Vei Transport Attendance Management

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Abstract- *The project "COLLEGE TRANSPORT APP" is designed as an android app with SQLite as backend. The transport management process is to be easier for transport to make allocate bus to students. This system is to maintain that the information of student's attendance, students information, bus incharge, bus driver, bus allocation, principle, HOD and bus arrival time. Until recently this was managed through a manual system. This had its limitations with regard to application process, approval system, etc. The computerized transport management system was introduced to overcome the limitations of the manual system. The main aim of the project is to maintain transport activities of the college through android application. The administrator maintains bus details and student's details and checks for students who got absent and present. Through this app HOD and principle can get to know about transport details including attendance and arrival time.*

The principal and HOD login to the android application and view all the available bus details, incharge details, arrival details, driver details, student details and their attendance details. Then they easily be come to know about all transport details with less effort. Admin can easily maintain reports such as student report, bus reports and attendance report and etc. Thus the applicationand view all the available bus details, incharge details, arrival details, driver details, student details and their attendance details. Then they easily be come to know about all transport details with less effort. Admin can easily maintain reports such as student report, bus reports and attendance report and etc. Thus the application helps to both transport incharge and head of departments during the maintenance of transports activities.

I. SYSTEM ANALYSIS

In existing system the college transport activities are carried out using excel sheets. It leads to data loss. Admin needs to put more effort to maintain all the transaction manually. In addition to that, head of departments doesn't know available bus details and attendance details when they need. They needs to directly communicate with transport admin to know al the transport related details. There is lot of difficulties available in exiting system. So there is a need for proposed system to overcome the drawbacks of existing system.

1.1 DRAWBACKS OF EXISTING SYSTEM

The existing system has following disadvantages.

- There is no systemized work.
- Time consumption is more.
- Large volume of data cannot be stored.
- Loss of data and difficulty to handle the data.
- There is no user-friendlysystem.
- All the process is done by manually. So there is no security.

1.2PROPOSED SYSTEM

The designing of android application will be compatible to the existing system with the system which is more users friendly and more GUI (Graphical User Interface) oriented. At present is managed manually by the incharge. This project deals with the problems faces in an existing system and managing all the transport related details through android app. This user friendly design helps the transport admin to make the attendance for students easier.

1.2.1 BENEFITS OF THE PROPOSED SYSTEM

The proposed system has following advantages,

- Large volume of data can be stored with ease.
- Security is assured.
- Maintenance of file is flexible.
- Records stored are updated now and then.
- Reports can be viewed with ease.

1.3 SYSTEM ENVIRONMENT

1.3.1 HARDWARE SPECIFICATION

This section gives the details and specification of the hardware on which the system is expected to work.

Processor	:	i5 processor
RAM	:	8 GB SD RAM
Monitor	:	17" Color
Hard disk	:	1 TB
Keyboard	:	Standard102 keys

Mouse : Optical mouse

1.3.2 SOFTWARE SPECIFICATION

This section gives the details of the software that are used for the development.

Environment : Android Studio
Front-End : Android 4.0.3
Coding : JDK 1.6
Operating System: Windows 10/11
Implementation OS: Android 4.0.3
Database : SQLite

1.4 MODULE DESCRIPTION

ADMIN

- Add Principal
- Add HOD
- Add Bus
- Add Bus Incharge
- Add Student
- View Principal
- View HOD
- View Buses
- View Bus Incharge
- View Students
- Allocate Bus to Students
- View Students Allocated

PRINCIPAL

- View HOD
- View Buses
- View Bus Incharge
- View students
- View Students Allocated(Bus)
- View Attendance
- Attendance(Search)
- View Principal
- Change Password

REPRESENTATIVE/BUS INCHARGE

- Bus Stops Entry
- Attendance Entr

1.4.1 ADMIN

ADD PRINCIPAL

In this Module, admin can add the principal details such as name, qualification, experience, gender, age, mailid, mobile no, password, and college name. These details are stored into a principal table.

