### PROJECT REPORT

On

### *“*Courier management system*”*

*Submitted in partial fulfilment of the requirements for the award of*

### Bachelor of Computer Application

In the department of

### Computer Science & Engineering

### A logo for a university Description automatically generated with low confidence

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**School of Engineering & Technology**

**ADAMAS University, Kolkata, West Bengal**

**Jan 2023 – June 2023**

**CERTIFICATE**

This is to certify that the project report entitled ***“*Courier management system*”****,* submitted to the School of Engineering & Technology (SOET), **ADAMAS UNIVERSITY, KOLKATA** in partial fulfilment for the completion of **Semester – 6th** of the degree of **Bachelor of Computer Application** in the department of **Computer Science & Engineering**, is a record of bonafide work carried out by **Abhishek Mondal**, **UG/02/BCAGA/2020/006**, **Barun Rajbhar, UG/02/BCABFSI/002, Neelash Saha, UG/02/BCA/2020/028, Swapnil Mitra, UG/02/BCABFSI/2020/004** **Asmat sk(UG/02/BCA/2020/028)** under our guidance.

All help received by us from various sources have been duly acknowledged.

No part of this report has been submitted elsewhere for award of any other degree.

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**HOD CSE**

**ACKNOWLEDGEMENT**

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without the mentioning of the people whose constant guidance and encouragement made it possible. We take pleasure in presenting before you, our project, which is the result of a studied blend of both research and knowledge.

We express our earnest gratitude to our **Roneeta Purkayastha (Assistant Professor)**, **Department of CSE**, for their constant support, encouragement and guidance. We are grateful for their cooperation and valuable suggestions.

Finally, we express our gratitude to all other members who are involved either directly or indirectly for the completion of this project.

**DECLARATION**

We, the undersigned, declare that the project entitled ‘Courier Management System’, being submitted in partial fulfillment for the award of Bachelor of Computer Application, affiliated to ADAMAS University, is the work carried out by us.

**Abhishek Mondal**  **Barun Rajbhar**

**(UG/02/BCAGA/2020/006)** (**UG/02BCABFSI/2020/002)**

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**Asmat sk**

(**UG/02/BCA/2020/034)**

**ABSTRACT**

Courier service became a frequent necessity of modern service. Parcel, Groceries, Food delivery – all are similar in nature. These services make sure point to point delivery with frequent update on parcel’s movement along the path it travels to reach the receiver’s address. This project is a development of similar parcel/courier delivery management system. Courier Management System involves scheduling the deliveries, manage the routes, manage the staff, manage branch and to update the customers about parcel status at different place during its travel to delivery point.

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**CHAPTER-1**

**INTRODUCTION**

### 1.1Background

Most of our buying today is online and those goods are being delivered by courier management company. Amazon, Flipkart became our daily need to get our parcels. That is where I decided to understand and implement a basic Courier Management System (CMS).

### Purpose of the Project

To understand and implement a courier management system to handle parcels in a multi-branch environment. Also this project is developed as a web based system so that globally can be accessed via internet.

### Problem Statement

Parcel movement, tracking and updating the status to all relevant users is the task which this software system is going to solve.

### Objective

This software system with it’s minimal functionality must be useful for a small courier management organization having multiple branches and staffs.

### Structure of Project

The outline of this project is shown as follows -

In Chapter 2, Literature Reviews of some of the previous related studies are provided.

In Chapter 3, Technology used

In Chapter 4, the methodology of the proposed system will be provided.

In Chapter 5, the hardware and software requirements will be provided.

In Chapter 6, the implementation and results will be provided.

In Chapter 7, the conclusion and recommendation will be provided.

**CHAPTER- 2**

**LITERATURE REVIEW**

**2.1 Literature review of some of the previous**

There are hundreds of company who are in business of parcel delivery i.e. Amazon, Flipkart, Bluedart, DHL, Indianpost.

To understand the functionality and working principle, I have investigated these companies websites and derived few common functionalities for this project.

Here are the few reference study summary of the research report I have studied:

**“Innovative solutions to increase last-mile delivery efficiency in B2C ecommerce: a literature review” - International Journal of Physical Distribution & Logistics Management**

Above report highlighted the problem of last mile delivery in B2C due to non-availability of the recipient. This causes the increase of cost due to re-deliver or return to sender. This problem can be addressed by adding pickup center facility which is cost effective. This feature is addressed in my solution developed.

**“How can parcel (package) delivery logistics company re-engineering their process to minimize the high send-again (returns)” - Jonkopin University**

Above paper also highlighted the problem of return parcel issue in details. This issue can be addressed by getting delivery slot selected by user. This maximizes the chance of delivery as receiver is part of the decision-making process. This feature is not implemented in my project.

