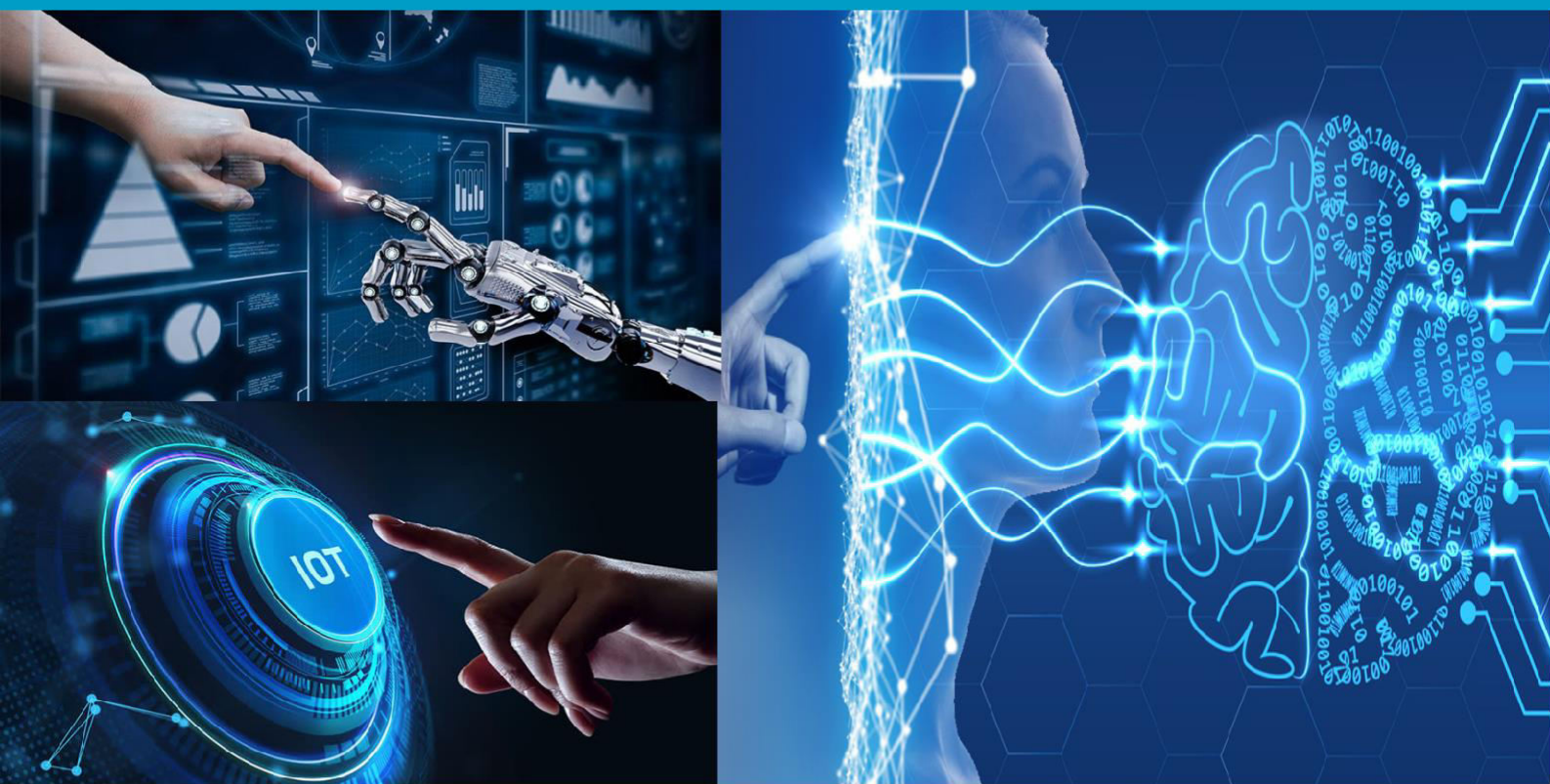




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CoBus

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ABSTRACT: The modern world is guided by the change in the technology day by day. Mostly the relevant changes in technologies are enhancing the modern business techniques. Different technologies have been developed in the world for making people's life easier and better day by day. Android is the latest and a rapid growing technology available for all the users or users in today's market. An enormous increase in the end user acceptance has been experienced in the past few years. The project is based on the latest GPS technology which enables college management team a better way to keep eye on the activity of the college buses and manage schedule as well as provide real time bus location for the students using bus service. The CoBus is Web & Android system aimed at students, college administration to maintain bus facility. The system takes student information as input source and attempts to maintain the bus services. It allows flexibility during these processes. The system generates exhaustive reports related to the Bus Management i.e. Fees paid, dues, rout no. & bus stop. To overcome the problems of manual bus management system, We have developed Web & Android Based college bus management System. CoBus System is based on Android & Web, which can be implemented on any Android Phone. The reports highlight various bus services and features of the bus, which can be subjected to improvements especially for the college administration to improve bus transport system. The system requires comparatively small amount of resources such as memory, input/output devices and disk space. The system overall keeps approach in highlighting key features of the bus services. It provides the facility of tracking the particular college bus's location in the google map. They can also view the bus details such as bus schedule and they reach the bus on time.

KEYWORDS: Android, Web Application, Java, MySQL, GPS, Location

I. INTRODUCTION

The mobile phone industry is one of the fastest and most dynamic business sectors today. The need to communicate efficiently and instantaneously is always an undying necessity. The market sector and the ever-growing and demanding consumers always want to have more, and they want it better than ever. Having a mobile phone for us makes life easier. Communication is always a part of daily life, and we cannot avoid it. The invention of mobile phone has gone tremendous leaps in innovation and new applications. Originally, it