ADD HOD

In this module, admin can add the HOD details such as name, qualification, experience, gender, age, department, mailid, mobile no, password, and college name. These details are stored into a HOD table.

ADD BUS

In this module, admin can add the Bus details such as bus id, bus no, college name, manufacture, year of make/color, no.of.seats, description, image, and registration no. These details are stored into a bus table.

ADD BUS INCHARGE

In this module, admin can add the Bus Incharge details such as name, qualification, experience, gender, age, mailid, mobile no, password, and college name. These details are stored into a bus incharge table

ADD STUDENT

In this module, admin can add the Student details such as RegisterNo, student name, department, studying year, mailid, parent MobileNo, college name. These details are stored into a Student table.

VIEW PRINCIPAL

In this Module, admin can view the principal details such as name, qualification, experience, gender, age, mailid, mobile no, password, and college name. These details are retrieved from a principal table.

VIEW HOD

In this module, admin can view the HOD details such as name, qualification, experience, gender, age, department, mailid, mobile no, password, and college name. These details are retrieved from a HOD table.

VIEW BUS

In this module, admin can view the Bus details such as bus id, bus no, college name, manufacture, year of

make/color, no.of.seats, description, image, and registration no. These details are retrieved from a bus table.

VIEW BUS INCHARGE

In this module, admin can view the Bus Incharge details such as name, qualification, experience, gender, age, mailid, mobile no, password, and college name. These details are retrieved from a bus incharge table.

VIEW STUDENT

In this module, admin can view the Student details such as RegisterNo, student name, department, studying year, mailid, parent MobileNo, college name. These details are retrieved from a Student table.

ALLOCATE BUS TO STUDENTS

In this module, admin can allocate the bus to students details such as college name, bus id/bus no, RegisterNo. These details are stored into a allocate bus table.

VIEW STUDENTS ALLOCATED

In this module, admin can view students allocated the bus details such as entry date, college name, bus id/bus no, RegisterNo. These details are retrieved from a allocate bus table.

1.4.2 PRINCIPAL

VIEW HOD

In this module, principal can view the HOD details such as name, qualification, experience, gender, age, department, mailid, mobile no, password, and college name. These details are retrieved from a HOD table.

VIEW BUS

In this module, principal can view the Bus details such as bus id, bus no, college name, manufacture, year of make/color, no.of.seats, description, image, and registration no. These details are retrieved from a bus table.

VIEW BUS INCHARGE

In this module, principal can view the Bus Incharge details such as name, qualification, experience, gender, age, mailid, mobile no, password, and college name. These details are retrieved from a bus incharge table.

VIEW STUDENT

In this module, principal can view the Student details such as RegisterNo, student name, department, studying year, mailid, parent MobileNo, college name. These details are retrieved from a Student table.

VIEW STUDENTS ALLOCATED

In this module, principal can view students allocated the bus details such as entry date, college name, bus id/bus no, RegisterNo. These details are retrieved from a allocate bus table.

VIEW ATTENDANCE

In this module, principal can view the attendance details such as the S.No, Register No, student name, bus no, entry date, status. These details are retrieved from a attendance table.

ATTENDANCE (SEARCH)

In this module, principal can view the search attendance for student present/absent details such as RegisterNo/student name. These details are retrieved from attendance table.

VIEW PRINCIPAL

In this Module, principal can view the principal details such as name, qualification, experience, gender, age, mailid, mobile no, password, and college name. These details are retrieved from a principal table

1.4.3 REPRESENTATIVE/BUS INCHARGE

BUS STOPS ENTRY

In this module, representative can add the bus stops details such as buss no, place, stage, morning timing, evening timing, amount, driver name, mobile no. These details are stored into bus stop table.

ATTENDANCE ENTRY

In this module, representative can add the attendance details such as bus no, register no, status. These details are stored into attendance table.

VIEW BUS STOPS

In this module, representative can view the bus no, place, stages, morning timing, evening timing, amount, driver name, mobile no. These details are retrieved from a bus stop table.

