

# DropEx-Logistics

Welcome to **DropEx**, an efficient and seamless logistics management system. DropEx provides both online and offline services to ensure hassle-free package management, tracking, and dispatching. With real-time updates, optimized routing, and a user-friendly interface, DropEx is designed for customers and service providers alike.

## Features

### Online and Offline Services

1. **Online Service:** Users can create accounts, request deliveries, and track their parcels.
2. **Offline Service:** Customers can visit our office and send their packages to other countries directly.

### User Management

- Customers can request parcel pickups from home.
- Staff can approve or reject delivery requests.
- Staff can manage offline orders and update order statuses at any point.

### Admin Panel

- Add and remove employees from the system.
- Monitor feedback provided by customers.
- Oversee all operational aspects of DropEx.

### Feedback System

- Customers can leave feedback about their experience with DropEx.
- Feedback is accessible to administrators for quality improvement.

### GitHub Link

- **GitHub Repository:** <https://github.com/neyamul-hasan14/DropEx-Logistics>

# Selling Points (Uniqueness & Motivation)

## 1. Uniqueness

- **Seamless Online-Offline Integration:** Ensures uninterrupted service even in areas with limited internet connectivity.
- **User-Centric Design:** Prioritizes ease of use with an intuitive interface for both users and administrators.
- **Scalability:** Designed to support future enhancements, such as AI-driven route optimization and third-party integrations.
- **Feedback-Oriented:** Incorporates user feedback to improve service quality over time.

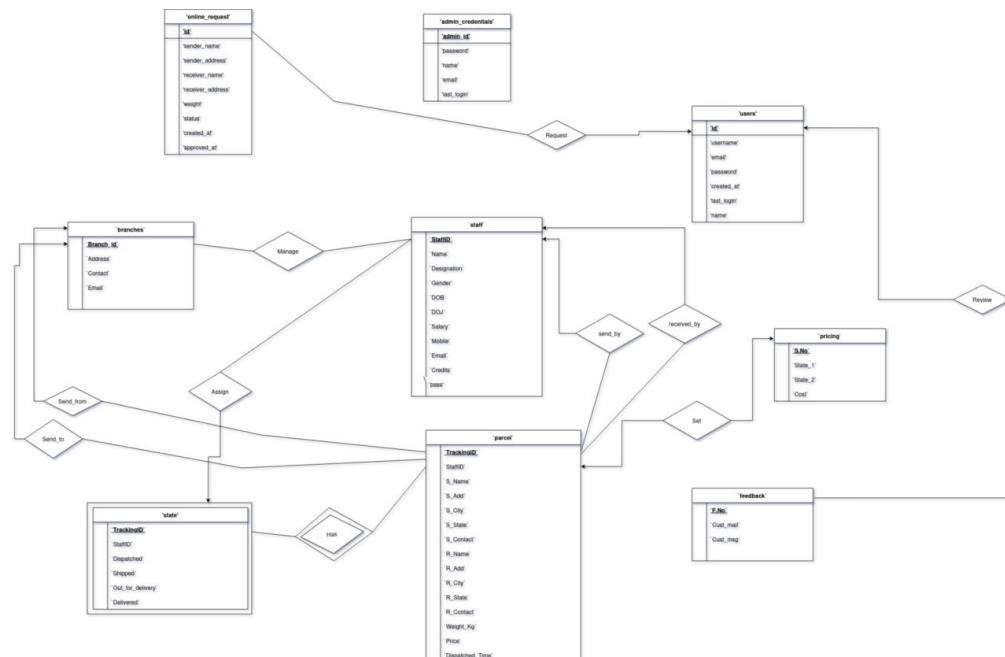
## 2. Motivation

The rapid growth of e-commerce and the increasing need for reliable logistics services inspired the creation of DropEx. The aim was to bridge the gap between users and accessible logistics solutions by combining technical expertise with a focus on real-world applications.

