



North South University
Department
of
Electrical and Computer Engineering

Project: Bangladesh National Portal

Course Code: CSE311

Section : 12

Date of Submission: 02-12-2024

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Bangladesh National Portal System

Project Scope

Overview

The **Bangladesh National Portal Management System** is a comprehensive web-based application designed to facilitate seamless interactions between citizens and administrative bodies. The portal integrates multiple services across different sectors, enabling users to apply for services, provide feedback, and access helplines. Administrators can manage services, track applicants, and analyze system usage, ensuring efficient and transparent operations.

Functional Scope

1. User Functionality:

- **Registration and Login:**
 - Users can register using their email, phone number, and password.

- Login functionality verifies user credentials and allows access to the portal.
- **Service Application:**
 - Users can view service sectors (education, health, agriculture, finance, transport) and apply for specific services.
 - Form submission for service applications includes details like name, phone, address, and educational background.
- **Feedback and Comments:**
 - Users can provide feedback while applying for a service.
 - Feedback is stored for administrative review and analysis.
- **Profile Management:**
 - Users can view their profile details, update information, and track application statuses.

2. Admin Functionality:

- **Service Management:**
 - Admins can add, update, or delete services and service sectors.
 - CRUD operations ensure dynamic management of services to meet evolving needs.

- **Applicant Management:**
 - Admins can view, update, and manage applicant information, including changing application statuses (e.g., pending, processed, under review).
- **Feedback Review:**
 - Admins can review and respond to user feedback for service improvement.

3. Helpline and Support:

- Helpline information is accessible to users for assistance with service-related queries.
-

Technical Scope

1. Database Design:

- The system uses a relational database with tables such as admin, user, service, service_sector, applicant, feedback, form, and login_log.
- **Key Features:**
 - Strong entities: admin, user, service_sector, service.
 - Weak entities: application (dependent on user and service).

- Relationships include one-to-one, one-to-many, and ternary relationships.
- Constraints like PRIMARY KEY, FOREIGN KEY, NOT NULL, and UNIQUE are implemented to maintain data integrity.
- Cascading rules ensure efficient deletion or updates.

2. Frontend Development:

- Technologies: HTML, CSS, JavaScript.
- Dynamic user interface for seamless navigation through service sectors, forms, and profile details.
- Responsive design ensures accessibility on multiple devices.

3. Backend Development:

- Language: PHP for server-side logic and database interaction.
- Features include secure user authentication, data validation, and CRUD operations.

4. Data Management:

- **Log Tracking:**
 - Every login attempt (user/admin) is logged in the login_log table with details like login_type and timestamp.

- **Application and Feedback Tracking:**

- User applications are stored in application, form, and user_service_form tables.
 - Feedback is stored for further analysis.
-

Operational Scope

- **User Experience:**

The portal is user-friendly, offering intuitive navigation and quick access to services and support.

- **Scalability:**

The system can accommodate additional service sectors or administrative roles as needed.