VIEW ATTENDANCE

In this module, representative can view the attendance details such as the S.No, Register No, student name, bus no, entry date, status. These details are retrieved from attendance table.

ATTENDANCE (SEARCH)

In this module, representative can view the search attendance for student present/absent details such as RegisterNo/student name. These details are retrieved from attendance table

1.5 SOFTWARE DESCRIPTION

1.5.1 FORNT END

INTRODUCTION

Android is a mobile operating system (OS) currently developed by Google, based on the Linux kernel and designed primarily for touchscreen mobile devices such as smartphones and tablets. Android's user interface is based on direct manipulation, using touch gestures that loosely correspond to real-world actions, such as swiping, tapping and pinching, to manipulate on-screen objects, along with a virtual keyboard for text input. In addition to touchscreen devices, Google has further developed Android TV for televisions, Android Auto for cars, and Android Wear for wrist watches, each with a specialized user interface. Variants of Android are also used on notebooks, game consoles, digital cameras, and other electronics. As of 2015, Android has the largest installed base of all operating systems. It is the second most commonly used mobile operating system in the United States, while iOS is the first.Initially developed by Android, Inc., which Google bought in 2005, Android was unveiled in 2007, along with the founding of the Open Handset Alliance – a consortium of hardware, software, and telecommunication companies devoted to advancing open standards for mobile devices. As of July 2013, the Google Play store has had over one million Android applications ("apps") published, and over 50 billion applications downloaded.An April–May 2013 survey of mobile application developers found that 71% of developers create applications for Android, and a 2015 survey found that 40% of full-time professional developers see Android as their priority target platform, which is comparable to Apple's iOS on 37% with both platforms far above others. At Google I/O 2014, the company revealed that there were over one billion active monthly Android users, up from 538 million in June 2013.Android's source code is released by Google under open source licenses, although most Android devices ultimately ship with a combination of open source and proprietary software, including proprietary software required for accessing Google services.Android is popular with technology companies that require a ready-made, low-cost and customizable operating system for high-tech devices. Its open nature has encouraged a large community of developers and enthusiasts to use the open-source code as a foundation for community-driven projects, which add new features for advanced users or bring Android to devices originally shipped with other operating systems. At the same time, as Android has no centralised update system most Android devices fail to receive security updates: research in 2015 concluded that almost 90% of Android phones in use had known but unpatched security vulnerabilities due to lack of updates and support. The success of Android has made it a target for patent litigation as part of the so-called "smartphone wars" between technology companies.

Android, Inc. was founded in Palo Alto, California in October 2003 by Andy Rubin (co-founder of Danger), Rich Miner (co-founder of Wildfire Communications, Inc.), Nick Sears (once VP at T-Mobile), and Chris White (headed design and interface development at WebTV) to develop, in Rubin's words, "smarter mobile devices that are more aware of its owner's location and preferences". The early intentions of the company were to develop an advanced operating system for digital cameras.

Though, when it was realized that the market for the devices was not large enough, the company diverted its efforts toward producing a smartphone operating system that would rival Symbian and Microsoft Windows Mobile. Despite the past accomplishments of the founders and early employees, Android Inc. operated secretly, revealing only that it was working on software for mobile phones. That same year, Rubin ran out of money. Steve Perlman, a close friend of Rubin, brought him $10,000 in cash in an envelope and refused a stake in the company.In July 2005, Google acquired Android Inc. for at least $50 million, whose key employees, including Rubin, Miner and White, stayed at the company after the acquisition. Not much was known about Android Inc. at the time, but many assumed that Google was planning to enter the mobile phone market with this move.

