

# **COURIER MANAGEMENT COURIER MANAGEMENT SYSTEM**

**A PROJECT REPORT SUBMITTED IN PARTIAL  
FULFILMENT OF REQUIREMENT  
FOR THE AWARD OF THE DEGREE**

**MASTER OF COMPUTER APPLICATIONS (MCA)**

**OF**

**MAHATMA GANDHI UNIVERSITY, KOTTAYAM**

**BY**

**AMALU SHAJI  
Reg No: 22PMC110**



**MARIAN COLLEGE  
KUTTIKANAM**

**(AUTONOMOUS)**

**MAKING COMPLETE**

**Marian College Kuttikkanam Autonomous**

**Peermade, Kerala – 685 531**

**2023**

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**Under the guidance of**

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**ASSISTANT PROFESSOR**  
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**2023**

# **PG DEPARTMENT OF COMPUTER APPLICATIONS**

## **Marian College Kuttikkanam Autonomous**

**MAHATMA GANDHI UNIVERSITY, KOTTAYAM**

**KUTTIKKANAM – 685 531, KERALA.**

### **CERTIFICATE**

This is to certify that the project work entitled

#### **COURIER MANAGEMENT**

is a bonafide record of work done by

**AMALU SHAJI**

**Reg. No. 22PMC110**

In partial fulfillment of the requirements for the award of Degree of

#### **MASTER OF COMPUTER APPLICATIONS [MCA]**

During the academic year 2022-2023

**Mr. Satheesh Kumar S**

Assistant Professor

PG Department of Computer Applications

Marian College Kuttikkanam Autonomous

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Head of the Department

PG Department of Computer Applications

Marian College Kuttikkanam Autonomous

**Examiner**

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AMALU SHAJI

## **ABSTRACT**

This project deals with the 'Courier management System'. The system will be used for day to day management activities like branch details, staff details, add courier and status of courier. Actually It is not easy to do this process manually because it would become very tough. Hence it is recommended to automate the process by developing the relevant software as the world is moving from manual working to information and technology era where computerization becomes important in all walks of life.

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# **1. INTRODUCTION**



## **1.1 Problem Statements**

This project deals with the 'Courier Management System '. The system is used for daily activities such as add courier, view courier details, staff details, Branch details and set the courier status by staff. It is very difficult to do this process manually. Hence it is recommended to computerize the process by developing the relative software as the world is turning into information and technology; computerization becomes necessity in all walks of life.

## **1.2 Proposed System**

Courier management system project is mainly designed to manage the courier products that are coming from different places. In this project admin will add staff registration then the username and password is given to staff also admin will add the branches then admin have the option to generate reports also he should view the current status of a courier. In here staff will add the courier and set the status of it also he or she should update their profile.

### **1.3 Features of the Project**

- 1.** The courier management system is very simple, user-friendly, and can be easily integrated with the existing system.
- 2.** Highly Secure, Scalable & Reliable.
- 3.** Provides high level of security with different level of authentication.

## **2. FUNCTIONAL REQUIREMENTS**

## FUNCTIONAL REQUIREMENTS

Courier management system is divided into two modules:

1. Staff Module
2. Admin Module

Staff Module details:

### **Dashboard:**

In this section staffs can see all detail in brief like total courier, Total Courier Pickup, Total Shipped, Total In-transit, Total Courier arrived at destination, Total courier out for delivery and Total delivered courier.

### **Add Courier**

In this section staffs fill the courier detail of parcel.

### **Status**

In this section staffs can view the courier details and they have also right to change courier status according to current status.

### **Search Courier**

In this section staffs can search particular courier with the help of tracking number/reference number.

Admin Module details:

### **Dashboard**

In this section admin can see all detail in brief like total courier, Total Courier Pickup, Total Shipped, Total In-transit, Total Courier arrived at destination, Total courier out for delivery and Total delivered courier.

### **Branches**

In this section admin can manage branches(add,update and delete).

### **Staffs**

In this section admin can manage Staffs(add, update and delete).

### **Courier**

In this section admin can view courier status and check the courier detail which is filled by staff of different branches.

5. **Reports:** In this section admin can view courier details, courier counts within a date.