was intended to be a telephone that can be carried wirelessly at greater distances. Advances in communications, upgrades in radio frequency and developments on the internet had given mobile phones more sophisticated but easy to use in applications. Android has become very popular in the world since it is an open source and there are no extra fees for Java Virtual Machine (JVM). In today's world, the time is more important for students. Being a product of high technology, mobile phones are more widely used and are becoming more and more popular. Nowadays, buses are used rapidly as a transportation system in the different organization, e.g., school, college, university, business firm, banks, etc. In almost every college, they provide their bus transportation facility. Under this, updating & maintaining daily bus records such as Route, bus no., bus name, bus timing, driver contact, drive name and bus details. So, they need to keep a record of their vehicle or bus running /driving and the driver of that bus or vehicle. This record contains bus and the bus driver's details and they need to keep bus departure, arrival and delay time. They need to keep track of that record in a notebook or register manually. This process is so time-consuming and it needs extra manpower. There is another problem related to students and staff is that they don't know the real-time location of the bus for which they are waiting for and the time it will take to reach their bus stop. And parents also don't know the location of the bus so, they need to wait. When bus is late then there is a late remark for staff that is traveling through the bus. There is another problem regarding vehicle maintains. To know there are a vehicle needs maintains is so hard. We develop College Bus Management System. This system developed on Android Platform using java programming language. The objective of this work is to implement an intelligent college bus management system based on current challenges and problems that is determining the person who is getting into the bus, the time of getting into the bus and the place where he is getting into the bus provided for student bus management system. College Bus Management System Application is a Web And Android application to help campus members detect the current location of the bus in real-time. It is based on client-server technology along with the use of database. One Android user (College Bus Driver) sends real time location of the bus with additional date and time information to the server. The information provided by that user is stored in the database of the server. And other