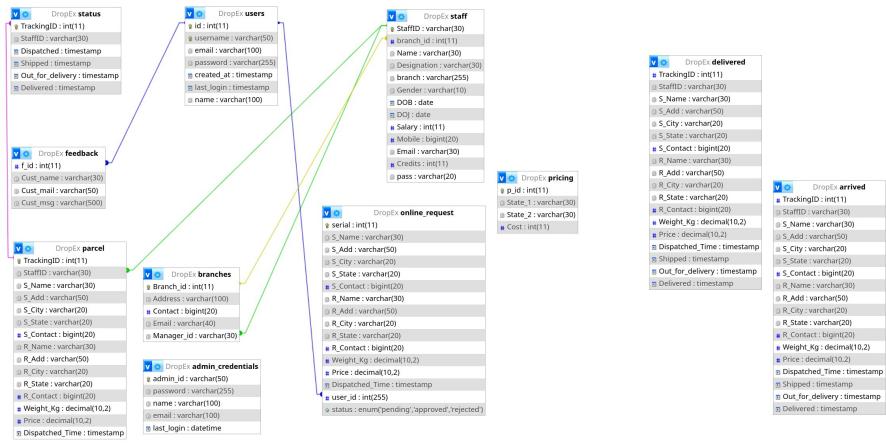
## Development Stack

- **Frontend:** HTML, CSS, JavaScript, Bootstrap
- **Backend:** PHP
- **Database:** MySQL
- **Version Control:** Git
- **Hosting:** Localhost (XAMPP)

## ERD (Entity-Relationship Diagram)



# Schema Diagram



## DDL to Create Database

```

CREATE TABLE `admin_credentials` (
    `admin_id` varchar(50) NOT NULL,
    `password` varchar(255) NOT NULL,
    `name` varchar(100) NOT NULL,
    `email` varchar(100) NOT NULL,
    `last_login` datetime DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;

CREATE TABLE `branches` (
    `Address` varchar(100) NOT NULL,
    `city` varchar(255) DEFAULT NULL,
    `state` varchar(255) DEFAULT NULL,
    `Contact` bigint(20) NOT NULL,
    `Email` varchar(40) NOT NULL,
    `Manager_id` varchar(30) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;

```

```
CREATE TABLE `feedback` (
  `f_id` int(11) NOT NULL,
  `Cust_name` varchar(30) NOT NULL,
  `Cust_mail` varchar(50) NOT NULL,
  `Cust_msg` varchar(500) NOT NULL,
  `id` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```

```
CREATE TABLE `online_request` (
  `serial` int(11) NOT NULL,
  `S_Name` varchar(30) NOT NULL,
  `S_Add` varchar(50) NOT NULL,
  `S_City` varchar(20) NOT NULL,
  `S_State` varchar(20) NOT NULL,
  `S_Contact` bigint(20) NOT NULL,
  `R_Name` varchar(30) NOT NULL,
  `R_Add` varchar(50) NOT NULL,
  `R_City` varchar(20) NOT NULL,
  `R_State` varchar(20) NOT NULL,
  `R_Contact` bigint(20) NOT NULL,
  `Weight_Kg` decimal(10,2) NOT NULL,
  `Price` decimal(10,2) NOT NULL,
  `Dispatched_Time` timestamp NOT NULL DEFAULT current_timestamp(),
  `user_id` int(255) NOT NULL,
  `status` enum('pending','approved','rejected') DEFAULT 'pending',
  `image` longblob DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```

```

CREATE TABLE `parcel` (
  `request_id` int(11) DEFAULT NULL,
  `TrackingID` int(11) NOT NULL,
  `StaffID` varchar(30) NOT NULL,
  `S_Name` varchar(30) NOT NULL,
  `S_Add` varchar(50) NOT NULL,
  `S_City` varchar(20) NOT NULL,
  `S_State` varchar(20) NOT NULL,
  `S_Contact` bigint(20) NOT NULL,
  `R_Name` varchar(30) NOT NULL,
  `R_Add` varchar(50) NOT NULL,
  `R_City` varchar(20) NOT NULL,
  `R_State` varchar(20) NOT NULL,
  `R_Contact` bigint(20) NOT NULL,
  `Weight_Kg` decimal(10,2) NOT NULL,
  `Price` decimal(10,2) NOT NULL,
  `Dispatched_Time` timestamp NOT NULL DEFAULT current_timestamp(),
  `image` longblob DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;