### **3. NON-FUNCTIONAL REQUIREMENTS**

## **NON-FUNCTIONAL REQUIREMENTS**

### ***a. Reliability***

The reliability of the overall project depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes, Also the system will be functioning inside a container. Thus, the overall stability of the system depends on the stability of container and its underlying operating system.

### ***b. Availability***

The system should be available at all times, meaning the user can access it using a web browser, only restricted by the down time of the server on which the system runs. A customer friendly system which is accessible for people around the world should work 24 hours. In case of a hardware failure or database corruption, a replacement page will be shown. Also, in case of a hardware failure or database corruption, backup of the database should be retrieved from the server and saved by the Organizer. Then the services will be restarted. It means 24 X 7 availability.

### ***c. Supportability***

The code and supporting modules of the system will be well-documented and easy to understand. Online documentation can help system requirements.

### ***d. Maintainability***

A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the project will be done. Also, the software design is being done with modularity in mind so that maintainability can be done efficiently.

## **4. FEATURES AND HIGHLIGHTS**

## 4.1 Features

### 1. Easy to add courier details

This is, obviously, the most basic and the most important of the core requirements. Adding courier detail is the heart of the courier management website; that it should have a user-friendly courier interface. This includes a clear idea of the details that are included.

### 2. See the reports

Next feature is that see the reports of the courier. This will details of the courier. that means admin should an option to see the report of the delivered products or shipped products within a date.

### 3. Updates

The staff and admin have the option to updates the details of the courier that will update by the staff. then admin should updates the branch details and also the staff details. Its also a big feature in this project.

### 4. Change the status of courier

Staff should an option to update the status of the courier. all the courier updates will managed by staff.

There is a big need of developing courier management system is to computerized the traditional way of manage the courier.

- The new system is totally computerized system.
- A new system provides features like time efficiency to show the courier details, staff profiles and the admin should see the reports of the courier status.
- It is the most software application for managing courier management.

Courier management system project is developed as a web application and it will work over web. The project has a wide scope, as it is not intended to a particular organization. This project is going to develop generic software, which can be applied by any management propose.



## **5. TECHNICAL ASPECTS**

## Architecture of Project

### ***1. Presentation Layer***

Templates: HTML templates are used to define the structure and layout of the user interface. Django's template engine allows you to dynamically populate the templates with data.

### ***2. Application Layer***

Controllers: In Django, controllers are implemented as views, which handle the request/response flow and control the overall behavior of the application.

### ***3. Business Logic Layer***

Models: Django's models define the data structure and business logic of the application. Models represent entities like users, bookings, flights, hotels, etc. They handle database operations, such as querying, inserting, updating, and deleting data. Models can also include methods to perform complex business logic.

### ***4. Jazmin***

Django Jazmin is a customizable and modern admin interface for Django applications. It provides an alternative user interface for the Django admin site with a more visually appealing design and additional features. Jazmin aims to enhance the user experience and improve the productivity of developers working with Django.

By installing and configuring django-jazzmin in your Django project, you can customize the admin interface by changing themes, layouts, icons, and other visual elements. It offers features such as responsive design, drag-and-drop sorting, inline editing, and support for various third-party Django packages. To use Django Jazzmin, you typically need to install it using a package manager like pip, add it to your Django project's settings, and configure it according to your preferences.

Here's a basic example of how to install Django Jazzmin using pip:

**pip install django-jazzmin**

Once installed, you would need to add 'jazzmin' to the INSTALLED\_APPS list in your Django project's settings.py file:

```
INSTALLED_APPS = [
```

```
...
```

```
'jazzmin',
```

```
...
```

```
]
```

Afterwards you can customize Django Jazzmin by modifying the settings in your Django project's settings.py file.

