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DEVELOPING WEB-PORTAL FOR COLLEGE TRANSPORT MANAGEMENT

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ABSTRACT
The purpose of this project is to develop an online Transportation Management Systemusing modern web-based technologies. The system aims to streamline transportation operations by offeringfeatures such as tracking bus income and expenditure, managing bus details, and accessing relevant information, printing bus passes, registering new user. The new system uses front-end tools such as HTML,CSS, JavaScript, and PHP UI/UX for styling to create a user-friendly interface. In addition, MySQL and XAMPP servers provide a reliable back-end database management system. This project aims to provide acomprehensive and efficient solution for transportation management. By reducing costs, improving efficiency, and enhancing data accuracy, the system is designed to facilitate hassle-free transportation operations.

KEYWORDS:
Transport system, MYSQL, PHP, JavaScript, HTML, CSS, XAMPP.

INTRODUCTION
The "DEVELOPING WEB-PORTAL FOR COLLEGE TRANSPORT MANAGEMENT"
is to create an efficient and user-friendly TMS that enables college administrators to manage transportation related activities with ease. The system provides features such as tracking bus income and expenditure, managing bus details, and accessing other relevant information. The system is designed to minimize costs, improveefficiency, and enhance data accuracy, thus making transportation management a hassle- free task.
The management of transportation services in educational institutions is a challenging task that requires proper planning, organization, andexecution. In many colleges and universities, the traditional method of transportationmanagement involves the use of paper-based record-keeping systems, which are time- consuming, prone to errors, and not cost- effective. To overcome these challenges, we have developed a web-based Transportation Management System (TMS) that simplifies theprocess of managing college transportation services.
Overall, our web-based TMS offers a comprehensive and efficient solution for managing college transportation services. By providing a user-friendly interface, advanced features, and reliable database management system, the TMS simplifies transportation- related activities and enhances the overall transportation experience for educational institutions.

EXISTING SYSTEM
The existing system of record-keeping for college transport management suffers from several drawbacks, including the inability to modify data easily, non-user-friendly interface,security issues, extensive paperwork, manual operator control, time-consuming search processes, high risk of errors, and chances of data loss. These limitations arise due to the manual collection and storage of data in registers, which makes the system unreliable and inefficient.
In conclusion, the limitations of the existing system highlight the urgent need for a more modern and sophisticated software solution that can overcome these challenges and improve overall transport management in the collegesetting.

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PROPOSED SYSTEM

The proposed system for college transportmanagement is:

1. Centralized Database: A centralized database will be created to store all the datarelated to college transport management, including information on students, faculty,routes, diversions, and billing. This will eliminate the need for manual record- keeping in registers and reduce the risk of data loss.
2. User-Friendly Interface: The proposed system will have a user-friendly interface that is easy to navigate and understand. It will allow users to access and modify data quickly and easily, reducing the chances oferrors.
3. User Data Management: The module will be linked to the centralized database, enabling easy access to student and facultydata. This will allow for quick verificationof eligibility for bus passes.

Overall, the proposed system will offer a modern and reliable solution to college transport management, improving efficiency, reducing paperwork, and enhancing the overalluser experience.

MODULES

Transport (Admin): The admin module isspecifically designed to provide administrators with complete control over the college bus transport system. Through this module,administrators can access user details, including personal information and transportation preferences. They can also add new users to the system and delete existing ones if necessary. Furthermore, the module enables administrators to manage the income and expenditures of the transportation system,allowing them to keep track of expenses and revenue generated.

User: In the user module, students and staff members can register for the transportation system. Students can print their bus passes,which will be verified by the bus driver before allowing them to board. Staff members will receive a notification once their registration is successful, and they will be able to use the system immediately.

Overall, the two modules work together to create an efficient and organized transportationsystem for the college.

PROBLEM ARCHITECTURE

User Registration: The first step in the system is user registration. Users must provide their personal information, transportation preferences, and other relevant details toregister for the transportation system.

Admin Dashboard: The admin dashboard provides a centralized location foradministrators to manage the transportation system. The dashboard allows administrators toview user details, add new users, delete existingones, and manage the income and expendituresof the transportation system.