- **Security:**

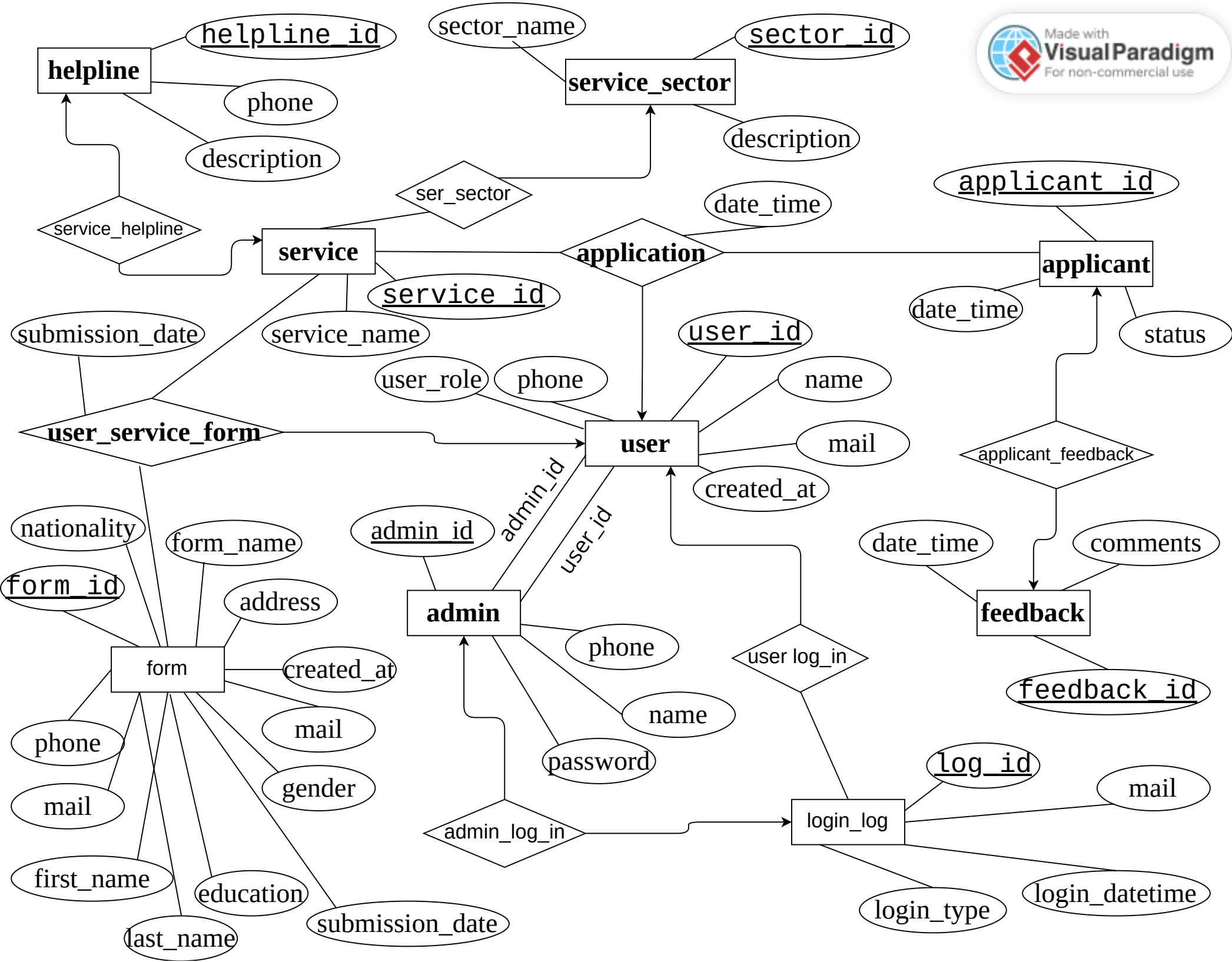
- Password encryption ensures user data protection.
- SQL constraints and validation checks prevent unauthorized data manipulation.

- **Analytics:**

Feedback and login logs provide insights into user behavior and service usage.

Conclusion

The **Bangladesh National Portal Management System** combines efficient database design, secure back-end functionality, and a user-centric front end. It offers a reliable platform for citizens and administrators to interact, fostering transparency, efficiency, and improved service delivery.



Relation Schema

- **admin**(admin_id (PK), name, mail, phone, password, created_at)
- **applicant**(applicant_id (PK), date_time, status)
- **application**(user_id (FK), applicant_id (FK), service_id (FK), date_time)
- **feedback**(feedback_id (PK), applicant_id (FK), comments, date_time)
- **form**(form_id (PK), form_name, service_id (FK), first_name, last_name, phone, education, address, nationality, gender, mail, submission_date)
- **helpline**(helpline_id (PK), phone, description, service_id (FK))
- **login_log**(log_id (PK), user_id (FK), admin_id (FK), mail, login_datetime, login_type)
- **service**(service_id (PK), service_name, sector_id (FK))
- **service_sector**(sector_id (PK), sector_name, description)
- **user**(user_id (PK), name, mail, phone, user_role, created_at)
- **user_service_form**(user_id (FK), service_id (FK), form_id (FK), submission_date)

SQL DDL for relational schema

-- Table: admin

```
CREATE TABLE admin (  
    admin_id INT AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(255) NOT NULL,  
    mail VARCHAR(255) NOT NULL UNIQUE,  
    phone VARCHAR(15),  
    password VARCHAR(255) NOT NULL,  
    created_at DATETIME DEFAULT CURRENT_TIMESTAMP  
);
```

-- Table: applicant

```
CREATE TABLE applicant (  
    applicant_id INT AUTO_INCREMENT PRIMARY KEY,  
    date_time DATETIME DEFAULT CURRENT_TIMESTAMP,  
    status ENUM('pending', 'processed', 'under review') NOT NULL  
);
```

-- Table: application

```
CREATE TABLE application (
```

```
user_id INT NOT NULL,  
applicant_id INT NOT NULL,  
service_id INT NOT NULL,  
date_time DATETIME DEFAULT CURRENT_TIMESTAMP,  
PRIMARY KEY (user_id, applicant_id, service_id),  
FOREIGN KEY (user_id) REFERENCES user(user_id) ON DELETE  
CASCADE,  
FOREIGN KEY (applicant_id) REFERENCES applicant(applicant_id) ON  
DELETE CASCADE,  
FOREIGN KEY (service_id) REFERENCES service(service_id) ON DELETE  
CASCADE  
);
```