### ***5. Data Access Layer***

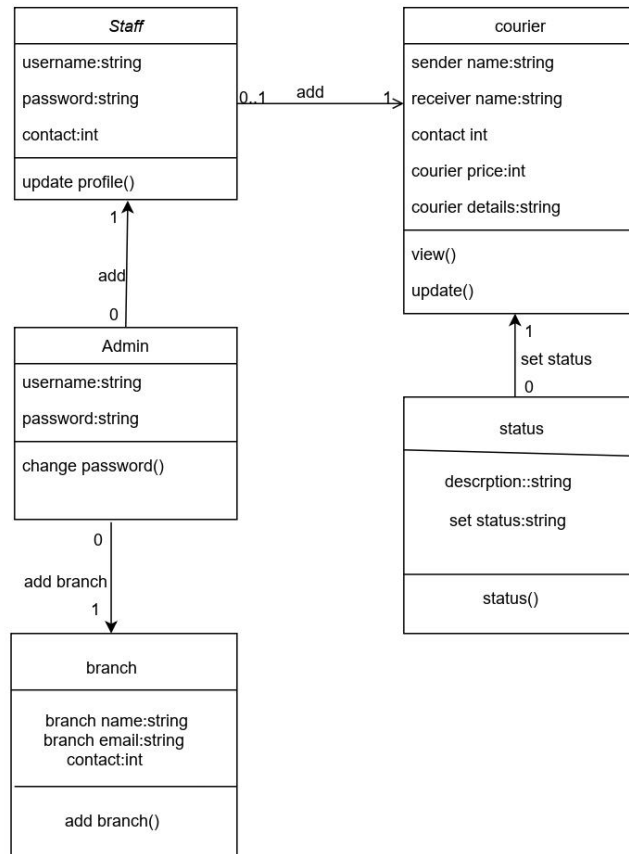
Database: Django integrates with various databases, allowing you to define and manage the application's data schema. You can use Django's Object-Relational Mapping(ORM) to interact with the database and perform CRUD operations.

### ***6. Database Models***

Django's models serve as both business logic entities and database models. They define the structure of the database tables and provide an abstraction layer for interacting with the database .

## Database

### Class Diagram



## **6 . CHALLENGES**

***1. User Authentication and Authorization***

Courier Management System software typically requires staff registration, login, and role-based access control. Implementing secure authentication and authorization mechanisms can be complex, especially when dealing with staff roles and permissions.

***2. Validation Mechanisms***

Implementing validation mechanisms helps ensure that user input is accurate and consistent. You need to validate user data at various stages, such as during registration, booking, or updating information. Validation can include for checking validation in email, phone number, password, pin number etc.

***3. Database Management***

Designing an efficient database schema and managing the database operations can be complex. You need to carefully plan the structure of your database, define relationships between entities handle data integrity, and optimize queries for performance.

## **7. FUTURE ENHANCEMENTS**

### 1. Social Media Integration

The social media sites are one of the most popular means of sharing experiences for users; Facebook, Twitter, Instagram are literally global marketing platforms. Taking advantage of this, you can integrate your website with these social networking sites, which lets the users post their opinions here.

### 2. User login

Should include a user and he or she can see the courier details of there.

### 3.Payment

The new user should an option to do there courier payment and the payment is reflected to staff page.

### 3. Multi-language Support

When you reach out to customers in a language that they are comfortable, greater are chances for client satisfaction. Also more the language the greater is the audience base. Ensure that the software is compatible with at least a few of the languages that are more prevalent in the area. Basic information like branch details ,courier details.



## **8.CONCLUSION**

The entire project has been developed and deployed as per the requirements stated by the user, it is found to be bug free as per the testing standards that is implemented. Any specification-untraced errors will be concentrated in the coming versions, which are planned to be developed in near future. The system at present does not take care of the money payment methods, as the consolidated constructs need SSL standards and are critically to be initiated in the first phase, the application of the credit card transactions is applied as a developmental phase in the coming days. The system needs more elaborative technically for its inception and evolution.