## **CHAPTER- 3 TECHNOLOGY USE**

**3.1 INTRODUCTION**

This project is based on Web technologies using Server and Databases. Client side HTML, Javascript, CSS are used. Server side Apache, PHP, MySQL are used.

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**Figure 3.1: Technology used for Client and Server**

**3.2 PHP**

PHP (Hypertext Preprocessor) is an open-source server-side scripting language; Today PHP is adopted in all common OS; Windows, Linux and Mac. % wise, PHP is the highest adopted languare in server side coding. PHP connects well with MySQL, PgSQL.

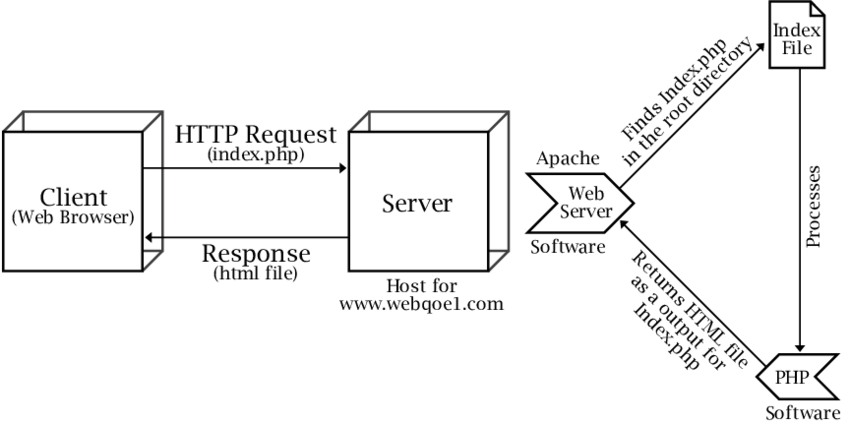
PHP is being upgraded continuously to make it object oriented and as per latest programming trends.

* The web server forwards the user’s request to the web application server which is Apache here. PHP processes data and make ready for service.
* Apache server delivers the requested data to the client machine and client browser will render the page.

**3.3 MySQL**

MySQL and PHP is one of the best combination for Web development in a minimalistic and faster pace. PHP, C++, C# gets connected to MySQL via ODBC, JDBC and that’s why it’s adopted in many projects.

XAMP panel has provided Admin control for Database viewing and editing which made development faster. Tables are made manually and data added by workflow.



**Figure 3.2: Client-Server interaction**

## **CHAPTER 4 METHODOLOGY**

## This project is developed following Waterfall development methodology.

## Following are the steps:

## Requirement gathering and use cases

## Design of the system

## Implementation

## Testing

## Deployment

## **4.1 Requirements and use cases**

## **Use case #1: Login:**

## System must be protected by login and password.

## Admin and Staff should have login id and password.

## Customer who uses the page for getting parcel status should be able to get the required information without id and password.

## **Use case #2: Add Branch**

## Admin should be able to create Branch as required.

## **Use case #3: Add Staff**

Admin should be able to add new staff and assign to a particular branch.

## **Use case #4: Add/Edit Parcel**

## Staff should add / Edit parcel details in the system.

## **Use case #5: Parcel Status**

## Staff / User should get the parcel tracking details from the system.

## A diagram of a user use case diagram Description automatically generated with low confidence

**Figure 4.1 : UML diagram for use cases**

**Hardware&Software**

Minimum hardware configuration for server:

I3 or higher CPU and 2GB+ RAM. Continuous power supply to support 24x7 to make the site up and running.

Software tools are used here are:

In server Apache, PHP, MySQL, XAMP installer and control panel.

As it’s a thin client based system, client machine can be of low configuration. Only requirement is

Client side is of having Internet connectivity and web browser like Chrome, Firefox, Edge.