At Google, the team led by Rubin developed a mobile device platform powered by the Linux kernel. Google marketed the platform to handset makers and carriers on the

promise of providing a flexible, upgradable system. Google had lined up a series of hardware component and software partners and signaled to carriers that it was open to various degrees of cooperation on their part.Speculation about Google's intention to enter the mobile communications market continued to build through December 2006. An earlier prototype codenamed "Sooner" had a closer resemblance to a BlackBerry phone, with no touchscreen, and a physical, QWERTY keyboard, but was later re-engineered to support a touchscreen, to compete with other announced devices such as the 2006 LG Prada and 2007 Apple iPhone. In September 2007, InformationWeek covered an Evalueserve study reporting that Google had filed several patent applications in the area of mobile telephony.Eric Schmidt, Andy Rubin and Hugo Barra at a 2012 press conference announcing Google's Nexus 7 table.On November 5, 2007, the Open Handset Alliance, a consortium of technology companies including Google, device manufacturers such as HTC, Sony and Samsung, wireless carriers such as Sprint Nextel and T-Mobile, and chipset makers such as Qualcomm and Texas Instruments, unveiled itself, with a goal to develop open standards for mobile devices. That day, Android was unveiled as its first product, a mobile device platform built on the Linux kernel. The first commercially available smartphone running Android was the HTC Dream, released on October 22, 2008.Since 2008, Android has seen numerous updates which have incrementally improved the operating system, adding new features and fixing bugs in previous releases. Each major release is named in alphabetical order after a dessert or sugary treat; for example, version 1.5 "Cupcake" was followed by 1.6 "Donut". In 2010, Google launched its Nexus series of devices – a line of smartphones and tablets running the Android operating system, and built by manufacturing partners. HTC collaborated with Google to release the first Nexus smartphone, the Nexus One.

Google has since updated the series with newer devices, such as the Nexus 5 phone (made by LG) and the Nexus 7 tablet (made by Asus). Google releases the Nexus phones and tablets to act as their flagship Android devices, demonstrating Android's latest software and hardware features. From 2013 until 2015, Google offered several Google Play Edition devices over Google Play. While not carrying the Google Nexus branding, these were Google-customized Android phones and tables that also ran the latest version of Android, free from manufacturer or carrier modifications.

From 2010 to 2013, Hugo Barra served as product spokesperson, representing Android at press conferences and Google I/O, Google's annual developer-focused conference. Barra's product involvement included the entire Android ecosystem of software and hardware, including Honeycomb, Ice Cream Sandwich, Jelly Bean and KitKat operating system launches, the Nexus 4 and Nexus 5 smartphones, the Nexus 7 and Nexus 10 tablets, and other related products such as Google Now and Google Voice Search, Google's speech recognition product comparable to Apple's Siri. In 2013, Barra left the Android team for Chinese smartphone maker Xiaomi. The same year, Larry Page announced in a blog post that Andy Rubin had moved from the Android division to take on new projects at Google. He was replaced by SundarPichai who became the new head of Android and Chrome OS, and, later, by Hiroshi Lockheimer when Pichai became CEO of Google.In 2014, Google launched Android One, a line of smartphones mainly targeting customers in the developing world. In May 2015, Google announced Project Brillo as a cut-down version of Android that uses its lower levels (excluding the user interface), intended for the "Internet of Things" (IoT) embedded systems.

1.5.2 INTERFACE

Notifications are accessed by sliding from the top of the display; individual notifications can be dismissed by sliding them away, and may contain additional functions as seen on this example of the "missed call" notification from an older version of Android.Android's default user interface is based on direct manipulation, using touch inputs, that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects, and a virtual keyboard. The response to user input is designed to be immediate and provides a fluid touch interface, often using the vibration capabilities of the device to provide haptic feedback to the user. Internal hardware such as accelerometers, gyroscopes and proximity sensors are used by some applications to respond to additional user actions, for example adjusting the screen from portrait to landscape depending on how the device is oriented, or allowing the user to steer a vehicle in a racing game by rotating the device, simulating control of a steering wheel.

Android devices boot to the homescreen, the primary navigation and information "hub" on Android devices that is analogous to the desktop found on PCs (Android also runs on regular PCs, as described below). Android homescreens are typically made up of app icons and widgets; app icons launch the associated app, whereas widgets display live, auto-updating content such as the weather forecast, the user's email inbox, or a news ticker directly on the homescreen. A homescreen may be made up of several pages that the user can swipe back and forth between, though Android's homescreen interface is heavily customisable, allowing the user to adjust the look and feel of the device to their tastes.