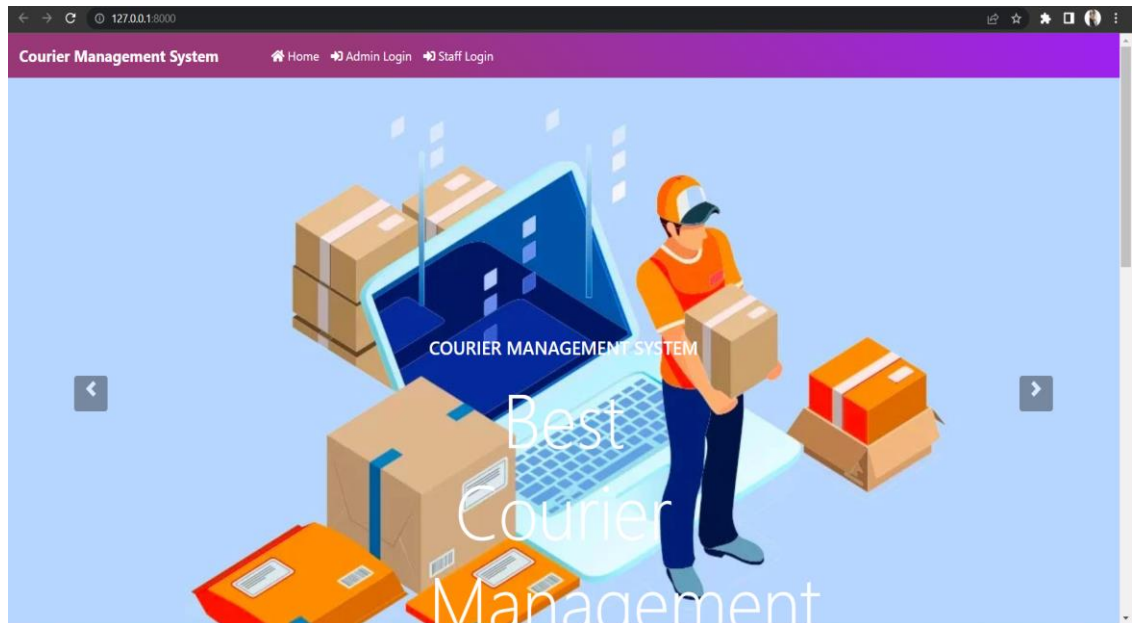
## **9. REFERENCES**

- <https://docs.djangoproject.com/en/4.1/intro/tutorial01/>
- <https://www.cargoerp.in/Courier-Booking-Management-Software.html>
- [getbootstrap.com](https://getbootstrap.com)
- <https://github.com/amalu1010/courier>

**ANNEXURE**

**A. SCREENSHOTS**

## 1.Home Page



## 2.Staff Registration

The screenshot shows the "Add New Staff" page within the "Admin Dashboard" of the Courier Management System. The browser's address bar shows "127.0.0.1:8000/addStaff". The left sidebar contains a menu with options: "Dashboard", "Branches", "CMS Staff", "Courier", "Reports", "Search", "Change Password", and "Logout". The main content area is titled "Add New Staff" and includes a breadcrumb trail: "Home / CMS Staff / Add Staff". The form contains the following fields: "Branch Name" (a dropdown menu with "Select Branch Name"), "Staff Name" (a text input field with "Enter Staff Name"), "Staff Mobile Number" (a text input field with "Enter Staff Mobile No."), "Staff Email" (a text input field with "amalu"), and "Staff Password" (a password input field with masked characters). A blue "Submit" button is located at the bottom of the form. The Windows taskbar at the bottom shows the system clock as 19:44 on 27/05/2023.