```

```

CREATE TABLE `pricing` (
  `p_id` int(11) NOT NULL,
  `State_1` varchar(30) NOT NULL,
  `State_2` varchar(30) NOT NULL,
  `Cost` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;

```

```
CREATE TABLE `staff` (
  `StaffID` varchar(30) NOT NULL,
  `Name` varchar(30) NOT NULL,
  `Designation` varchar(30) NOT NULL,
  `branch` varchar(255) DEFAULT NULL,
  `Gender` varchar(10) NOT NULL,
  `DOB` date NOT NULL,
  `DOJ` date NOT NULL,
  `Salary` int(11) NOT NULL,
  `Mobile` bigint(20) NOT NULL,
  `Email` varchar(30) NOT NULL,
  `Credits` int(11) NOT NULL DEFAULT 0,
  `pass` varchar(20) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```

```
CREATE TABLE `status` (
  `TrackingID` int(11) NOT NULL,
  `StaffID` varchar(30) NOT NULL,
  `Dispatched` timestamp NULL DEFAULT NULL,
  `Shipped` timestamp NULL DEFAULT NULL,
  `Out_for_delivery` timestamp NULL DEFAULT NULL,
  `Delivered` timestamp NULL DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1 COLLATE=latin1_swedish_ci;
```

```
CREATE TABLE `users` (
  `id` int(11) NOT NULL,
```

```

`username` varchar(50) NOT NULL,
`email` varchar(100) NOT NULL,
`password` varchar(255) NOT NULL,
`created_at` timestamp NOT NULL DEFAULT current_timestamp(),
`last_login` timestamp NULL DEFAULT NULL,
`name` varchar(100) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;

```

## ***Triggers***

```

DELIMITER $$

CREATE TRIGGER `placeParcel` AFTER INSERT ON `parcel` FOR EACH ROW
BEGIN

    UPDATE staff SET Credits=Credits+5 WHERE StaffID=NEW.StaffID;

    INSERT INTO status (TrackingID, StaffID, Dispatched)
    VALUES ( NEW.TrackingID, NEW.StaffID, NEW.Dispatched_Time);

END

$$

DELIMITER ;

```

## **DML Used in the Application**

### ***Insert Statements***

```

-- Inserting admin credentials

INSERT INTO `admin_credentials` (`admin_id`, `password`, `name`,
`email`, `last_login`)

VALUES ('999', '1234', 'Elon Mask', 'iamelon@gmail.com', '2025-01-27
17:32:48');

```

```

-- Inserting branch details

INSERT INTO `branches` (`Address`, `city`, `state`, `Contact`,
`Email`, `Manager_id`)

VALUES ('Paris, France', 'Paris', 'France', 331234567890,
'paris_branch@gmail.com', 'DE1124');

-- Inserting feedback

INSERT INTO `feedback` (`f_id`, `Cust_name`, `Cust_mail`, `Cust_msg`,
`id`)

VALUES (2, 'Tahimul Amin', 'tah12@gmail.com', 'Good Service', 3);

-- Inserting parcel details

INSERT INTO `parcel` (`request_id`, `TrackingID`, `StaffID`, `S_Name`,
`S_Add`, `S_City`, `S_State`, `S_Contact`, `R_Name`, `R_Add`,
`R_City`, `R_State`, `R_Contact`, `Weight_Kg`, `Price`,
`Dispatched_Time`, `image`)