android users can get the information through the server. The login page is available on the user app for the college administrator. The administrator can keep the record of the bus such as bus no., bus schedule, route info, driver contact, etc. on the database. The administrator also has the permission to manipulate the bus record as per the needs. Student need to login. Student can search for the bus present on the particular stop. College bus management Students get updated on the bus location at certain time interval so that they don't have to wait for the bus being unknown whether the bus is coming or has gone. our system handles all the data about current location of bus and by using this data the real time tracking of bus can be done and this information is then given to remote user who want to know the real time bus information. For development purpose some technologies like GPS (Global Positioning System) and Google maps are used. The system includes server-client based application, which gives real time location of bus on Google Maps. In this proposed system through GPS we will get the bus running distance, distance will be getting from the map API. We can track the bus from where it is coming and where is its next stop so student, staff, parents do not need to wait they can track the bus in the mobile application. Security head needs to give the daily report of transportation to the concerned authority, this report is generated through this system it will be sent to the concerned authority. After some distance for maintains of the vehicle this system will notify to maintain department that particular bus needs maintenance. And using the QR Code, we will get the attendance of students and staff on time so that if the bus was late then the staff cannot get late remark and if a student is not in the bus after a certain stop parent will get notified that their child was not in the bus. Information about the bus acquired by integrating the GPS device and biometric device in the bus. This will help to reduce man power and time for this work. There are many systems are available to bus tracking and monitoring student in bus. This system will be easy to access because there is no any manual work needs to do, making system smart which works automatically. This system also monitors student who are traveling through the bus, View students details. We fix QR Code scanner for monitoring. This report will send to the central system. From this all collected information we are generating report for higher authority so they will check transport status. If there is any mistake or error, they will take action. It also improves data security no one will be change data.

II. LITERATURE SURVEY

The authors Komal Satish Agarwal et al proposed RFID Based Intelligent Bus Management and Monitoring System. They concluded that by implementing this system various problems like underutilization of bus fleet and long waiting time at the bus stops will be reduced. It can improve the quality of the public transportation service effectively [1]. The authors M.A.HANNAN et al, proposed the Intelligent Bus Monitoring and Management System. The experimental results show that the system is intelligent enough and able to provide important information to the authorities for monitoring and management of the bus system [2]. The authors Anuradha Vishwakarma et al, proposed GPS and RFID Based Intelligent Bus Tracking and Management System. In their proposed model they have developed AISFBRM the autonomous informative services for bus route map that is flexible, affordable, customizable and accurate [3]. The authors Shital M.Dharrao et al, recommended the Intelligent Bus stand Monitoring and Control Using Combination of GSM,GPS& IR Sensors. The proposed system provides real time information to monitor bus stand activity done by bus stand management as well as prospective passenger. Proposed system is more efficient and cost effective, it is possible to implement commercially [4]. The authors Sunil Praneel et al, proposed Wireless Sensor Enabled Public Transportation System. The research focuses on the actual RFID hardware implementation such as the passive tags and the reader that is used to track the University Bus as it moves from one station to another station [5]. The authors Ben Ammar Hatem et al, suggested the Bus Management System Using RFID In WSN. In their proposed model, they concluded that it is expected that integration of RFID and WSN will provide new opportunities for applications related to the identification of object over a large area. Possible applications are parking solution, agriculture [6].