### 3. Staff login

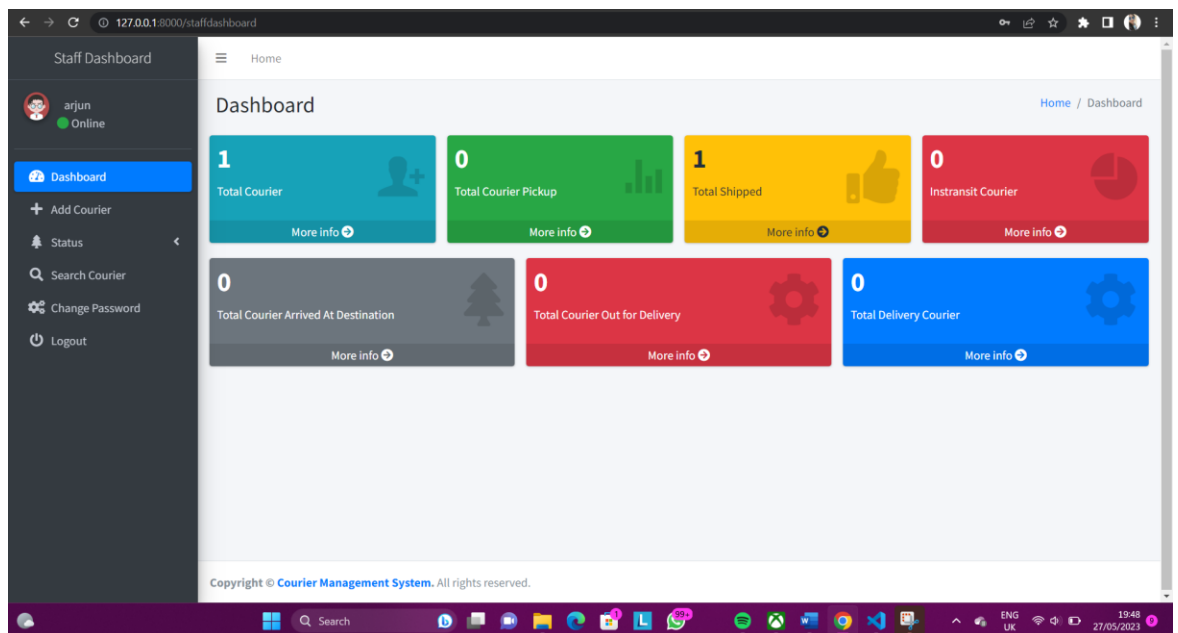
Staff Login

Email ID  
arjun@gmail.com

Password  
\*\*\*\*\*

Submit

### 4. Staff Dashboard



## 5.Add courier page

Staff Dashboard

arjun Online

Dashboard

+ Add Courier

Status

Search Courier

Change Password

Logout

Home

### Courier Detail

Home / Add Courier

#### Sender Detail

**Sender Branch**

CMS kuttikanam

**Sender Name**

Enter Sender Name

**Sender Contact Number**

Enter Sender Mobile Number

**Sender Address**

Enter Sender Address

**Sender City**

Enter Sender City

**Sender State**

Enter Sender State

## 5.Status page

Staff Dashboard

arjun Online

Dashboard

+ Add Courier

Status

Search Courier

Change Password

Logout

Home

### View Shipped Courier

Home / Status / Shipped

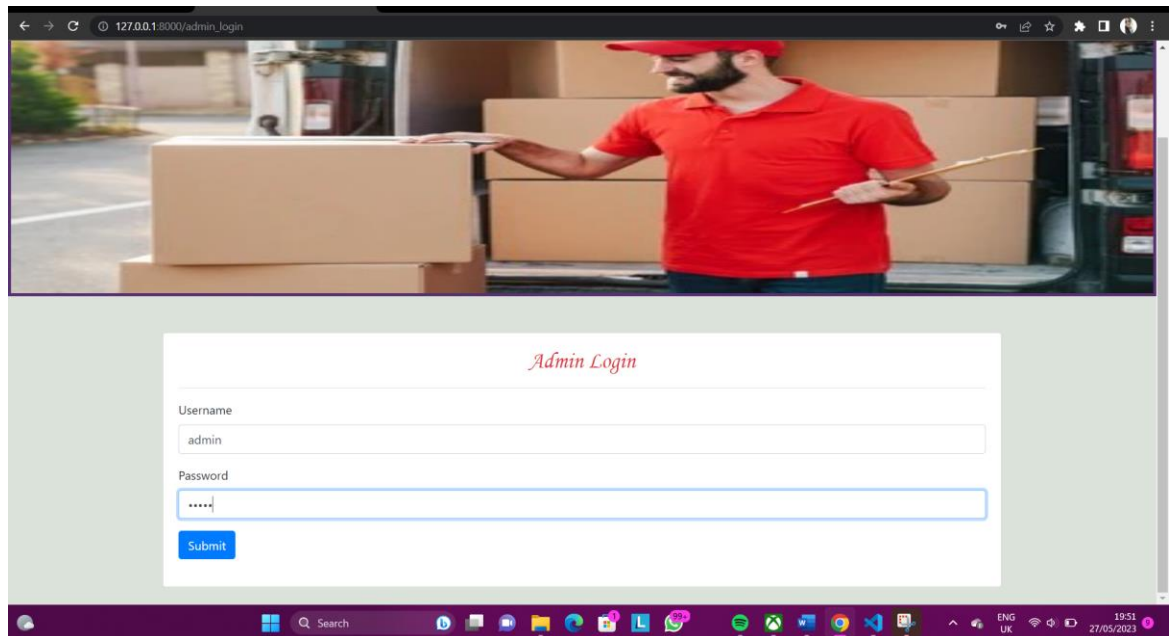
#### View Shipped Courier

#	Reference Number	Sender Name	Recipient Name	Courier Date	Action
# 1	26190349	arjun	arya	May 26, 2023, 11:23 a.m.	

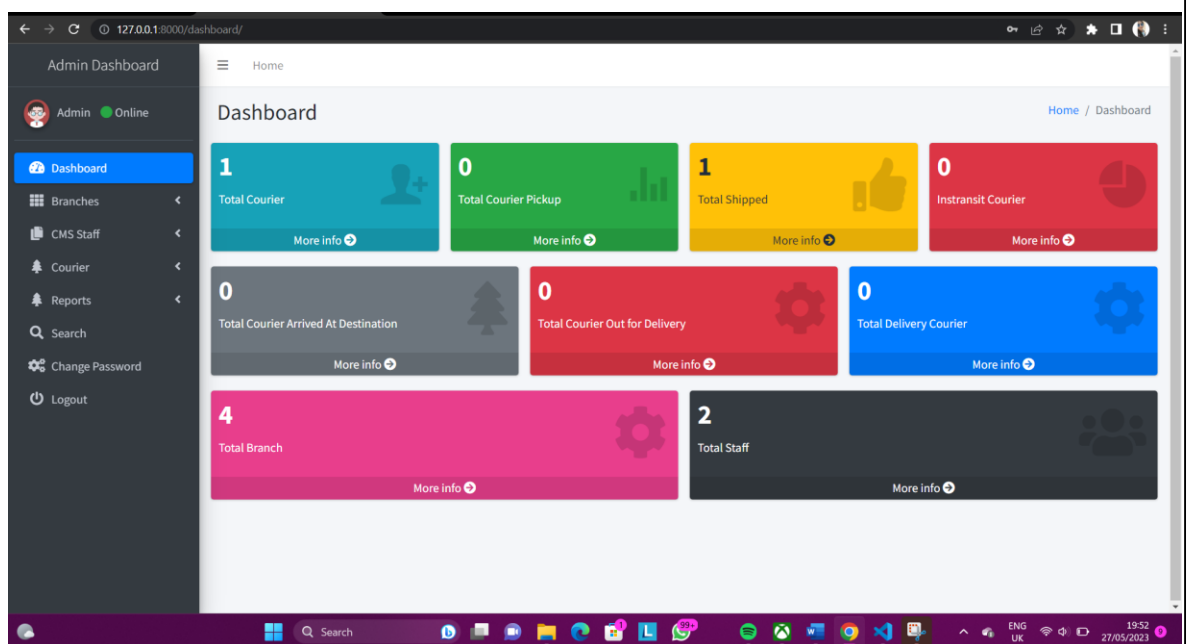
Copyright © Courier Management System. All rights reserved.



## 6.Admin Login



## 7.Admin Dashboard



## 8. Add Branch page

Admin Dashboard

Admin Online

Dashboard

Branches

CMS Staff

Courier

Reports

Search

Change Password

Logout

Branch Detail

Home / Branch / Add Branch

Add New Branch