Bus Pass Verification: Before boarding the bus,students must present their printed bus pass to the accountant for verification of fee details.

Notification System: The notification system sends automatic notifications to staff members upon successful registration. The system also sends notifications to users regarding importantupdates, such as changes to the transportation schedule.

Reporting and Analytics: The reporting andanalytics module provides insights into the transportation system's performance, allowing administrators to make informed decisions regarding system improvements.

Data Security: The system must ensure data security by encrypting user data, limiting access to sensitive information, and following best practices for data storage and handling.

Overall, the problem architecture is designed toprovide a comprehensive solution for managingthe college transportation system whileensuring data security and user privacy.

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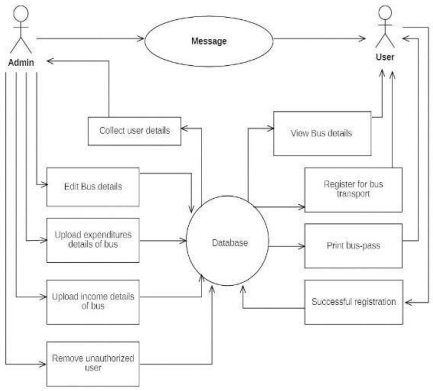

Problem Architecture

DESIGN

The new system may be completely new replacing a being primer or automated system, or it may be a major revision to a being system.The system of Design is to gauge to be espousedis set up originally. The system is tested duly and at the same time, the druggies are trained inthe new procedure. Proper perpetration is essential to give a dependable system to meet association conditions.

Use case diagram*:* A Use case is an explanationof a set of sequence of events graphically.

Admin module: The Actor represents the role ofAdmin. The actor needs to perform actions thatare in each use case in the use case subject. Theactor needs to add buses, upload expenditure and income details, store the details of the students and staff. To perform all these use casethe actor need to login once it's done the actor can logout.

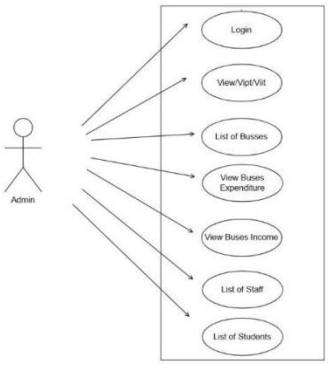

Fig.1. Use Case diagram for Admin module

User module*:* The Actor represents the role of the student/staff. If the actor is a new user he needs to register and fill in the details so he cansuccessfully register. If the actor is already existing then he can directly print the bus-pass.

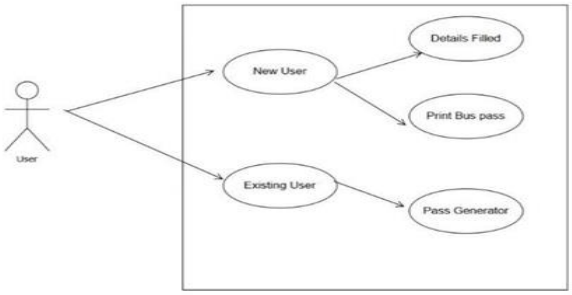

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Fig.2. Use case diagram for user module

Class Diagram*:* Class diagrams are arguably the most used UML diagram type. There are some attributes and operations that are needed to be performed by the student and the admin.
The given below class diagram explains in twosections one is about the attributes that areneeded to be given and the other are the operations that must be done.

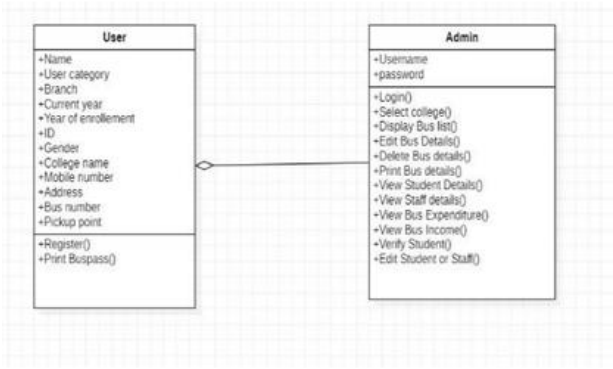

Fig.3. class diagram for user and admin

IMPLEMENTATION
Home page:

The Home page consists of transport for two locations one is for duvvada and another is for thimmapuram, for these locations there are users and admins to register and login.
User Registration:

For a new user to register they need to fillthese data as shown in the below picture.