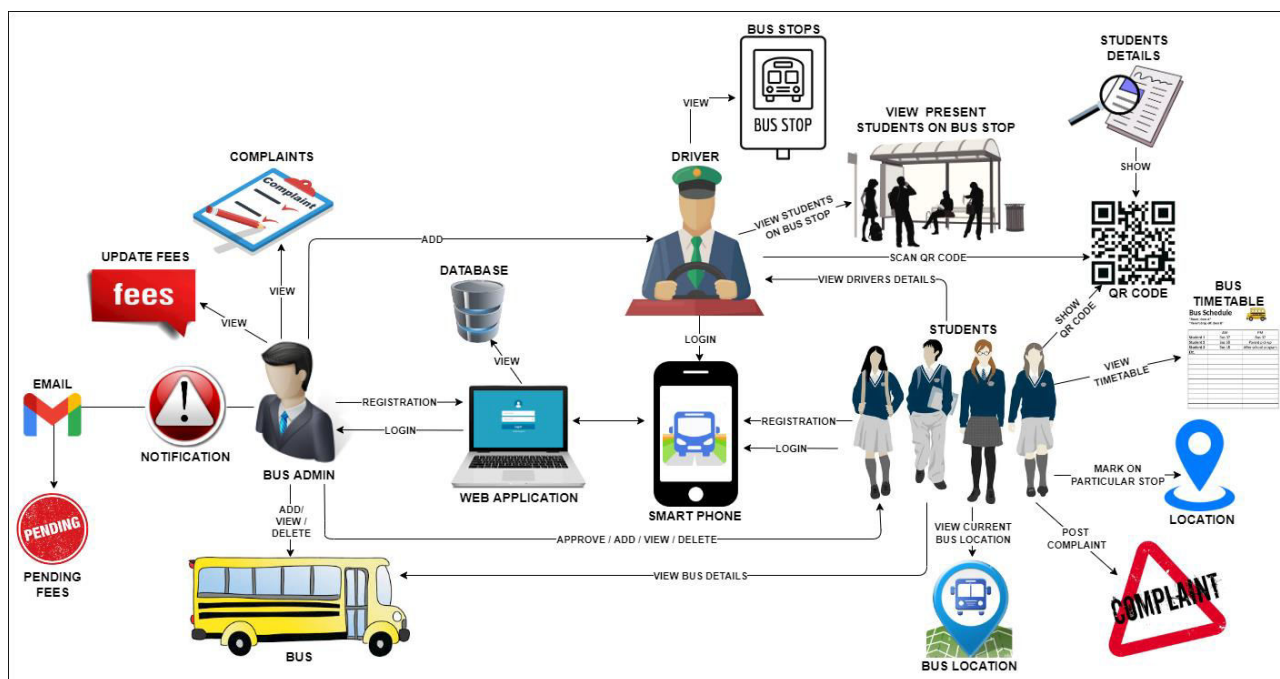
III. EXISTING SYSTEM

In the Existing system Colleges have to manually maintain information regarding College busses and routes. Information relating to student details and bus passes have to be maintained separately. Provide a simpler method to store and access information related to buses and students. Provide a simple interface which will be easily used without much training. Reduce paperwork and make all related information accessible easily.

IV. PROPOSED METHODOLOGY AND DISCUSSION

We tried to implement a system which overcomes the limitations of the existing approach. The Bus Management System is a desktop system aimed at students, college administration to maintain bus facility. The system takes student information as input source and attempts to maintain the bus services. It allows flexibility during these processes. The

system generates exhaustive reports related to the Bus Management i.e. Fees paid, dues, rout no. & bus stop. The reports highlight various bus services and features of the bus, which can be subjected to improvements especially for the college administration to improve bus transport system. The system requires comparatively small amount of resources such as memory, input/output devices and disk space. We are expecting to find the location of the bus and let the users know the location so that one can manage their time efficiently and reach their stop just before the bus arrives or take an alternate means of transport if they miss the bus or they are running late.



The system architecture diagram shows that when the user opens the application, they will need to log in or register if they do not have an account. Once they successfully log in, they will see the home page which will display their current location on a map as well as the current location of their assigned bus. The current location of their assigned bus will be obtained by getting the longitude and latitude values of the bus from the database with is updated from the global positioning system and the location of the bus is displayed on the user's map. The driver's details such as their name and number will also be retrieved and displayed to the user, in case they need to contact the driver. Once the location is displayed on the map, the estimated time for the bus to reach the user's location will also be displayed. This will record the time it took the bus previously to reach the user's stop from its current location. The user can also set an alarm if they want to be notified when the bus is at a specific stop or a certain amount of time before the bus reaches their stop.

V. CONCLUSION

The proposed system is implemented practically in the bus and the working is monitored and observed that it has maximum functional capability. This application will make it easier for users to students to track the real-time location of their buses. This ensures that the user arrives on time to the university and does not get delayed trying to find a bus or wondering if they missed their bus. It is useful to first-year students who might not know the bus might arrive that their stop and lets them know if they have missed their bus in which case they can find other buses that might pass by their stop. This system only gives the latitude and longitude of the place, in future we are trying to implement the system which gives the name of the place.

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