Branch Name

Cms admali

Branch Contact Number

7527526385

Branch Email

cmsadimali@gmail.com

Branch Address

gedfgvz

Branch City

fgvfe

Branch State

dfvys

Branch Pincode

## 9. Courier Page

Admin Dashboard

Admin Online

Dashboard

Branches

CMS Staff

Courier

Reports

Search

Change Password

Logout

View Shipped Courier

Home / Courier / Shipped

#	Reference Number	Sender Name	Recipient Name	Courier Date	Action
# 1	26190349	arjun	arya	May 26, 2023, 11:23 a.m.	<a href="#">View</a>

## 10. Report page

The screenshot displays the 'Between Date Report Details' page. The left sidebar contains the 'Admin Dashboard' menu with options: Admin (Online), Dashboard, Branches, CMS Staff, Courier, Reports, Search, Change Password, and Logout. The main content area shows the report details for the period from 2023-05-24 to 2023-05-27. A table lists the report entries.

#	Reference Number	Sender Name	Recipient Name	Status	Courier Date	Action
# 1	26190349	arjun	arya	Shipped	May 26, 2023, 11:23 a.m.	

## 11. Search Page

The screenshot displays the 'Search' page. The left sidebar is identical to the previous page. The main content area has a 'Search' header and a section titled 'Search By Reference Number'. It includes a text input field containing '31418553' and a blue 'Search' button.