-- Table: feedback

```
CREATE TABLE feedback (  
feedback_id INT AUTO_INCREMENT PRIMARY KEY,  
applicant_id INT NOT NULL,  
comments TEXT,  
date_time DATETIME DEFAULT CURRENT_TIMESTAMP,  
FOREIGN KEY (applicant_id) REFERENCES applicant(applicant_id) ON  
DELETE CASCADE  
);
```

-- Table: form

```
CREATE TABLE form (  
    form_id INT AUTO_INCREMENT PRIMARY KEY,  
    form_name VARCHAR(255) NOT NULL,  
    service_id INT,  
    first_name VARCHAR(255),  
    last_name VARCHAR(255),  
    phone VARCHAR(15),  
    education VARCHAR(255),  
    address VARCHAR(255),  
    nationality VARCHAR(255),  
    gender VARCHAR(50),  
    mail VARCHAR(255),  
    submission_date DATETIME,  
    FOREIGN KEY (service_id) REFERENCES service(service_id) ON DELETE  
    SET NULL  
);
```

-- Table: helpline

```
CREATE TABLE helpline (  
    helpline_id INT AUTO_INCREMENT PRIMARY KEY,  
    phone VARCHAR(15) NOT NULL,
```

```
description TEXT,  
service_id INT,  
FOREIGN KEY (service_id) REFERENCES service(service_id) ON DELETE  
SET NULL  
);
```

-- Table: login_log

```
CREATE TABLE login_log (  
    log_id INT AUTO_INCREMENT PRIMARY KEY,  
    user_id INT,  
    admin_id INT,  
    mail VARCHAR(255) NOT NULL,  
    login_datetime DATETIME DEFAULT CURRENT_TIMESTAMP,  
    login_type ENUM('user', 'admin') NOT NULL,  
    FOREIGN KEY (user_id) REFERENCES user(user_id) ON DELETE SET  
NULL,  
    FOREIGN KEY (admin_id) REFERENCES admin(admin_id) ON DELETE  
SET NULL  
);
```

-- Table: service

```
CREATE TABLE service (  
    service_id INT AUTO_INCREMENT PRIMARY KEY,
```

```
service_name VARCHAR(255) NOT NULL,  
sector_id INT,  
FOREIGN KEY (sector_id) REFERENCES service_sector(sector_id) ON  
DELETE SET NULL  
);
```

-- Table: service_sector

```
CREATE TABLE service_sector (  
sector_id INT AUTO_INCREMENT PRIMARY KEY,  
sector_name VARCHAR(255) NOT NULL,  
description TEXT  
);
```

-- Table: user

```
CREATE TABLE user (  
user_id INT AUTO_INCREMENT PRIMARY KEY,  
name VARCHAR(255) NOT NULL,  
mail VARCHAR(255) NOT NULL UNIQUE,  
phone VARCHAR(15),  
user_role ENUM('user', 'admin') DEFAULT 'user',  
created_at DATETIME DEFAULT CURRENT_TIMESTAMP  
);
```

-- Table: user_service_form

```
CREATE TABLE user_service_form (  
    user_id INT NOT NULL,  
    service_id INT NOT NULL,  
    form_id INT NOT NULL,  
    submission_date DATETIME DEFAULT CURRENT_TIMESTAMP,  
    PRIMARY KEY (user_id, service_id, form_id),  
    FOREIGN KEY (user_id) REFERENCES user(user_id) ON DELETE  
CASCADE,  
    FOREIGN KEY (service_id) REFERENCES service(service_id) ON DELETE  
CASCADE,  
    FOREIGN KEY (form_id) REFERENCES form(form_id) ON DELETE  
CASCADE  
);
```



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উত্তরাধিকার

Education

Health

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Bangladesh National Portal

Admin Login

Admin Email:

asif570068@gmail.com

Password:

....