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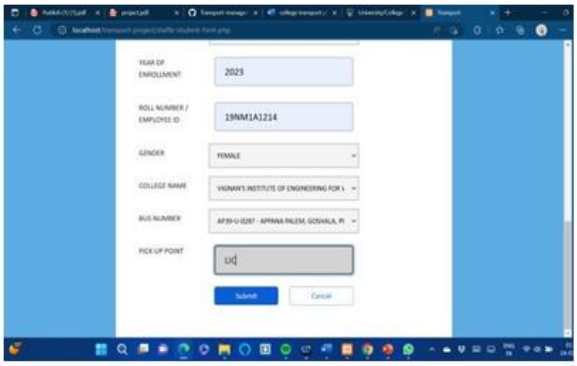
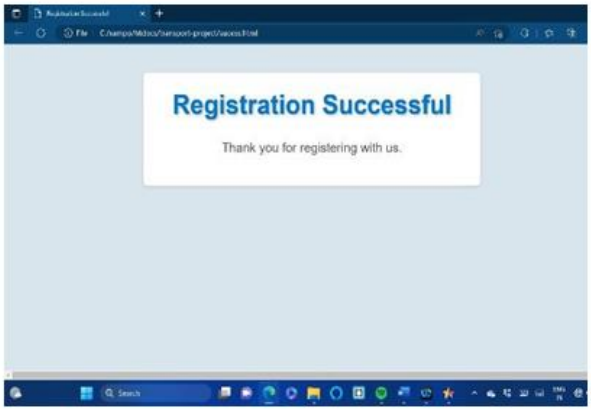


Student Bus-pass Generation:
If the user was student it will redirect togenerating bus-pass.

If the user was staff, then they will receive anotification of successful registration.



Admin Login:
For admin login, it should be given the properlogin credentials for a successful login.

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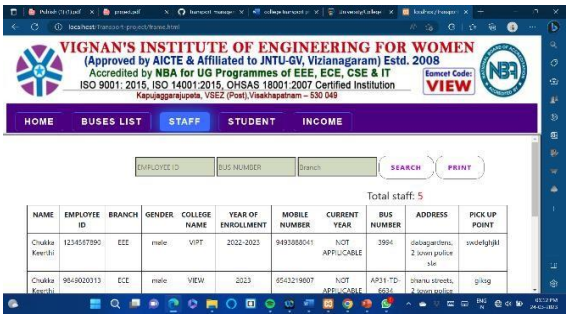

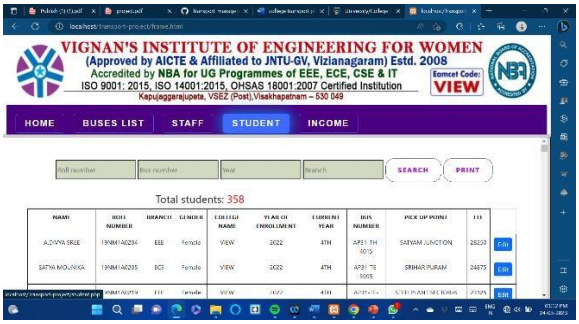

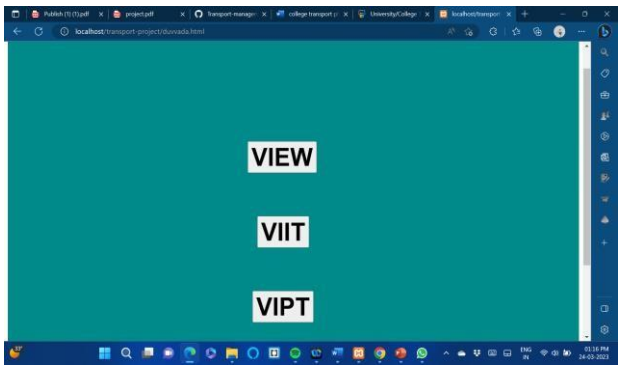

Admin Dashboard:

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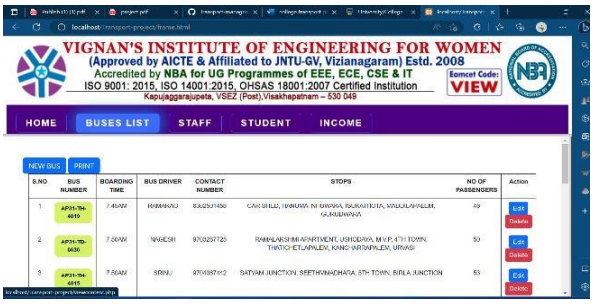
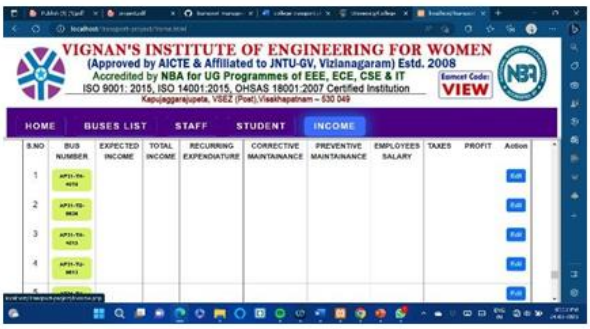
Admin dashboard consists of buses list, registeredstaff list, registered students list, display income and expenditure details of buses.





The admin module is designed to provide access to various functionalities related to collegetransport management. Upon logging in, the admin will be directed to the main dashboard where they can access the following features:

1. Select College: The admin can select a college from a drop-down menu to view the details of buses registered with that college.
2. List of Buses: The admin can view a list of buses registered with the selected college. The list includes the bus number, driver'sname, and the contact details of the bus owner.
3. List of Staff Registered: The admin can viewa list of staff members who have registered for college transport management. The list includes the staff member's name, contactdetails, and the type of transport service theyrequire.
4. List of Students Registered: The admin can view a list of students who have registered forcollege transport management. The list includes the student's name, contact details, and the bus route they are assigned to.
5. View Bus Expenditures: The admin can viewthe expenses incurred for each bus registeredwith the selected college. The expenses include fuel costs, maintenance costs, and driver's salary.

6. View Income in College Transport Management: The admin can view the income generated from college transport management. The income includes the fees collected from staff and students who have registered for transport services.

To access each of these features, the admin needsto click on the corresponding option in the main dashboard. The data will be displayed in a table format, with each column representing a specificdata point.

FUTURE EXTENSION

The Future scope of a college transportation management system is vast, as there are several advancements that can be made to enhance thesystem's efficiency and effectiveness.

1. Real-time tracking: Implement a featurethat enables real-time tracking of buses.This will allow staff and students to track the location of the bus and estimate itsarrival time.
2. Mobile app: Develop a mobile app thatallows staff and students to view their transport details, including bus route, timings, and fare information. This willprovide a more convenient way for them toaccess information on-the-go.
3. Automated billing: Integrate an automated billing system that calculates the fees for transport services based on the distancetravelled and the duration of service. This will streamline the billing process and reduce the workload of the admin.
4. Parental access: Provide parental access tothe transport management system. This will allow parents to view their child's bus route, timings, and safety measures in place.
5. Feedback system: Implement a feedback system that allows staff and students to ratethe quality of transport services provided. This will help to identify areas of improvement and provide better service to the users.

CONCLUSION

Generally, the Transportation department is useful for Administration, staff, Students, which is developed as an portal which helps thestreamline transportation operations by offering features such as tracking busexpenditure, Managing bus details and accessing relevant information easily and efficiently. It should provide safe, reliable, andefficient transportation options for all membersof the college community including students, faculty, and staff.

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