2023-2024

SHIVAJI UNIVERSITY, KOLHAPUR.

A

Project report

On

BUS-PASS MANAGEMENT SYSTEM

Submitted to

Shivaji University, Kolhapur.

YASHWANTARAO CHAVAN SCHOOL OF RURAL DEVELOPMENT

Shivaji University, Kolhapur

In partial fulfilment of the degree

Master of Computer Applications (MCA-II)

Semester -3

By

Mr. Ravasaheb Bajrang Patil

Mr. Vivek Vijay Patil

Year: 2023-2024

Under The Guidance of

Dr. Tejashree Moharekar

2023-2024

YASHWANTARAO CHAVAN SCHOOL OF RURAL DEVELOPMENT

Shivaji University, Kolhapur

CERTIFICATE

This is certify that **Mr. Ravasaheb Bajrang Patil** and **Mr. Vivek Vijay Patil** have satisfactorily completed the Minor project entitled as "**Bus Pass Management System**" in the partial Fulfilment of **MCA II (Sem.3)** during the academic year 2023-24.

Place: Kolhapur

Date:

Guide   **Examiner**   **MCA Co-ordinator**

ACKNOWLEDGEMENT

Project is always a scheduled, guided & coordinated team effort aimed at achieving common minimum goals. This minimum goal cannot be achieved without the guidance of guide.

It is with immense pleasure that present my project report to our project guide **Dr. Tejashree T. Moharekar** We find no words to describe her efforts and total confidence in our potential to see this project to completion. She has always been a source of inspiration and a tower of support boosting our moral beyond imagination. I, would like to express our gratitude to **Dr. Nitin Mali I/C Director and Dr. Vaishali P. Bhosale. MCA Co-ordinator, Yashwantrao Chavan School of Rural Developmen**t for her continuing support and encouragement. I, sincerely express our gratitude to our parents for their blessing for making this project successful.

Finally, I, thankful to our department and all our friends who have helped us to realize our efforts.

Thanking all of them, again.

Place: Kolhapur

Date: / / 2023

Mr. Ravasaheb Bajrang Patil   **Mr. Vivek Vijay Patil.**

DECLARATION

We hereby declare that, the industrial project entitled **"Bus Pass Management System"** has not formed earlier the basic for the award of degree of this or any other University or examination body.

Further we declared that we have not violated any of the provisions under copyright act.

Place: Kolhapur

Date:

Exam Seat No.   Mr. Ravasaheb Bajrang Patil

Exam Seat No.   Mr. Vivek Vijay Patil

INDEX

Chapter – 1

Introduction

Introduction to System:

System involves co-ordinating and overseeing the work activities of others so that their activities are completed efficiently and effectively.

A bus pass management system is a digital system or software application designed to streamline and automate the process of issuing, tracking, and managing bus passes for public transportation systems or educational institutions. It is used to manage various types of bus passes, such as monthly passes, student passes, senior citizen passes, and more. Here are some key features and functionalities typically associated with a bus pass management system:

A bus pass management system is a software-based solution designed to streamline and optimize the issuance, distribution, and monitoring of bus passes for public transportation systems. This system serves as a critical component in modernizing and enhancing the efficiency of public transit services, making it easier for passengers to access and use buses while allowing transportation authorities to better manage their operations. Here's an introduction to the key features and benefits of a bus pass management system:

The introduction of a bus pass management system can significantly enhance the efficiency and effectiveness of a public transportation system. Passengers benefit from convenient, flexible pass options, while transit agencies gain valuable insights, reduce administrative overhead, and can provide a more reliable and attractive service to the public.

Chapter – 2

❖ Introduction To Project :

2.1 About project:

The Bus Pass Management System project aims to address the challenges and complexities associated with managing bus passes for a public transportation system. In an era of increasing urbanization and growing demand for efficient public transit services, it is crucial for transportation authorities to modernize their operations. This project seeks to develop a comprehensive software solution that streamlines the entire process of issuing, distributing, and monitoring bus passes. By doing so, it will significantly improve the accessibility and usability of public transportation, while also providing numerous advantages for both passengers and the transit agency.

Public transportation plays a pivotal role in the lives of millions of people around the world, offering an affordable and eco-friendly mode of commuting. To ensure efficient and convenient access to these services, organizations, such as public transit agencies, schools, and universities, often implement Bus Pass Management Systems. These systems leverage technology to streamline the process of issuing, renewing, and verifying bus passes, enhancing the overall user experience and operational efficiency.

2.2 Objective of the system:

The main reason behind the development of the system is to overcome the problems and provide the good and quick service to customers. And easy work for booking also.

The system consists many objectives as follows:

1) To increase efficiency and make work effective.

2) This system also uses to current and quick working.

3) To reduce manpower and paperwork.

4) The objective of this system is to store large amount of data with less space and less time.

5) To introduce drawbacks of manual system.

6) To provide good service and give desired and accurate result.

7) There is no loss of data.

8) Using computer software addition, modification, view, deletion of record is quickly possible.

The main objective is to provide accuracy in the billing. It helps to customer and owner also for errorless transactions. The paperwork has too many errors while booking. To resolve this problem this system is developed.

2.3 Scope of system:

The scope of a Bus Pass Management System encompasses the range of functionalities, features, and objectives that the system is designed to address. It defines what the system can and cannot do. Here is an overview of the scope of a Bus Pass Management System:

1. **Pass and Pricing**: Passengers should be able to select from various pass types (e.g., daily, weekly, monthly, annual) and view associated pricing.

2. **Pass Application and Renewal**: Passengers should have the ability to apply for new passes and renew existing ones.

3. **Reporting and Administration:** Administrators should have access to tools to manage the system, generate reports, and handle exceptions like lost or stolen passes.

The scope of a Bus Pass Management System can vary depending on the specific needs and goals of the transit agency implementing it. However, the primary aim is to improve the passenger experience, enhance operational efficiency, and provide valuable data for better decision-making in public transportation services.

2.4 User requirement:

- When system on the live server then we have to internet to control system.