Login as Admin

Back to User Login

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User Management


Show 10 entries

Search: R


User ID	Name	Email	Phone	Created At	Total Applications
3	Abdul Rahman	abdul.rahman@exam	1122334455	2024-11-20 17:52:55	1
4	Rima Khan	rima.khan@example.c	2233445566	2024-11-20 17:52:55	1
7	Rasel	rasel@gmail.com	01700000000	2024-11-21 19:53:56	3

Showing 1 to 3 of 3 entries (filtered from 7 total entries)

Previous 1 Next



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asif
asif570068@gmail.com

Date

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HomeServiceUserApplicantFeedback



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Service Management

Add New Service


Show 10 entries

Search:

Service ID	Service Name	Sector Name	Actions
2	Public Health Insurance	Health	Edit Delete
3	Bus Transport System	Transport	Edit Delete
4	Crop Subsidies for Farmers	Agriculture	Edit Delete
5	Banking Services	Finance	Edit Delete
9	Student Admission Service	Education	Edit Delete



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asif
asif570068@gmail.com

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Home

Profile

About

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Applicant Management


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Search:


Applicant ID	Name	Email	Phone	Review	Application Date	Application Status	Actions
2	Jane Smith	jane.smith@exa	0987654321	you have offering the best service.	2024-11-20 18:00:20	Processed	Edit
3	Abdul Rahman	abdul.rahman@	1122334455	you have offering the best service.	2024-11-20 18:00:20	Pending	Edit
4	Rima Khan	rima.khan@exa	2233445566	you have offering the best service.	2024-11-20 18:00:20	Pending	Edit

localhost/Bangladesh_National_Portal_Management_System/applicant.php of 3 entries (filtered from 12 total entries)

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About

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Feedback Management

Show 10 entries

Search:

Feedback ID	Applicant Name	Email	Comments
1	Shamsul Alam	shamsul.alam@example.com	very good but try to make it more optimize
2	Asif	asif570068@gmail.com	you have offering the best service.
3	Asif	asif570068@gmail.com	you have offering the best service.
4	Rasel	rasel@gmail.com	you have offering the best service.
5	Asif	asif570068@gmail.com	Best Service
6	Samin	samin@qamil.com	best service for agqrobussiness

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asif

asif570068@gmail.com

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Add

Add/Edit Service


Service Name

Sector Name


Health

Save

	Service Name	Sector Name	Actions
2	Public Health Insurance	Health	<div>EditDelete</div>
3	Bus Transport System	Transport	<div>EditDelete</div>
4	Crop Subsidies for Farmers	Agriculture	<div>EditDelete</div>
5	Banking Services	Finance	<div>EditDelete</div>
9	Student Admission Service	Education	<div>EditDelete</div>


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All



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12/2024 Monday, 23:16:43




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Profile Details





Admin Name: asif

Email: asif570068@gmail.com

Role: Administrator

Log Out

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asif

asif570068@gmail.com

Date

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HomeServiceUserApplicantFeedback



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Profile

About

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Add/Edit User

Name

Email

Phone

Feedback Comments

you have offering the best service.

Pending

Processed

Under Review

Processed

Save

	Applicant ID	Application Status	Actions
2		Processed	<div>Edit</div>
3		Pending	<div>Edit</div>
4		Pending	<div>Edit</div>
5		Pending	<div>Edit</div>

Sign Up

Username:

Asif Miah

Email:

asif.miah@northsouth.edu

Contact Number:

018000000000

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User Login

Email:

asif.miah@northsouth.edu

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Search services



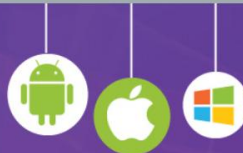
Asif Miah

asif.miah@northsouth.edu

Date

12/2024 Monday, 23:21:11

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Profile Details



Name: Asif Miah

Email: asif.miah@northsouth.edu

Phone: 018000000000

Total Applications: 2

Log Out

Helpline Information

Available Helplines



Contact Us

Description: Helpline for Education-related inquiries.

Phone: 16161



Contact Us

Description: General Health service helpline.

Phone: 16263



Contact Us

Description: Transport service inquiries for public buses.

Phone: 16363



About Us

Discover our mission, vision, and the services

About Us

Discover our mission, vision, and the services we proudly provide.

Our Vision

Our vision is to build a community-driven platform that empowers individuals by providing them with easy access to essential services and resources. We believe in fostering innovation, inclusivity, and growth.

Our Services

Education

Access to top-tier educational resources and services for every citizen.

Health

Comprehensive healthcare services for a healthier tomorrow.

Agriculture


Support and resources for farmers to thrive in the modern era.


Finance

Financial tools and guidance for economic empowerment.

Transport

Efficient transport solutions for better connectivity and mobility.

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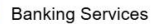
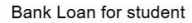


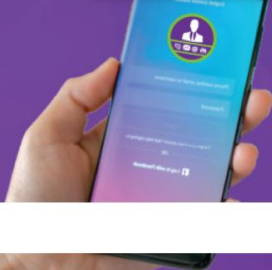
Asif Miah
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- Home
- Profile
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- Contact
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