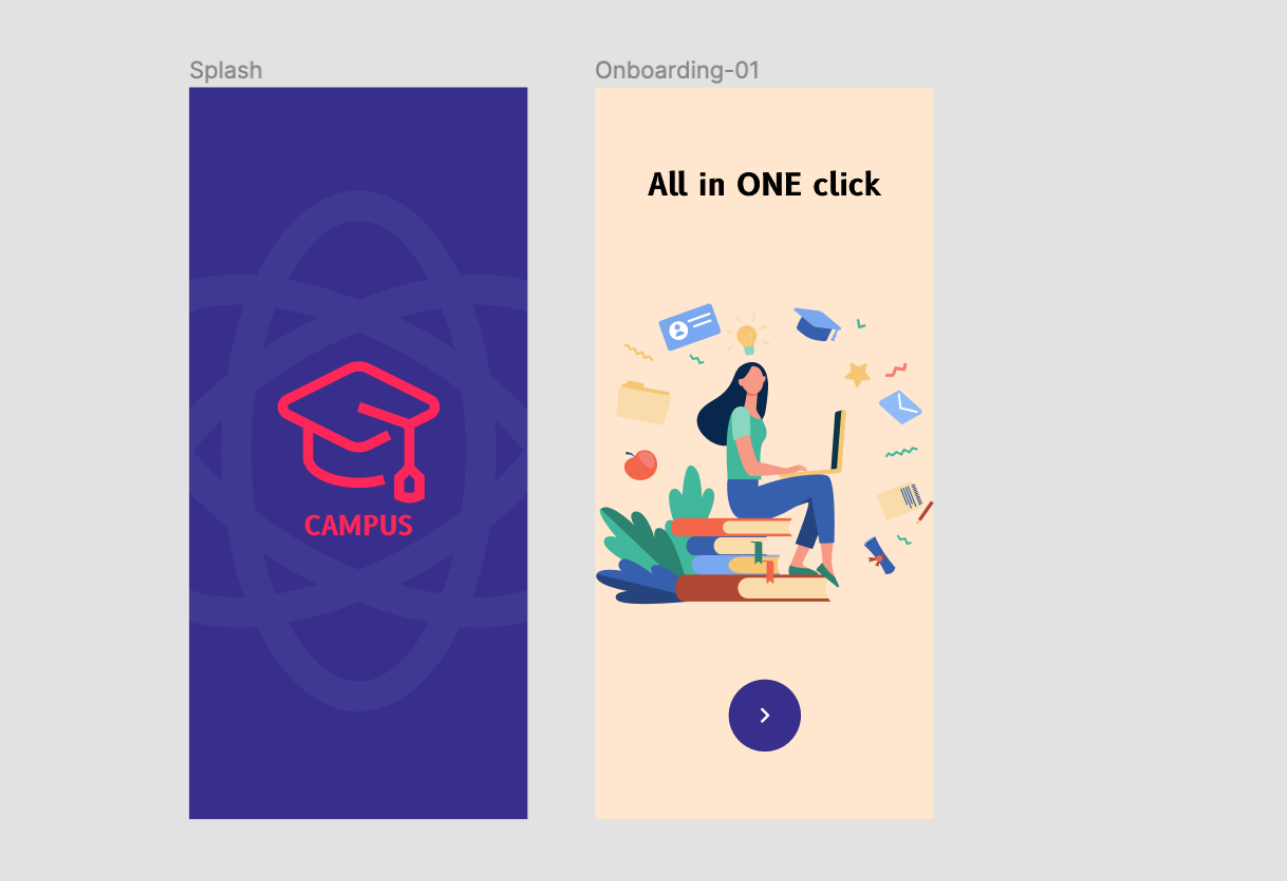
Network software and protocols in order for systems to communicate:

- TCP/IP
- HTTP
- HTTPS
- FTP

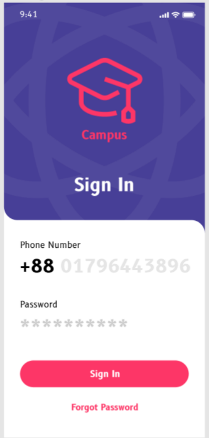
Mainframe system :