- Although the system is a simple one, man who manages this organization is able to understand simple computer processes is needed to run the system.

- The organizer will be the person who enters the data needed in to the system. Thus system will be understandable to person who handles all the organization.

- The system also needs MySql for the organizations database management system.

- Different information is entered into the database such as information about the different service and the fees.

- The admin has respective accounts with password that enables him to enter in the system.

- Correct information is to be entered in to the system to prevent mismanaged conflicts to occur. This view makes the information provided by the system to reliable and useful.

- The target of this system is to provide errorless bookings and make all the organization computerized.

Chapter – 3

PagerDuty

Investigation Phase

❖ Investigation Phase

3.1 Existing system:

In the existing system bus pass registration and renewal process are carried out manually. The person has to visit the counter and have to submit the details and then they have to wait for approval. For each and every process there is time limit 2 specified if the person fails to go on time, then all the transactions will be cancelled. In this existing system was used to bus details maintain through file. And after bus information are stored to computerize. The Project Metrics has to enter all the details of project, documents, and tasks. And, also the maintenance team information and also efforts estimation. For this purpose, the organization maintain the size of the document, source code and update the information about team member's details manually. Which is much of time-consuming process and more importantly it is error prone. At present system bus pass collect from depot very rare one. User can face lot of problems Disadvantages:

- It is time consuming

- It consumes lot of manpower to better results

- It lacks of data security

- Retrieval of data takes lot of time

- Percentage of accuracy is less

• Reports take time to produce 1.3 Drawbacks of Existing Systems: The drawback of existing system is user dependent that is the user has to be manually present to fetch information from all departments of the college. We have observed many limitations of the existing system as follows.

• The traditional system is user dependent.

• A student who needs to fetch information should be present personally at the information provider.

• It cannot automatically access information.

• It cannot get data out easily

• It cannot view data easily

• It cannot able track buses

• It cannot access the system from a laptop or a desktop. It cannot access information from a smart phone.

3.2 Proposed System:

Introduction to proposed system:

So we thought of designing a project where we are going to design a project named Bus pass system for a college where we are going to integrate all the things needed from a college to make it virtual that is access information without personal presence with the help of my SQL as a medium. In order to achieve our target of developing the application of a bus pass system we have to take into consideration various requirements to have a complete application such as : The System will use my SQL as a medium to fetch information. Our system will have t applications one as Admin and students. The Admin will first assign id and password for students separately and fill valid information of the student. Then the student can login from his android app and access the information needed from my SQL.

The information is bi-directional i.e a user can both share and access information from the same application. Students can fill their fees record directly from their smartphones or laptops/pc 2, Admin can check and approve the data provided by students, Admin can manage student data easily.

Chapter – 4

❖ Requirement Analysis

4.1 Hardware and software requirement:

System specification divided into two categories. You must have certain software and hardware installed on your computer. The minimum system specifications include.

➢ HARDWARE SPECIFICATION

1) RAM: 8.00 GB

2) HARD DISK: 1 TB

➢ SOFTWARE SPECIFICATION

1) Database: MySQL

2) Server: Apache

3) Frontend: HTML

4) Scripting Language: Javascript

5) Technology: PHP

4.2   Technology Used:

It's an integrated development environment in which you can develop, run, test and debug your application.

a. PHP is easy to learn and has a relatively simple and straightforward syntax.

b. It supports a wide range of databases, including MySQL, PostgreSQL, SQLite, and others.

c. PHP is platform-independent and compatible with various web servers, such as Apache and Nginx.

d. It offers extensive support for web-related tasks, like form processing, file handling, and session management.

e. PHP supports both procedural and object-oriented programming.

- **Need for programming:**

These tools or languages allow us to design interfaces user friendly by window. Menus and buttons etc. but the disadvantages of such tools are that the interface is designed using code. The program has the code for user interface elements. Such a program spends a lot of time writing code for the user interface and for that purpose the need of house was an environment that would allow easy design of the interface.

Chapter – 5

System Analysis & Design

❖ System Analysis And Design

5.2 Feasibility Study:

The Feasibility study is useful to evaluate cost and benefits of the system required. There at main aspect in the feasibility study. A feasibility study is conducted to select the best system that meet initial and identification dissipation evaluation of candidate system and the selection of best system for the job.

The system analyst knows what the user is expecting out of the proposed system based on this body of knowledge. The feasibility aspects are worked out of this is done to feasibility study. The key considerations are involved in feasibility study.

1) **Technical feasibility –**

The technical feasibility focuses on the existing computer hardware software and personal it also includes the possibility of processing or installing such facility.

The existing system required a lowcost hardware and software. Technical feasibility sender around the existing computer system (software hardware etc.) and to what extend it proposed addition. This also includes the need for more software, hardware or personal and the possibility of instead search facility.

2) Operational feasibility:

It considers the acceptability of the system. It checks whether system will be used it is developed and implemented or the users of the system able to handle the system, whether the proposed system cause any trouble, etc.

Another name of feasibility is behavioural feasibility. It considers accessibility of system. It checks whether system will use if is developed and implement are the system able to handle the system, whether the proposed system because any trouble etc. this feasibility focuses on the capacity of the user and after studying this, programmer can decide about the design of the system.

3) Economic feasibility:

It considers profit of the proposed system the benefit is always expected to the overweighting the cost. Economic feasibility is helpful to find the system development cost and checks whether it justifiable for that it checks, investigation cost, software and hardware cost, training cost, salaries, maintenance cost etc. in development following methodology is adopted. It is most frequently used method for the effectiveness of the candidate system.