Third-party apps available on Google Play and other app stores can extensively re-theme the homescreen, and even mimic the look of other operating systems, such as Windows Phone. Most manufacturers, and some wireless carriers, customise the look and feel of their Android devices to differentiate themselves from their competitors. Applications that handle interactions with the homescreen are called "launchers" because they, among other purposes, launch the applications installed on a device.

Present along the top of the screen is a status bar, showing information about the device and its connectivity. This status bar can be "pulled" down to reveal a notification screen where apps display important information or updates, such as a newly received email or SMS text, in a way that does not immediately interrupt or inconvenience the user. Notifications are persistent until read (by tapping, which opens the relevant app) or dismissed by sliding it off the screen. Beginning on Android 4.1, "expanded notifications" can display expanded details or additional functionality; for instance, a music player can display playback controls, and a "missed call" notification provides buttons for calling back or sending the caller an SMS message.Android provides the ability to run applications which change the default launcher and hence the appearance and externally visible behaviour of Android. These appearance changes include a multi-page dock or no dock

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1.5.3 APPLICATIONS

Applications ("apps"), which extend the functionality of devices, are written using the Android software development kit (SDK) and, often, the Java programming language that has complete access to the Android APIs. Java may be combined with C/C++, together with a choice of non-default runtimes that allow better C++ support; the Go programming language is also supported since its version 1.4, which can also be used exclusively although with a restricted set of Android APIs. The SDK includes a comprehensive set of development tools, including a debugger, software libraries, a handset emulator based on QEMU, documentation, sample code, and tutorials. Initially, Google's supported integrated development environment (IDE) was Eclipse using the Android Development Tools (ADT) plugin; in December 2014, Google released Android Studio, based on IntelliJ IDEA, as its primary IDE for Android application development. Other development tools are available, including a native development kit (NDK) for applications or extensions in C or C++, Google App Inventor, a visual environment for novice programmers, and various cross platform mobile web applications frameworks. In January 2014, Google unveiled an framework based on Apache Cordova for porting Chrome HTML 5 web applications to Android, wrapped in a native application shell.

Android has a growing selection of third-party applications, which can be acquired by users by downloading and installing the application's APK (Android application package) file, or by downloading them using an application store program that allows users to install, update, and remove applications from their devices. Google Play Store is the primary application store installed on Android devices that comply with Google's compatibility requirements and license the Google Mobile Services software. Google Play Store allows users to browse, download and update applications published by Google and third-party developers; As of July 2013, there are more than one million applications available for Android in Play Store. As of May 2013, 48 billion applications have been installed from Google Play Store and in July 2013, 50 billion applications were installed. Some carriers offer direct carrier billing for Google Play application purchases, where the cost of the application is added to the user's monthly bill.

Due to the open nature of Android, a number of third-party application marketplaces also exist for Android, either to provide a substitute for devices that are not allowed to ship with Google Play Store, provide applications that cannot be offered on Google Play Store due to policy violations, or for other reasons. Examples of these third-party stores have included the Amazon Appstore, GetJar, and SlideMe. F-Droid, another alternative marketplace, seeks to only provide applications that are distributed under free and open source licenses.

1.5.4 MEMORY MANAGEMENT

Since Android devices are usually battery-powered, Android is designed to manage memory (RAM) to keep power consumption at a minimum, in contrast to desktop operating systems which generally assume they are connected to unlimited mains electricity. When an Android application is no longer in use, the system will automatically suspend it in memory; while the application is still technically "open", suspended applications consume no resources and sit idly in the background until needed again. This brings a dual benefit by increasing the general responsiveness of Android devices, since applications do not need to be closed and reopened from scratch each time.

Android manages the applications stored in memory automatically: when memory is low, the system will begin killing applications and processes that have been inactive for a while, in reverse order since they were last used (oldest first).