- IBM Gateway
- DB2 database

2.5 Design and Implementation Constraints


Splash
Onboarding-01
CAMPUS
All in ONE click
›

01-Sign-In



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Campus

Sign In

Phone Number

+88 01796443896

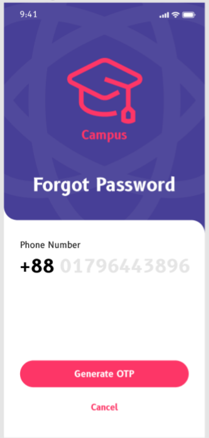
Password

****

Sign In

Forgot Password

02-Forgot-Password



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Campus

Forgot Password

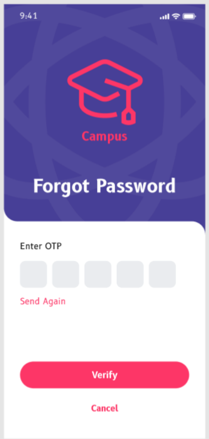
Phone Number

+88 01796443896

Generate OTP

Cancel

03-Enter-OTP



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Campus

Forgot Password

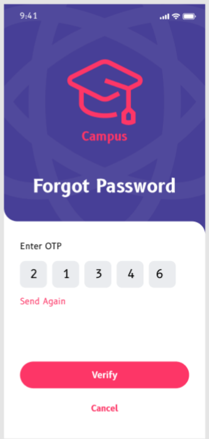
Enter OTP

Send Again

Verify

Cancel

03-Enter-OTP-Autofilled



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Campus

Forgot Password

Enter OTP

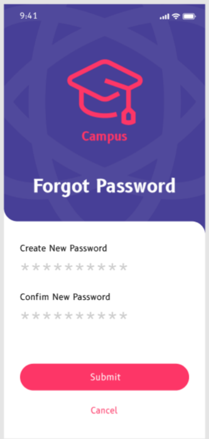
2 1 3 4 6

Send Again

Verify

Cancel

04-New-Password



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Campus

Forgot Password

Create New Password

****

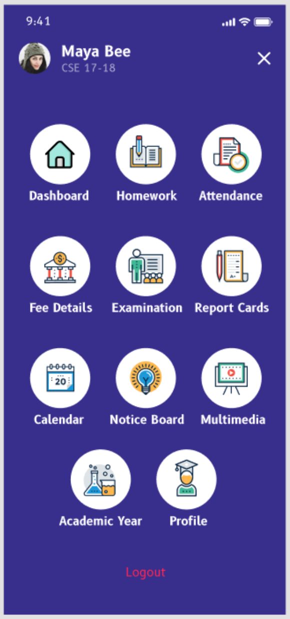
Confim New Password

****

Submit

Cancel

06-Menu



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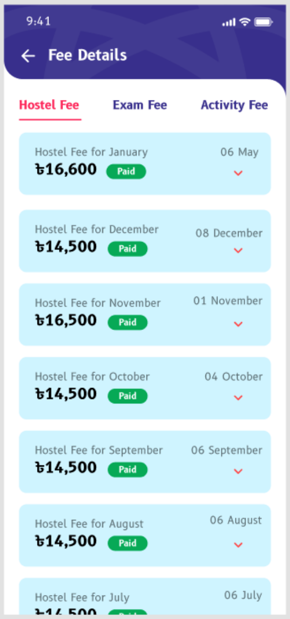
Maya Bee
CSE 17-18

09-Fee



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Fee Details

Hostel Fee for January 06 May
৳16,600 Paid

Hostel Fee for December 08 December
৳14,500 Paid

Hostel Fee for November 01 November
৳16,500 Paid

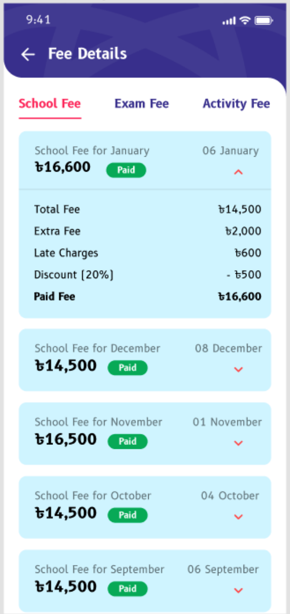
Hostel Fee for October 04 October
৳14,500 Paid

Hostel Fee for September 06 September
৳14,500 Paid

Hostel Fee for August 06 August
৳14,500 Paid

Hostel Fee for July 06 July
৳14,500

09-Fee-Expand



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Fee Details

School Fee for January 06 January
৳16,600 Paid

Total Fee	৳14,500
Extra Fee	৳2,000
Late Charges	৳600
Discount (20%)	- ৳500
Paid Fee	**৳16,600**

School Fee for December 08 December
৳14,500 Paid

School Fee for November 01 November
৳16,500 Paid

School Fee for October 04 October
৳14,500 Paid

School Fee for September 06 September
৳14,500 Paid

2.6 Assumptions and Dependencies

Following are some assumptions and dependencies which are related to the Online Student Fees Payment System project:

- This system is a standalone system. So it will not be affected by the type of system where it is deployed.
- This is an internet and computer based system. The staff of the traditional system are not familiar with using computer and internet technologies in this manner, so training of the staff will be necessary.
- The end-user is familiar with web-based applications and technologies and will be able to use this system without much problem.
- Existing banks will adopt this system because it is not as expensive as other solutions.
- This system will not have any other third party software or hardware dependency. It will be web-based, so that it can be used regardless of the staff and end-users device, operating systems etc.
- Staff and users of this system will have devices with internet communicability.
- This project does contain some valuable features that are not present in existing online banking services provided by some banks. So this project will eventually replace the old systems.
- After this system is adapted, end-users will not need to deal with additional formalities as they had to with the traditional systems.

3. System Features

3.1 More Secured :

Online student fees payment software is more secure as opposed to the conventional style of paying fees. Students do not have to queue up in order to pay the fees whenever it is needed.They can do so from the comforts of their homes.

3.2 User-friendly :

The applications are easy to use and easy to implement. They offer a user-friendly interface that assists a user to smoothly navigate through the options provided in the software.

3.3 Account Management :

Create student profiles with demographic information, contact details and parent information. Track and post fees for admission, hostel, library, and other activities in student accounts.

3.4. Quick Payments :

Make fee remittances faster from the website and mobile devices using secure payment gateways to provide students hassle-free processing and automatic generation of fee receipts.

3.5 Accessibility :

Since the online student fees payment system is an online tool, it can be accessed anytime and anywhere. Administrators, students , the higher management and the accounting department can all access it remotely just by logging into the system with their respective accounts.

3.6 Notifications :

This application can provide a real-time notification in the form of SMS, email, push notifications etc, which keep the students informed about fee dues and financial transactions.

4. Non-Functional Requirements

4.1. Usability

The students and the administrators who maintain the system. The student members are assumed to have knowledge of computers, smartphones, and internet browsing. The hall and department administrators must have the knowledge of internal functionalities of the system and be able to handle small problems occurring in the system such as server down, power failure and other disasters to maintain the system. The proper user interface, user's manual, online help and the guide to use and maintain the system must be sufficient to educate the users on how to use the system without any issue.

4.2. Reliability

The system must be maintained with critical safety. The emergency situation shall not occur without reason. The reliability of the system has to be very well handled. The system has to be very reliable due to the importance of data and the damages incorrect or incomplete data can do.

4.3. Availability

When in normal operating conditions, a request by a user for a servicer shall be handled within 1 second. Immediate feedback of the system activities shall be communicated to the user by link.

At peak system load, individual users at either the server in the security office, at the links or inside the banking system shall not experience any delay in the service response to their commands longer than 1 second. : The system is available 100% for the user and is used 24 hrs. A day and 365 days a year. The system shall be operational 24 hours a day and 7 days a week.

4.4. Security

There shall be no security mechanisms in place to keep unwanted users out of the system. However, all users of the system shall not be able to perform actions or request actions from the banking system, which will cause harm to any person or damage to the system or its environment.

4.5. Maintainability

There shall be design documents describing the internal works of the software. There shall be access to the control panel and servers for the purpose of upgrading the software or flashing any firmware. It shall be maintained carefully.

4.6. Portability

There are no portability requirements. Requirement Organization: All requirements shall be organized according to object. First, general requirements for all service types shall be described. Following are sections for each service type and their special requirements. Last are requirements related to other objects like the user's view pages and any other.

4.7. Standard Compliance

Not specified.

4.8. Mean Time between Failures(MTBF)

The system will be developed in such a way that it may fail once in a year.

4.9. Mean Time to Repair(MTTR)

Even if the system fails, the system will be recovered back up within an hour or less.

4.10. Accuracy

The accuracy of the system is limited by the accuracy of the speed at which the employees and users use the system.

4.11. Maximum Bugs or Defect Rate

Not specified.

4.12. Access Reliability

The system shall provide 100% access reliability

5 Detailed Use Cases

Use cases related to Students-

- Login
- See all fees
- Make payment

- Get confirmation and payment receipt

Use cases related to Departments-

- Login
- Insert exam notice and date
- Insert all fees
- Check paid students

Use cases related to Hall Administrator-

- Login
- Insert notice
- Insert hall fees
- Check paid students

Use cases related to University Administrator-

- Login
- Insert year admission notice
- Insert fees
- Check paid students

Use cases related to Maintenance Engineer-

- Login
- Maintain users
- Maintain admins
- IT supports