## **Implementation and results**

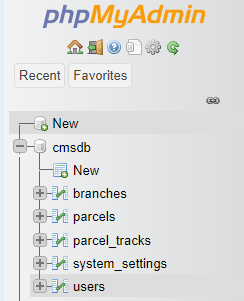
## **Functionality and file map:**

|  |  |
| --- | --- |
| File name | Functionality |
| Login.php | Login |
| New\_branch.php | Add branch |
| Edit\_branch.php | Edit branch |
| new\_parcel.php | Accept parcel |
| Parcel\_list.php | List of parcels |
| Track.php | Enquire parcel by staff |
| Track.php | Enquire parcel by user |

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Description automatically generated with medium confidence

**Figure 4.2 : Apache and Mysql activation panel**

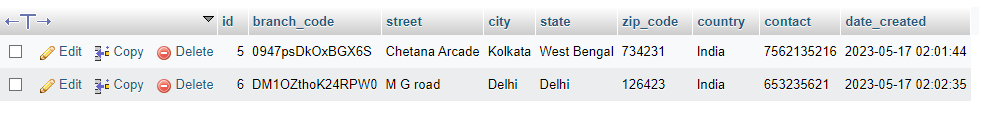


**Figure 4.3 : Tables used in Database**

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**Figure 4.4 : User table details**



**Figure 4.5 : Branch table details**

A screenshot of a computer

Description automatically generated with medium confidence

**Figure 4.6 : Parcel track details**

Code:

Index.php

<!DOCTYPE html>

<html lang="en">

<?php session\_start() ?>

<?php

if(!isset($\_SESSION['login\_id']))

header('location:login.php');

include 'db\_connect.php';

ob\_start();

if(!isset($\_SESSION['system'])){

$system = $conn->query("SELECT \* FROM system\_settings")->fetch\_array();

foreach($system as $k => $v){

$\_SESSION['system'][$k] = $v;

}

}

ob\_end\_flush();

include 'header.php'

?>

<body class="hold-transition sidebar-mini layout-fixed layout-navbar-fixed layout-footer-fixed" style="background-color: #C6E9F9">

<div class="wrapper">

<?php include 'topbar.php' ?>

<?php include 'sidebar.php' ?>

<!-- Content Wrapper. Contains page content -->

<div class="content-wrapper">

<div class="toast" id="alert\_toast" role="alert" aria-live="assertive" aria-atomic="true">

<div class="toast-body text-white">

</div>

</div>

<div id="toastsContainerTopRight" class="toasts-top-right fixed"></div>

<!-- Content Header (Page header) -->

<div class="content-header">

<div class="container-fluid">

<div class="row mb-2">

<div class="col-sm-6">

<h1 class="m-0"><?php echo $title ?></h1>

</div><!-- /.col -->

</div><!-- /.row -->

<hr class="border-primary">

</div><!-- /.container-fluid -->

</div>

<!-- /.content-header -->

<!-- Main content -->

<section class="content">

<div class="container-fluid">

<?php

$page = isset($\_GET['page']) ? $\_GET['page'] : 'home';

if(!file\_exists($page.".php")){

include '404.html';

}else{

include $page.'.php';

}

?>

</div><!--/. container-fluid -->

</section>

<!-- /.content -->

<div class="modal fade" id="confirm\_modal" role='dialog'>

<div class="modal-dialog modal-md" role="document">

<div class="modal-content">

<div class="modal-header">

<h5 class="modal-title">Confirmation</h5>

</div>

<div class="modal-body">

<div id="delete\_content"></div>

</div>

<div class="modal-footer">

<button type="button" class="btn btn-primary" id='confirm' onclick="">Continue</button>

<button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>

</div>

</div>

</div>

</div>

<div class="modal fade" id="uni\_modal" role='dialog'>

<div class="modal-dialog modal-md" role="document">

<div class="modal-content">

<div class="modal-header">

<h5 class="modal-title"></h5>

</div>

<div class="modal-body">

</div>

<div class="modal-footer">

<button type="button" class="btn btn-primary" id='submit' onclick="$('#uni\_modal form').submit()">Save</button>

<button type="button" class="btn btn-secondary" data-dismiss="modal">Cancel</button>

</div>

</div>

</div>

</div>

<div class="modal fade" id="uni\_modal\_right" role='dialog'>

<div class="modal-dialog modal-full-height modal-md" role="document">

<div class="modal-content">

<div class="modal-header">

<h5 class="modal-title"></h5>

<button type="button" class="close" data-dismiss="modal" aria-label="Close">

<span class="fa fa-arrow-right"></span>

</button>

</div>

<div class="modal-body">

</div>

</div>

</div>

</div>

<div class="modal fade" id="viewer\_modal" role='dialog'>

<div class="modal-dialog modal-md" role="document">

<div class="modal-content">

<button type="button" class="btn-close" data-dismiss="modal"><span class="fa fa-times"></span></button>