This process is designed to be invisible to the user, so that users do not need to manage memory or the killing of applications themselves.

1.5.5HARDWARE

The main hardware platform for Android is the ARM architecture (ARMv7 and ARMv8-A architectures), with x86 and MIPS architectures also officially supported in later versions of Android. Since Android 5.0 "Lollipop", 64-bit variants of all platforms are supported in addition to the 32-bit variants. Unofficial Android-x86 project used to provide support for the x86 and MIPS architectures ahead of the official support. Since 2012, Android devices with Intel processors began to appear, including phones and tablets. While gaining support for 64-bit platforms, Android was first made to run on 64-bit x86 and then on ARM64.Requirements for the minimum amount of RAM for devices running Android 5.1 range from 512 MB of RAM for normal-density screens, to about 1.8 GB for high-density screens. The recommendation for Android 4.4 is to have at least 512 MB of RAM, while for "low RAM" devices 340 MB is the required minimum amount that does not include memory dedicated to various hardware components such as the baseband processor. Android 4.4 requires a 32-bit ARMv7, MIPS or x86 architecture processor (latter two through unofficial ports), together with an OpenGL ES 2.0 compatible graphics processing unit (GPU). Android supports OpenGL ES 1.1, 2.0, 3.0 and 3.1. Some applications may explicitly require a certain version of the OpenGL ES, and suitable GPU hardware is required to run such applications.Android devices incorporate many optional hardware components, including still or video cameras, GPS, orientation sensors, dedicated gaming controls, accelerometers, gyroscopes, barometers, magnetometers, proximity sensors, pressure sensors, thermometers, and touchscreens. Some hardware components are not required, but became standard in certain classes of devices, such as smartphones, and additional requirements apply if they are present. Some other hardware was initially required, but those requirements have been relaxed or eliminated altogether. For example, as Android was developed initially as a phone OS, hardware such as microphones were required, while over time the phone function became optional. Android used to require an autofocus camera, which was relaxed to a fixed-focus camera if present at all, since the camera was dropped as a requirement entirely when Android started to be used on set-top boxes.In addition to running on smartphones and tablets, several vendors run Android natively on regular PC hardware with a keyboard and mouse. In addition to their availability on commercially available hardware, similar PC hardware–friendly versions of Android are freely available from the Android-x86 project, including customized Android 4.4. Using the Android emulator that is part of the Android SDK, or by using BlueStacks or Andy, Android can also run non-natively on x86.

Chinese companies are building a PC and mobile operating system, based on Android, to "compete directly with Microsoft Windows and Google Android". The Chinese Academy of Engineering noted that "more than a dozen" companies were customising Android following a Chinese ban on the use of Windows 8 on government PCs.

1.5.6 DEVELOPMENT

Android is developed in private by Google until the latest changes and updates are ready to be released, at which point the source code is made available publicly. This source code will only run without modification on select devices, usually the Nexus series of devices. The source code is, in turn, adapted by OEMs to run on their hardware. Android's source code does not contain the often proprietary device drivers that are needed for certain hardware components.In 2007, the green Android logo was designed for Google by a graphic designer Irina Blok. The design team was tasked with a project to create a universally identifiable icon with the specific inclusion of a robot in the final design. As Android is open-sourced, it was agreed that the logo should be likewise, and since its launch the green logo has been reinterpreted into countless variations on the original design.

II. BACK END

2.1INRODUCTON

SQLite is a relational database management system contained in a C programming library. In contrast to many other database management systems, SQLite is not a client–server database engine. Rather, it is embedded into the end program.SQLite is ACID-compliant and implements most of the SQL standard, using a dynamically and weakly typed SQL syntax that does not guarantee the domain integrity.SQLite is a popular choice as embedded database software for local/client storage in application software such as web browsers. It is arguably the most widely deployed database engine, as it is used today by several widespread browsers, operating systems, and embedded systems, among others. SQLite has bindings to many programming languages.