VALUES (NULL, 1407, 'DE9913', 'Mehedi hasan', 'Australia , good people
town 1300', 'Sydney', 'Australia', 87655, 'Afrin sultana', 'Japan',
'Tokyo', 'Japan', 654844845, 48.00, 52800.00, '2025-01-14 19:52:00',
NULL);

-- Inserting pricing data

INSERT INTO `pricing` (`p_id`, `State_1`, `State_2`, `Cost`)

VALUES (1, 'Bangladesh', 'France', 1100);

-- Inserting staff details

INSERT INTO `staff` (`StaffID`, `Name`, `Designation`, `branch`,
`Gender`, `DOB`, `DOJ`, `Salary`, `Mobile`, `Email`, `Credits`,
`pass`)

```

```
VALUES ('DE1124', 'Md. AR Hossain', 'Manager', 'France', 'M', '1980-02-14', '2025-01-13', 55000, 1234567890, 'arhossain@gmail.com', 10, '1234');

-- Inserting user details

INSERT INTO `users` (`id`, `username`, `email`, `password`, `created_at`, `last_login`, `name`)

VALUES (1, 'tahmid', 'tah12@gmail.com',
'$2y$10$Jh86wYMLY2Syqa61ISyg5eWG5F89Q3xRf2pyhR3j1lTxTt9MB0VKa', '2025-01-15 16:22:17', '2025-01-26 18:44:04', 'Tahamid');
```

### ***Update Statements***

```
-- Updating parcel status

UPDATE `status`

SET `Shipped` = '2025-01-20 15:57:42', `Out_for_delivery` = '2025-01-20 15:57:57', `Delivered` = '2025-01-20 15:58:43'

WHERE `TrackingID` = 1407;
```

```
-- Updating staff credits
```

```
UPDATE staff SET Credits=Credits+5 WHERE StaffID='DE9913';
```

```
-- Updating user last login
```

```
UPDATE users SET last_login = NOW() WHERE id = 1;
```

### ***Delete Statements***

```
-- Deleting staff member
```

```
DELETE FROM staff WHERE StaffID = 'DE1124';
```

```
-- Deleting feedback
```

```
DELETE FROM feedback WHERE id = 5;
```

### ***Select Statements***

```
-- Fetching all branches
```

```
SELECT * FROM branches;

-- Fetching all feedback
SELECT * FROM feedback;

-- Fetching all parcels
SELECT * FROM parcel;

-- Fetching all pricing data
SELECT * FROM pricing;

-- Fetching all staff
SELECT * FROM staff;

-- Fetching all users
SELECT * FROM users;

-- Fetching specific parcel status
SELECT * FROM status WHERE TrackingID = 1407;
```

### *Views*

```
-- View for arrived parcels
CREATE VIEW `arrived` AS
SELECT `p`.`TrackingID`, `p`.`StaffID`, `p`.`S_Name`, `p`.`S_Add`,
`p`.`S_City`, `p`.`S_State`, `p`.`S_Contact`,
`p`.`R_Name`, `p`.`R_Add`, `p`.`R_City`, `p`.`R_State`,
`p`.`R_Contact`, `p`.`Weight_Kg`, `p`.`Price`,
`p`.`Dispatched_Time`, `s`.`Shipped`, `s`.`Out_for_delivery`,
`s`.`Delivered`
```

```

FROM `parcel` `p`
JOIN `status` `s` ON `p`.`TrackingID` = `s`.`TrackingID`
WHERE `s`.`Delivered` IS NULL;

-- View for delivered parcels

CREATE VIEW `delivered` AS

SELECT `p`.`TrackingID`, `p`.`StaffID`, `p`.`S_Name`, `p`.`S_Add`,
`p`.`S_City`, `p`.`S_State`, `p`.`S_Contact`,

`p`.`R_Name`, `p`.`R_Add`, `p`.`R_City`, `p`.`R_State`,
`p`.`R_Contact`, `p`.`Weight_Kg`, `p`.`Price`,