<img src="" alt="">

</div>

</div>

</div>

</div>

<!-- /.content-wrapper -->

<!-- Control Sidebar -->

<aside class="control-sidebar control-sidebar-dark">

<!-- Control sidebar content goes here -->

</aside>

<!-- /.control-sidebar -->

<!-- Main Footer -->

<footer class="main-footer">

<div class="float-right d-none d-sm-inline-block">

<b><?php echo $\_SESSION['system']['name'] ?></b>

</div>

</footer>

</div>

<!-- ./wrapper -->

<!-- REQUIRED SCRIPTS -->

<!-- jQuery -->

<!-- Bootstrap -->

<?php include 'footer.php' ?>

</body>

</html>

Db\_connect.php

<?php

$conn= new mysqli('localhost','akash','pa55word','cmsdb')or die("Could not connect to mysql".mysqli\_error($con));

Login.php

<!DOCTYPE html>

<html lang="en">

<?php

session\_start();

include('./db\_connect.php');

ob\_start();

// if(!isset($\_SESSION['system'])){

$system = $conn->query("SELECT \* FROM system\_settings")->fetch\_array();

foreach($system as $k => $v){

$\_SESSION['system'][$k] = $v;

}

// }

ob\_end\_flush();

?>

<?php

if(isset($\_SESSION['login\_id']))

header("location:index.php?page=home");

?>

<?php include 'header.php' ?>

<body class="hold-transition login-page">

<div class="login-box">

<div class="login-logo">

<a href="#"><b><?php echo $\_SESSION['system']['name'] ?></b></a>

</div>

<!-- /.login-logo -->

<div class="card">

<div class="card-body login-card-body">

<form action="" id="login-form">

<div class="input-group mb-3">

<input type="email" class="form-control" name="email" required placeholder="Email">

<div class="input-group-append">

<div class="input-group-text">

<span class="fas fa-envelope"></span>

</div>

</div>

</div>

<div class="input-group mb-3">

<input type="password" class="form-control" name="password" required placeholder="Password">

<div class="input-group-append">

<div class="input-group-text">

<span class="fas fa-lock"></span>

</div>

</div>

</div>

<div class="row">

<div class="col-8">

<div class="icheck-primary">

<input type="checkbox" id="remember">

<label for="remember">

Remember Me

</label>

</div>

</div>

<!-- /.col -->

<div class="col-4">

<button type="submit" class="btn btn-primary btn-block">Sign In</button>

</div>

<!-- /.col -->

</div>

</form>

</div>

<!-- /.login-card-body -->

</div>

</div>

<!-- /.login-box -->

<script>

$(document).ready(function(){

$('#login-form').submit(function(e){

e.preventDefault()

start\_load()

if($(this).find('.alert-danger').length > 0 )

$(this).find('.alert-danger').remove();

$.ajax({

url:'ajax.php?action=login',

method:'POST',

data:$(this).serialize(),

error:err=>{

console.log(err)

end\_load();

},

success:function(resp){

if(resp == 1){

location.href ='index.php?page=home';

}else{

$('#login-form').prepend('<div class="alert alert-danger">Username or password is incorrect.</div>')

end\_load();

}

}

})

})

})

</script>

<?php include 'footer.php' ?>

</body>

</html>

**CHAPTER-5**

## **Output**

## **screens**

## A screenshot of a computer Description automatically generated with medium confidence

**Figure 5.1 : Admin panel**

## A screenshot of a computer Description automatically generated with medium confidence

**Figure 5.2 : Adding new branch by Admin**

## A screenshot of a computer Description automatically generated with medium confidence

**Figure 5.3 : List of branches**

## A screenshot of a computer Description automatically generated with medium confidence

**Figure 5.4 : Adding new Staff**

## A screenshot of a computer Description automatically generated with medium confidence

**Figure 5.5 : List of Staff**

## A screen shot of a computer Description automatically generated with medium confidence

**Figure 5.6 : Add new parcel**

A screenshot of a login form

Description automatically generated with medium confidence

**Figure 5.7 : Track parcel option for sender in login page**

A screenshot of a login box

Description automatically generated with low confidence

**Figure 5.8 : Track parcel result shown to sender/staff**

## **CONCLUSION**

A working code base is ready to deploy for a courier management system.

User wise login and their main use cases are shown here as screenshots and all workflows are working fine.

Test results are not documented due to time constraint. Server setup, Database setup is also ready.

Once deployed in server, user will be able to connect to the system and will be able to enquire about their parcel.

There is a huge scope of enhancement of the system to make it more professional and complete.

## **FUTURE WORK**

This project is very minimalistic implementation of the real software system used by professional companies.

Few important functionalities to be added are:

* Sending email and SMS to the sender and receiver
* Calculation of parcel charge based on weight and dimensions.
* Integration of receipt printing

Also the project to be hosted in cloud (AWS/Azure) or any Apache server with php and mysql.

## **REFERENCE**

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