2.2 DESIGN

Unlike client–server database management systems, the SQLite engine has no standalone processes with which the application program communicates. Instead, the SQLite

library is linked in and thus becomes an integral part of the application program. The library can also be called dynamically. The application program uses SQLite's functionality through simple function calls, which reduce latency in database access: function calls within a single process are more efficient than inter-process communication. SQLite stores the entire database (definitions, tables, indices, and the data itself) as a single cross-platform file on a host machine. It implements this simple design by locking the entire database file during writing. SQLite read operations can be multitasked, though writes can only be performed sequentially.

Due to the server-less design, SQLite applications require less configuration than client-server databases. SQLite is called zero-conf because it does not require service management (such as startup scripts) or access control based on GRANT and passwords.Access control is handled by means of File system permissions given to the database file itself. Databases in client-server systems use file system permissions which give access to the database files only to the daemon process.Another implication of the serverless design is that several processes may need to be able to write to the database file. In server-based databases, several writers will all connect to the same daemon, which is able to handle its locks internally. SQLite on the other hand has to rely on file-system locks. It has less knowledge of the other processes that are accessing the database at the same time. Therefore, SQLite is not the preferred choice for write-intensive deployments. However, for simple queries with little concurrency, SQLite performance profits from avoiding the overhead of passing its data to another process.

SQLite uses PostgreSQL as a reference platform. “What would PostgreSQL do” is used to make sense of the SQL standard. One major deviation is that, with the exception of primary keys, SQLite does not enforce type checking; the type of a value is dynamic and not strictly constrained by the schema (although the schema will trigger a conversion when storing, if such a conversion is potentially reversible). SQLite strives to follow Postel's Rule.

SQLite implements most of the SQL-92 standard for SQL but it lacks some features. For example, it partially provides triggers, and it can't write to views (however it provides INSTEAD OF triggers that provide this functionality). While it provides complex queries, it still has limited ALTER TABLE function, as it can't modify or delete columns.

SQLite uses an unusual type system for an SQL-compatible DBMS; instead of assigning a type to a column as in most SQL database systems, types are assigned to individual values; in language terms it is dynamically typed. Moreover, it is weakly typed in some of the same ways that Perl is: one can insert a string into an integer column (although SQLite will try to convert the string to an integer first, if the column's preferred type is integer). This adds flexibility to columns, especially when bound to a dynamically typed scripting language.

However, the technique is not portable to other SQL products. A common criticism is that SQLite's type system lacks the data integrity mechanism provided by statically typed columns in other products. The SQLite web site describes a "strict affinity" mode, but this feature has not yet been added. However, it can be implemented with constraints like CHECK(typeof(x)='integer').

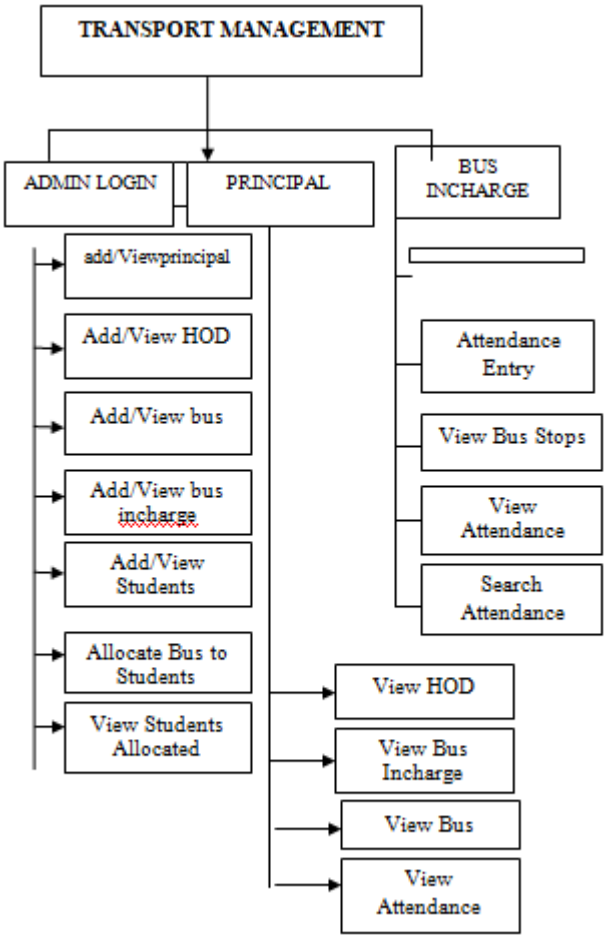
Several computer processes or threads may access the same database concurrently. Several read accesses can be satisfied in parallel. A write access can only be satisfied if no other accesses are currently being serviced. Otherwise, the write access fails with an error code (or can automatically be retried until a configurable timeout expires). This concurrent access situation would change when dealing with temporary tables. This restriction is relaxed in version 3.7 when write-ahead logging (WAL) is turned on enabling concurrent reads and writes.