`p`.`Dispatched_Time`, `s`.`Shipped`, `s`.`Out_for_delivery`,
`s`.`Delivered`

FROM `parcel` `p`
JOIN `status` `s` ON `p`.`TrackingID` = `s`.`TrackingID`
WHERE `s`.`Delivered` IS NOT NULL;

```

## Challenges Faced and How They Were Overcome

**Challenge:** Managing real-time parcel tracking.

**Solution:** Implemented a status table that updates parcel status at each stage (Dispatched, Shipped, Out for Delivery, Delivered).

**Challenge:** Calculating delivery costs based on weight and destination.

**Solution:** Created a pricing table with predefined costs for different routes and weights.

**Challenge:** Ensuring data consistency across multiple tables.

**Solution:** Used foreign keys and constraints to maintain referential integrity.

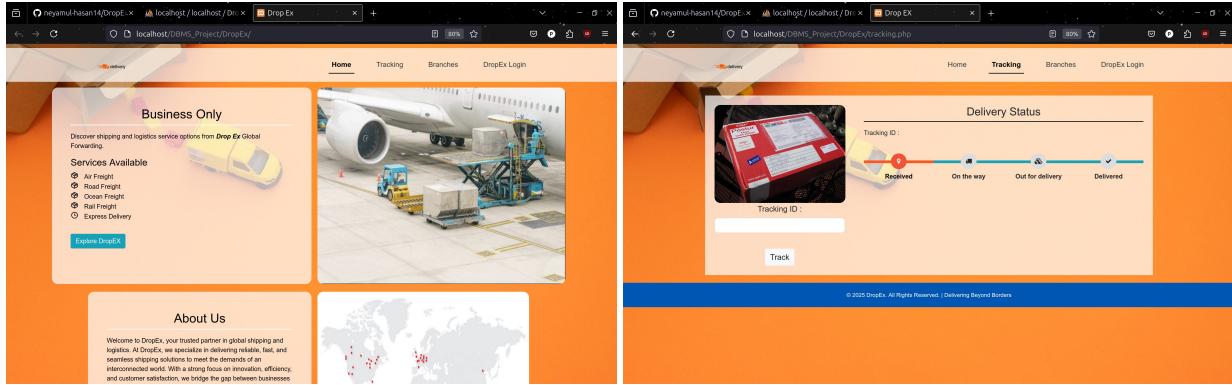
**Challenge:** Handling large volumes of data efficiently.

**Solution:** Optimized SQL queries and indexed frequently accessed columns.

# Sections with Visual Representation

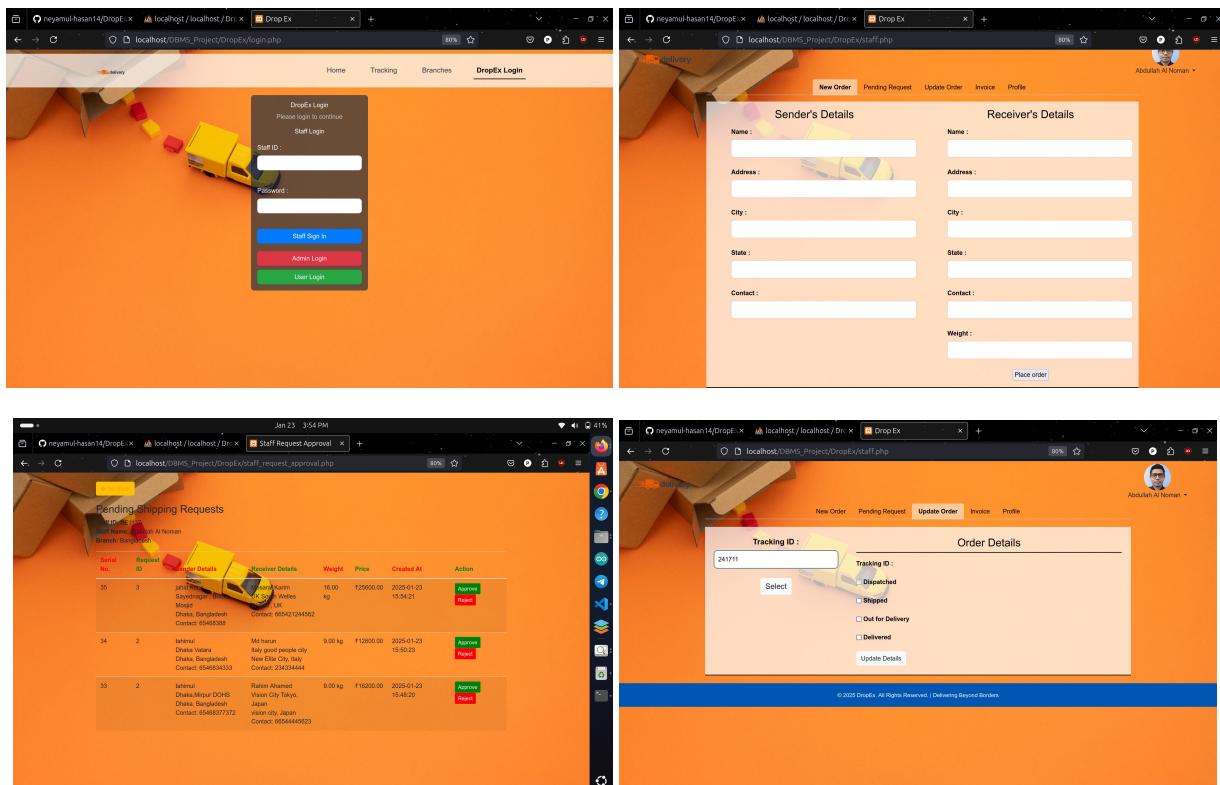
## 1. Home Section

Welcoming interface for both online and offline service information.



## 2. Staff Section

Staff functionalities including order approval, rejection, and updates.



### 3. User Section

User-friendly interfaces for customers to manage their deliveries.

## 4. Admin Section

*Comprehensive admin controls for managing employees and viewing feedback.*

The screenshots illustrate the DropEx Admin interface. The first window shows the login screen where an administrator can log in or switch to user login. The second window shows the staff management section where a new staff member is being added, with fields for personal information and contact details. The third window shows a list of all staff members, including their names, roles, and performance metrics like credits. Below these, a customer feedback section is visible.