It is also known as cost and benefits analysis the cost of providing solution is estimated and is compared with the benefits. Only when the benefits are more than the cost involved, the system proposal passes through subsequent stem of system analysis. Otherwise further justification or alternation in the proposed system will have to be made, if it is to have a change of being
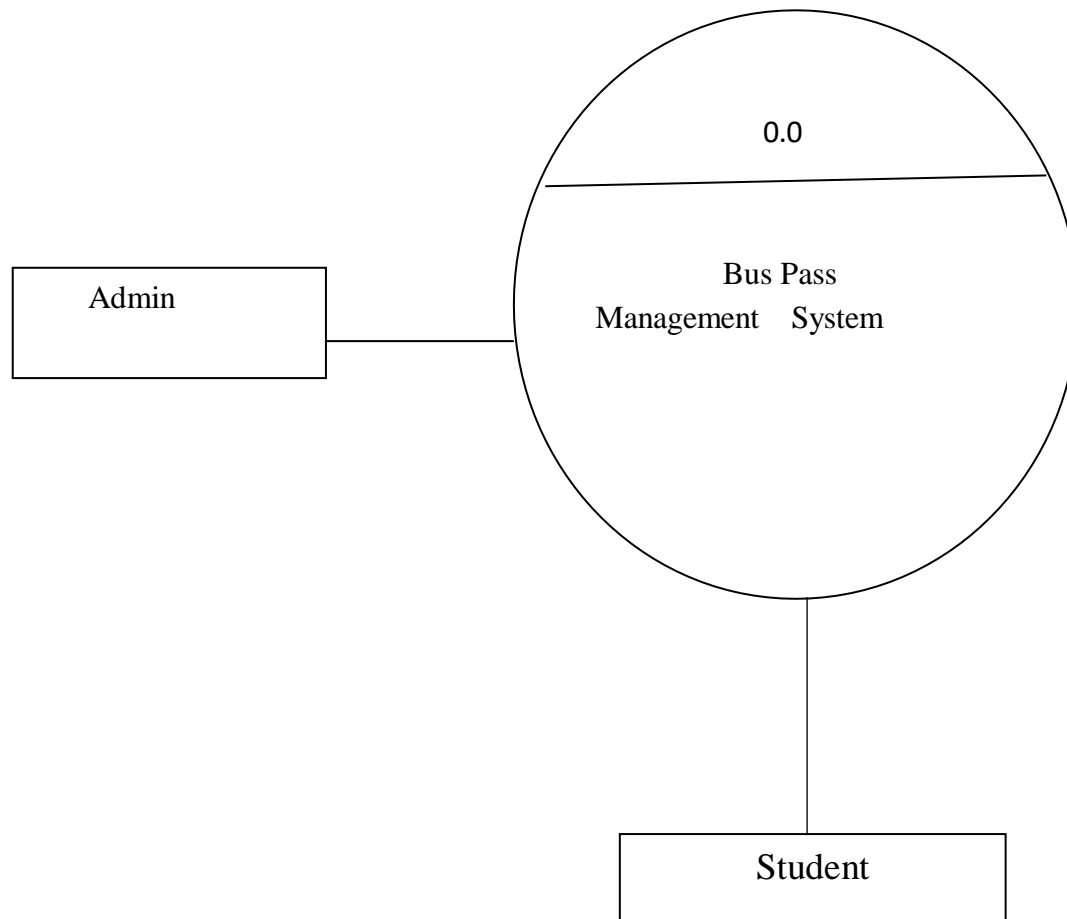
approved. This is an on-going effort that improves in accuracy at each phase of the system life cycle.

a. You must get requirement of the user known you should collect all the detailed and relevant information of the system. They you must classify the gathered information into groups or subgroups.

b. Next, you must draw the flowchart of the system and also class diagram extended dataflow diagram and entity relationship diagram and dataflow diagram.

c. Next, you must create the necessary database, start coding according to system specification.

d. After coding you must test system and make your code error free and finally prepared necessary documents for the users convince. Implement your system in the organization.

5.4 Data Flow Diagram:
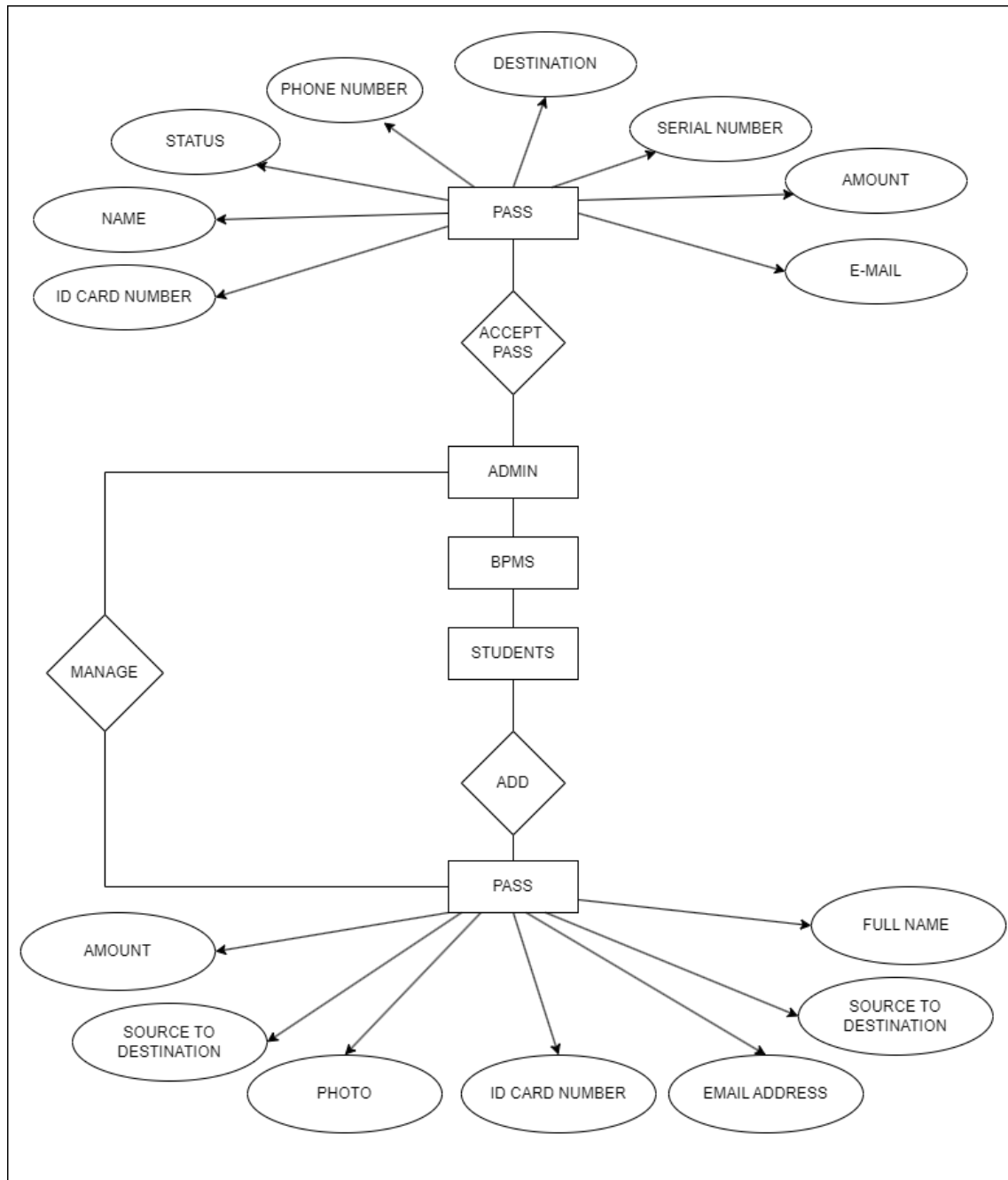
Entity Relationship Diagram

5.6 Database Structure :

1) **Admin:** This Table store information about admin.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID 🔑	int(10)			No	None		AUTO_INCREMENT
2	AdminName	varchar(120)	utf8mb4_general_ci		Yes	NULL		
3	UserName	varchar(120)	utf8mb4_general_ci		Yes	NULL		
4	MobileNumber	bigint(10)			Yes	NULL		
5	Email	varchar(120)	utf8mb4_general_ci		Yes	NULL		
6	Password	varchar(200)	utf8mb4_general_ci		Yes	NULL		
7	AdminRegdate	timestamp			Yes	current_timestamp()		

2) **Category:** This Table store category of bus.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID 🔑	int(10)			No	None		AUTO_INCREMENT
2	CategoryName	varchar(200)	utf8mb4_general_ci		Yes	NULL		
3	CreationDate	timestamp			Yes	current_timestamp()		

3) **Add Pass Structure:** This Table Shows Information about person.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID 🔑	int(10)			No	None		AUTO_INCREMENT
2	PassNumber	varchar(200)	utf8mb4_general_ci		Yes	NULL		
3	FullName	varchar(200)	utf8mb4_general_ci		Yes	NULL		
4	ProfileImage	varchar(200)	utf8mb4_general_ci		Yes	NULL		
5	ContactNumber	bigint(10)			Yes	NULL		
6	Email	varchar(200)	utf8mb4_general_ci		Yes	NULL		
7	IdentityType	varchar(200)	utf8mb4_general_ci		Yes	NULL		
8	IdentityCardno	varchar(200)	utf8mb4_general_ci		Yes	NULL		
9	Category	varchar(100)	utf8mb4_general_ci		Yes	NULL		
10	Source	varchar(200)	utf8mb4_general_ci		Yes	NULL		
11	Destination	varchar(200)	utf8mb4_general_ci		Yes	NULL		
12	FromDate	varchar(200)	utf8mb4_general_ci		Yes	NULL		
13	ToDate	varchar(200)	utf8mb4_general_ci		Yes	NULL		
14	Cost	decimal(10,0)			Yes	NULL		
15	PasscreationDate	timestamp			Yes	current_timestamp()		

4) **Enquiry:** This table store the enquiry details of users

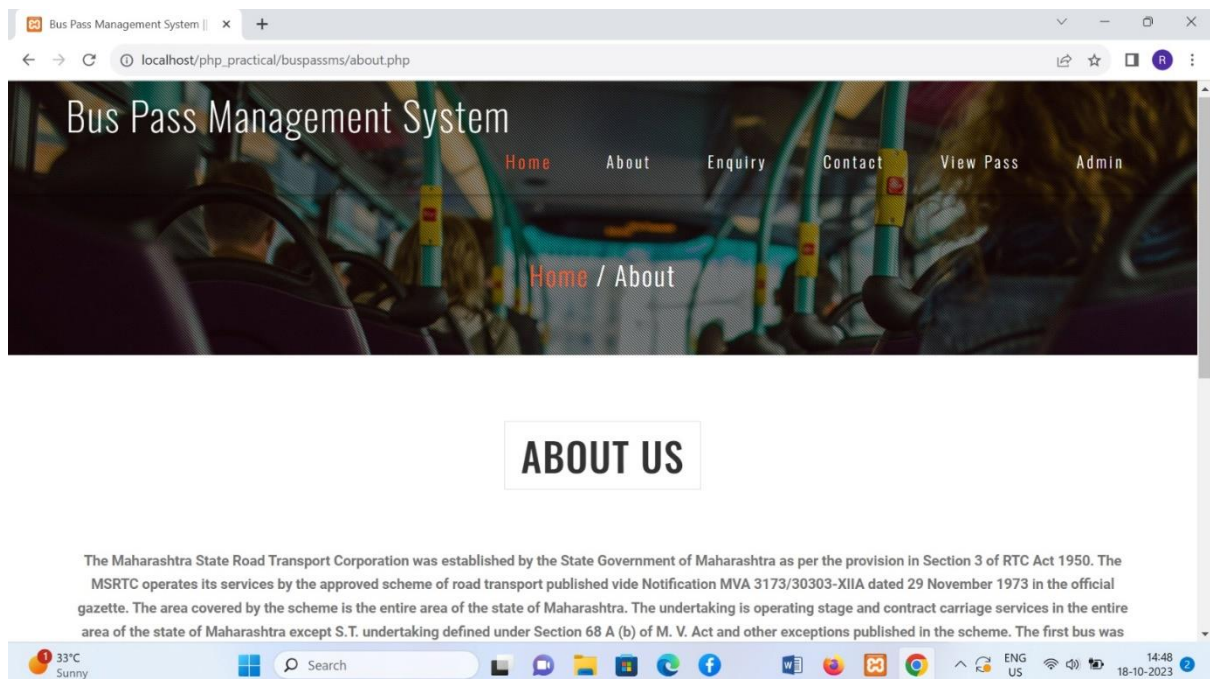| #	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID 🔑	int(10)			No	None		AUTO_INCREMENT
2	Name	varchar(200)	utf8mb4_general_ci		Yes	NULL		
3	Email	varchar(200)	utf8mb4_general_ci		Yes	NULL		
4	Message	mediumtext	utf8mb4_general_ci		Yes			
5	EnquiryDate	timestamp			No	current_timestamp()		
6	IsRead	int(5)			Yes	NULL		