## How to Use

### For Customers:

1. Create an account via the DropEx website.
2. Request a delivery by providing package details.
3. Track your parcel in real-time.
4. Leave feedback about your experience.

### For Staff:

1. Log in to your staff account.
2. View and manage customer requests (approve/reject).
3. Insert offline orders and update their statuses as needed.

### For Admins:

1. Log in to the admin panel.
2. Add or remove employees from the system.
3. Monitor customer feedback and service performance.

## **Conclusion**

DropEx Logistics demonstrates a comprehensive and efficient solution for modern logistics management. Developed by Kazi Neyamul Hasan(0112230359) and Md. Habibullah Misbah(011221373), the project showcases their ability to combine technical expertise and user-centric design to solve real-world challenges. Through features like real-time tracking, optimized operations, and seamless integration of online and offline services, DropEx serves as a testament to innovation and teamwork.

This platform not only fulfills academic requirements but also holds potential for real-world application, making logistics accessible and hassle-free for users. The inclusion of an admin panel, staff management, and a feedback system highlights the project's scalability and focus on continuous improvement.

By addressing diverse user needs and employing robust technologies like PHP and MySQL, DropEx has set a strong foundation for future enhancements and practical deployment. It reflects the dedication to bridging the gap between users and efficient logistics services. Thank you for exploring DropEx Logistics.