Chapter – 6

Bus Pass Management System

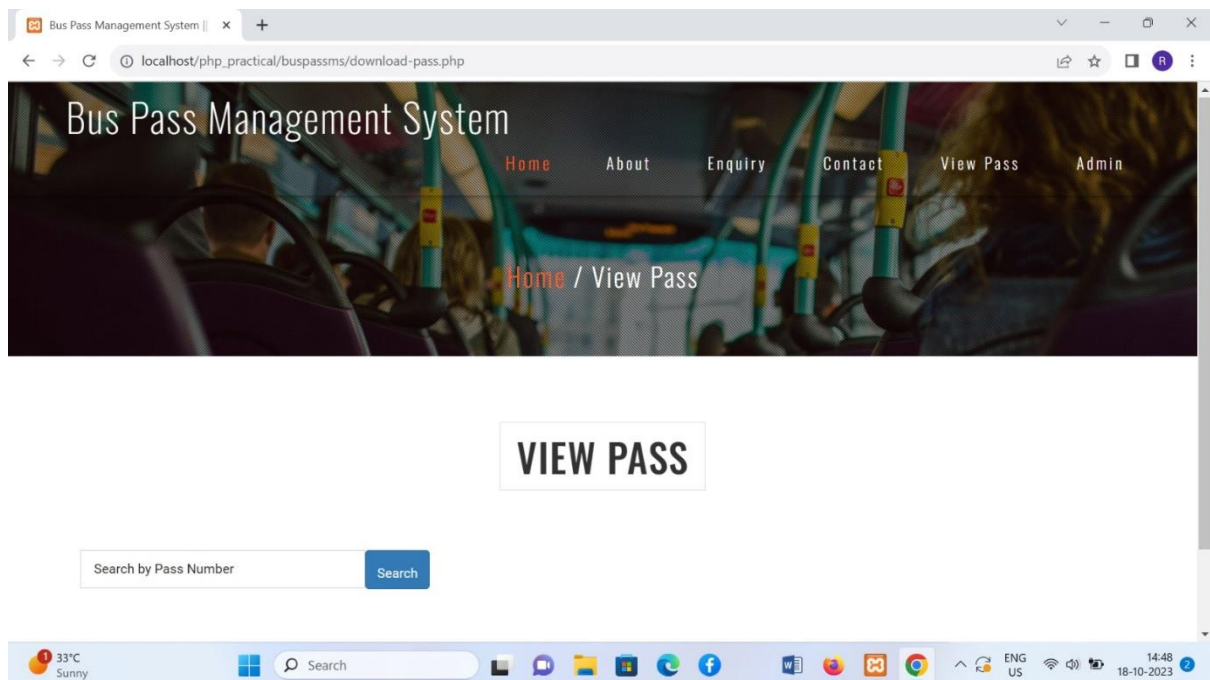**Home:** This Page Shows Home Page For Bus Pass Management System
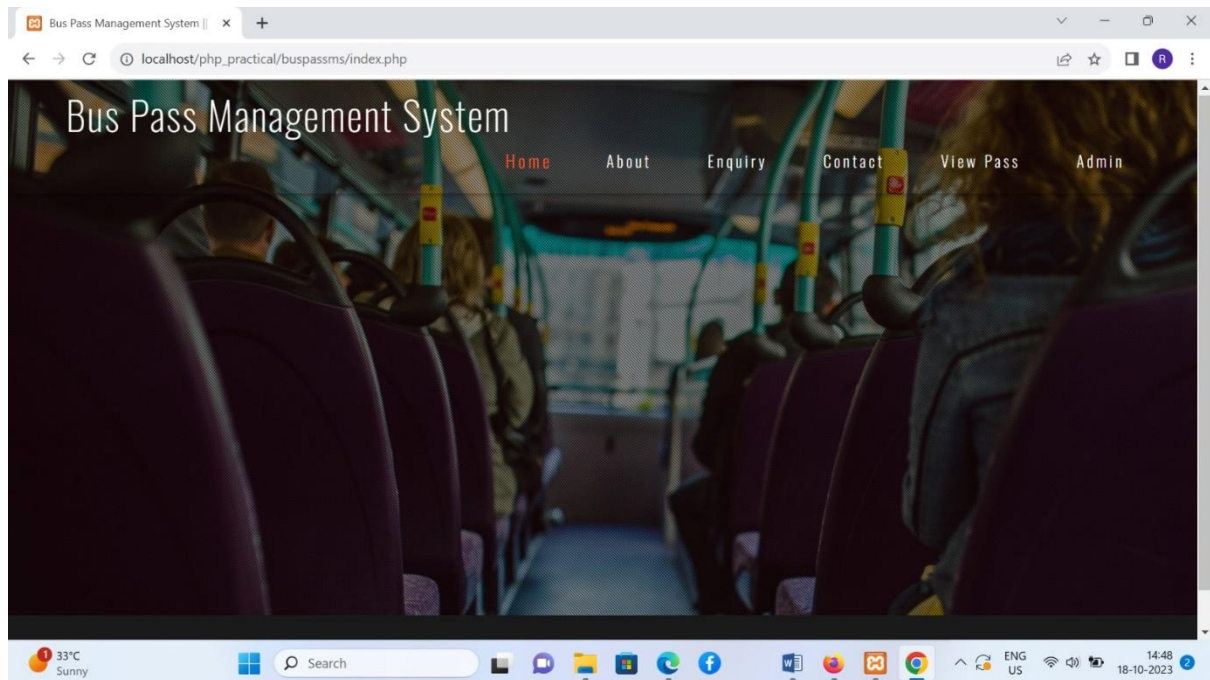
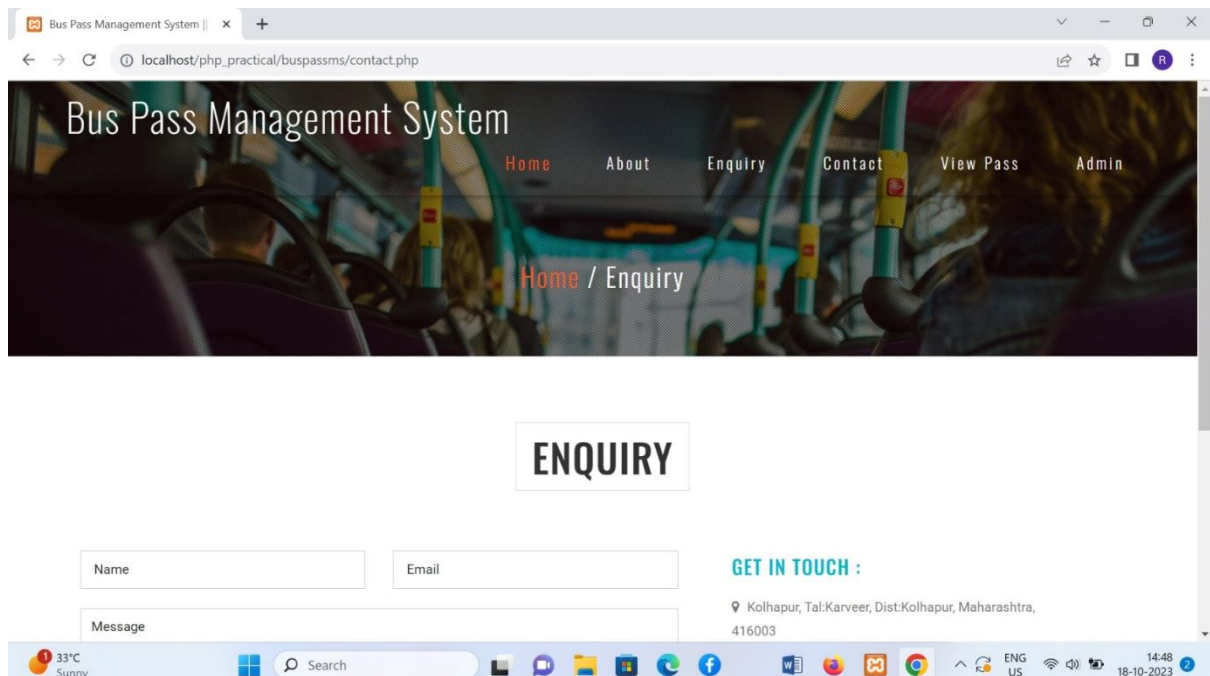**About us:** This Page Shows About us For Bus Pass Management System

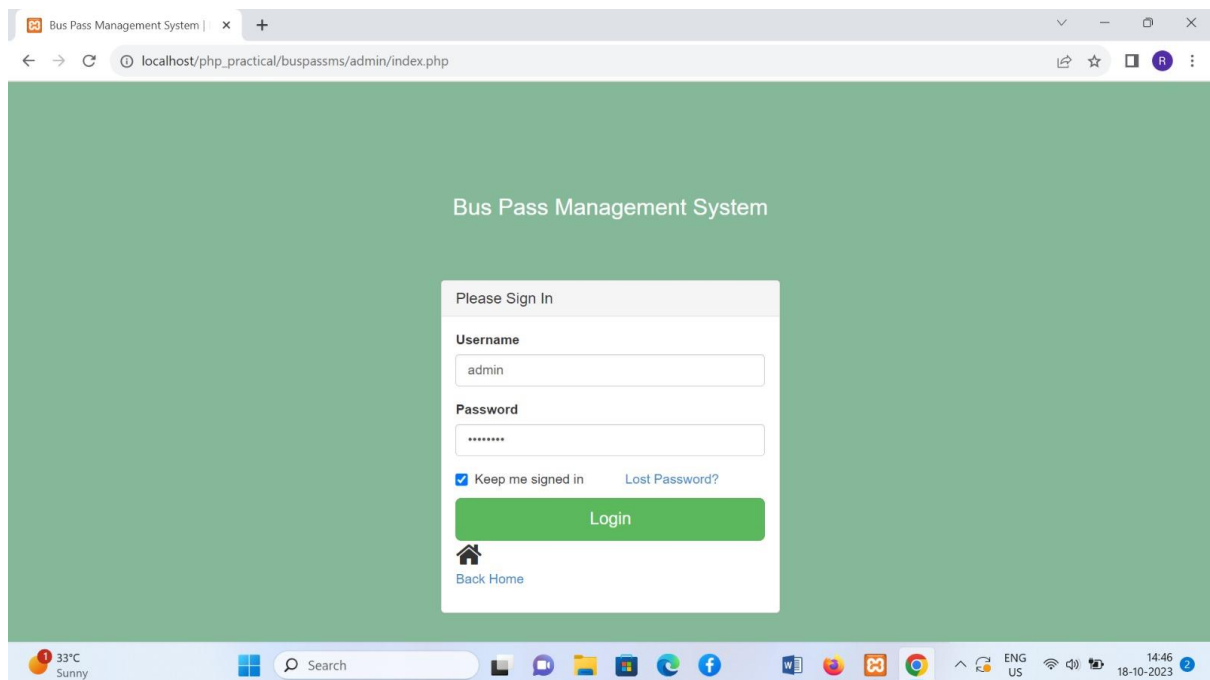**View Pass:** This Page Shows Pass Details For Student
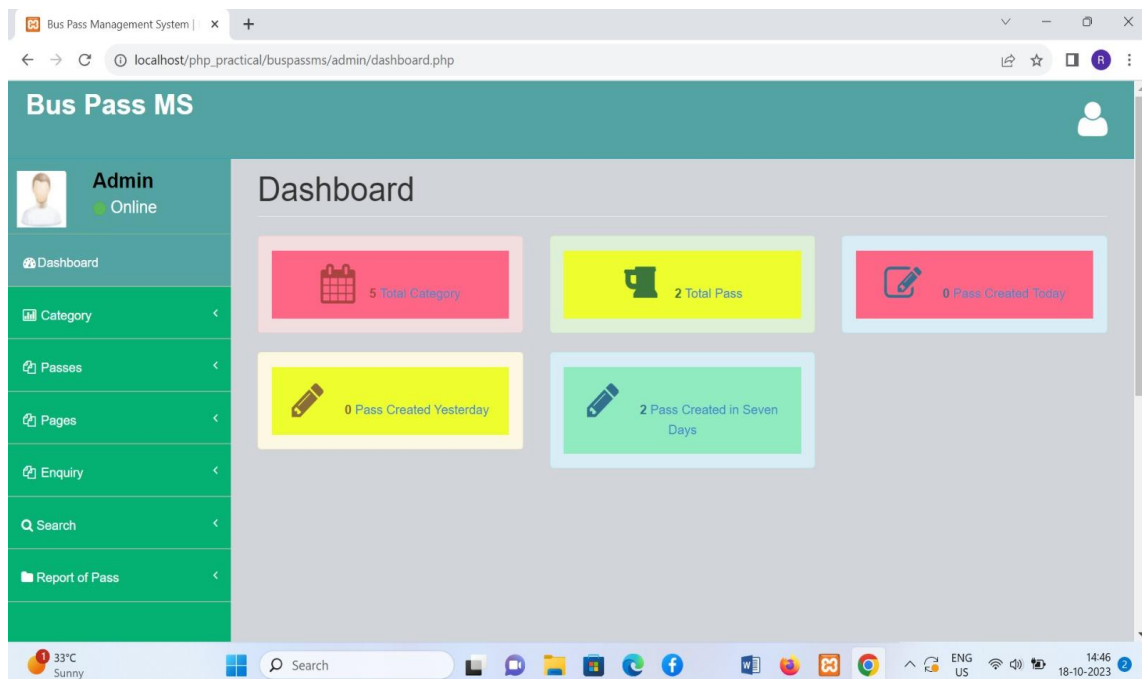

Enquiry: This Page Shows Enquiry foruser.

Bus Pass Management System

Admin Login: Access the admin login page.

Dashboard: This Page shows dashboard for admin.

Add Pass: This Page Shows Add Pass Details For User.

Add Category: This Page Shows Add Category For Bus.

Report: This Page For Report generate.
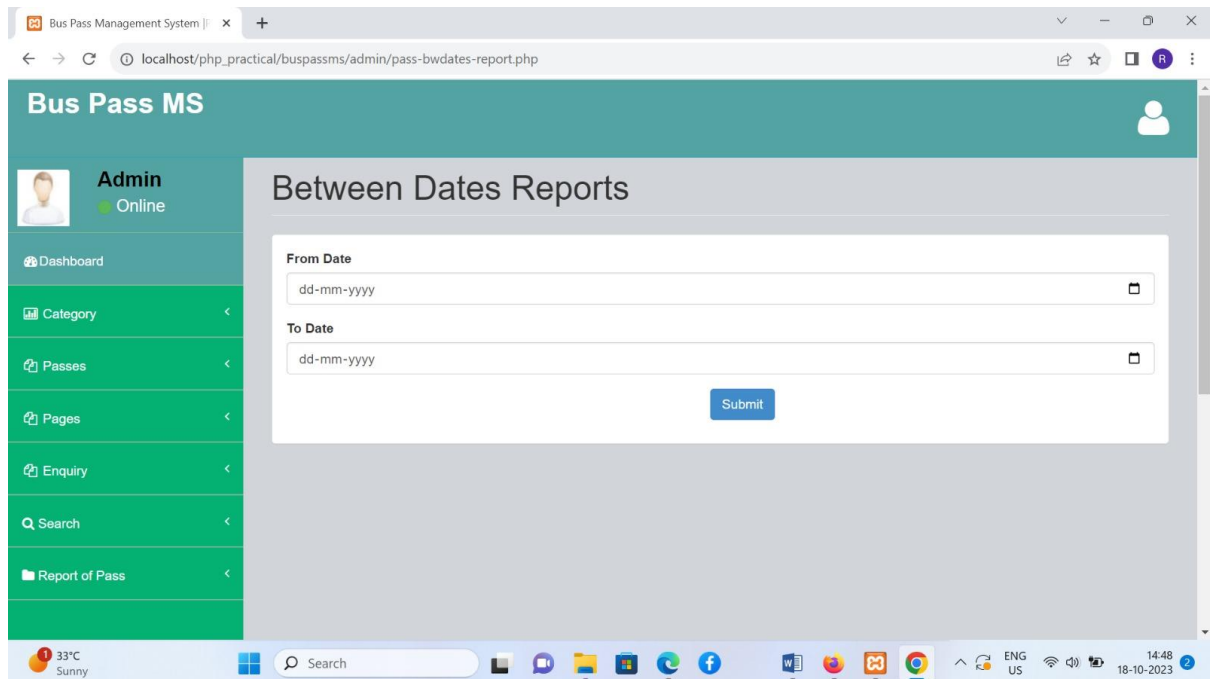
Admin Search Pass: This Page for search pass details through pass number for admin.
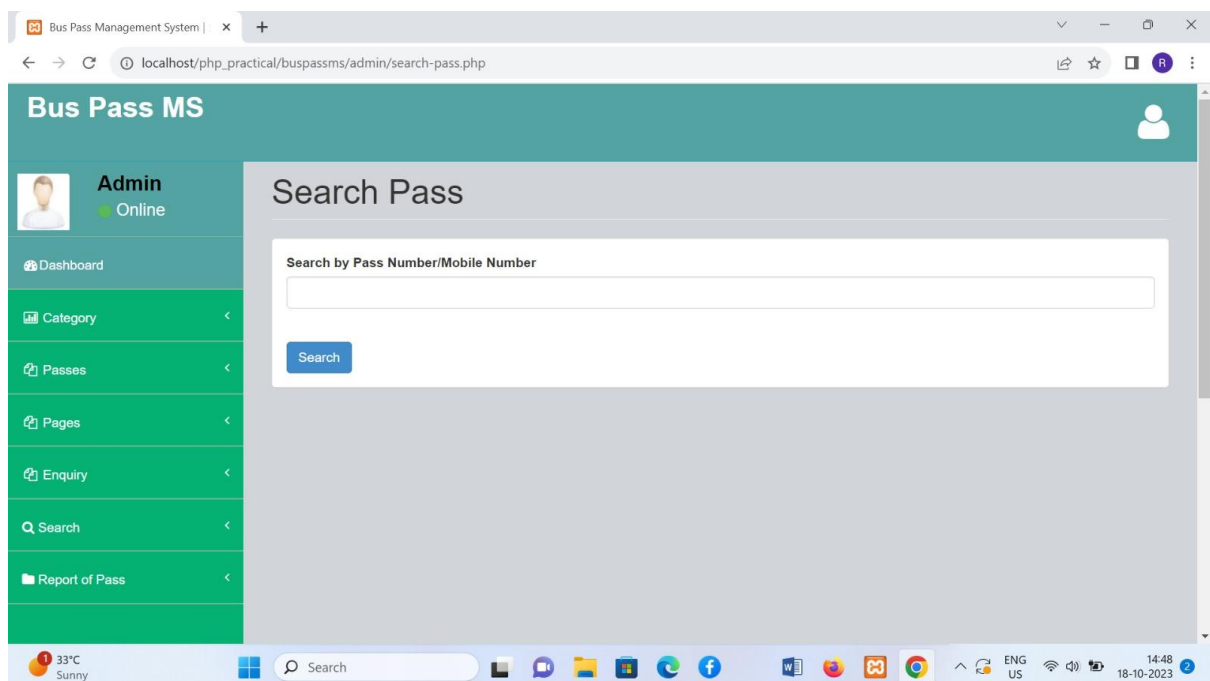
Chapter - 7

When you search or start website then main **Dashboard** page of Bus Pass Management System is displayed. There was all information of Bus Pass Management System. The system which has named as Bus Pass Management System.

In the dashboard as follow:

Some information about Bus Pass Management System.

1) **Add Pass -** which shows adding pass.

2) **Category-** shows all category.

3) **Pages-** shows about and contact pages.

4) **Enquiry-** shows read enquiry and unread enquiry.

5) **Search Pass-** search by pass number.

6) **Report-**shows between reports.

Chapter – 8

FUTURE

ENHANCEMENT

1. If there is any problem to operate on software there will be help provided to overcome the problems.

2. We will also try to generate the report supporting to Managerial Decision-making system.

- **Mobile App Integration:**

  Develop a dedicated mobile application for passengers to apply for, renew, and manage their bus passes, as well as receive real-time updates and alerts.

- **Contactless Payment Options:**

  Implement advanced contactless payment methods such as NFC (Near Field Communication) and mobile wallet integration for seamless and secure transactions.

- **Smart Card Integration:**

  Enable the use of smart cards or RFID (Radio-Frequency Identification) cards for pass validation, providing passengers with a convenient and efficient way to board buses.

- **Advanced Analytics and Reporting:**

  Enhance the analytics and reporting capabilities to provide transportation authorities with deeper insights into passenger behavior, route performance, and revenue trends, enabling better decision-making.

- **Predictive Maintenance:**

  Implement predictive maintenance solutions that use data collected from buses to schedule maintenance tasks, reducing downtime and ensuring reliable service.

- **Dynamic Pricing Models:**

  Implement dynamic pricing based on factors such as demand, time of day, or route popularity, allowing transportation authorities to optimize revenue.

Chapter - 9

ADVANTAGES

OF

SYSTEM

❖ <u>ADVANTAGES OF SYSTEM :</u>

- Proposed system requires less man power.

- Speed of computer is high so it can perform operation easily.

- Results are more accurate and automatic calculated.

- Storage capacity is high.

- Operation on data can be done quickly as per requirement.

- This system also uses to current and quick.

- There is no loss data.

- Using computer addition, modification, view, deletion, of record is quickly possible.

- The main objective is to provide security, authority conclusion and further privacy and also is any unauthorized person cannot destroy or get information.

- Structured error handling capabilities.

- Fully secured system

Chapter - 10

❖ LIMITATIONS OF SYSTEM:

1. Once record is deleted it cannot be recovered.

2. This system is only supported by Microsoft visual studio code software.

3. It is single user system.

4. Recovering of records is not enabled.

Chapter - 11

❖ CONCLUSION:

Bus Pass Management System has many powerful features and is certainly more than a "simple" diagramming tool. With its support of MDA (Model Driven Architecture), it is more aimed at people using UML in an intensive way and with some code generations objectives than for simply drawing diagrams to document requirements. However, using 'Bus Pass Management System' just as a diagramming tool work fine, especially on Windows as the tool is built with Delphi and might execute faster than the Java-based tools. Modern world is computer world where the things have to be done promptly that requires optimal resources and optimal methods. Due to this inevitable requirement, computerisation of each and every sector in the main stream is must, so that it can be held itself in the race.

Chapter – 12

References

❖ <u>REFERENCES:</u>

For PHP
- https://www.w3schools.com/php/default.asp

- https://www.sitepoint.com/php/

- https://www.php.net/

For MySQL
- https://www.mysql.com/
- http://www.mysqltutorial.org

For XAMPP
- https://www.apachefriends.org/download.html