SQLite version 3.7.4 first saw the addition of the FTS4(full text search) module, which features enhancements over the older FTS3 module. FTS4 allows users to perform full text searches on documents similar to how search engines search webpages. Version 3.8.2 added support for creating tables without rowid, which may provide space and performance improvements. Common table expressions support was added to SQLite in version 3.8.3.

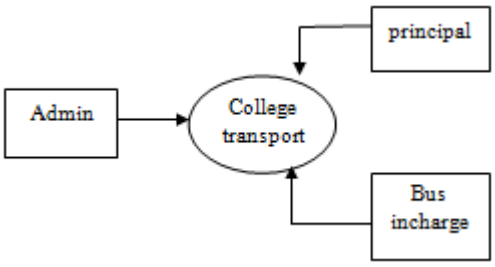
SQLite with full Unicode function is optional.

III. SYSTEM DESIGN

3.1SYSTEM FLOW DIAGRAM



3.2 DATA FLOW DIAGRAM



3.4 DATA BASE DESIGN

The most important consideration in designing the database is how information will be used. The main objectives of designing a database are,

Data Integration

In a database, information from several files are coordinated, accessed and operated upon as through it is in a single file. Logically, the information are centralized, physically, the data may be located on different devices, connected through data communication facilities.

Data Integrity

Data integrity means storing all data in one place only and how each application to access it. This approach results in more consistent information, one update being sufficient to achieve a new record status for all applications, which use it. This leads to less data redundancy; data items need not be duplicated; a reduction in the direct access storage requirement.

Data Independence

Data independence is the insulation of application programs from changing aspects of physical data organization. This objective seeks to allow changes in the content and organization of physical data without reprogramming of applications and to allow modifications to application programs without reorganizing the physical data.

3.5 TABLE STRUCTURE

TABLE NAME : Admin
Primary Key : Admin Id

FIELD NAME	TYPE	SIZE	DESCRIPTION
Admin id	varchar	15	Primary key
Password	varchar	15	Not Null

IV. INPUT DESIGN

Input design is the process of converting user-originated inputs to a computer understandable format. Input design is one of the most expensive phases of the operation of computerized system and is often the major problem of a system. A large number of problems with a system can usually be tracked backs to fault input design and method. Every moment of input design should be analyzed and designed with utmost care. The design of the input should be made the input as the over to the numerous networks in the reliable area that should be passed as the installation in the remote network. It has the following constraints in the input database.All the files from the disk should be acquired by data.It is suitable to more

available data clearance and made available.The menu of design should be understandable and it is in the right format.The system takes input from the users, processes it and produces an output. Input design is link that ties the information system into the world of its users. The system should be user-friendly to gain appropriate information to the user.

System analysis decide the following input design details like, what data to input, what medium to use, how the data should be arranged or coded, data items and transactions needing validations to detect errors and at last the dialogue to guide user in providing input.Input data of a system may not be necessarily is raw data captured in the system from scratch. These can also be the output of another system or subsystem. The design of input covers all the phases of input from the creation of initial data to actual entering of the data to the system for processing.The design of inputs involves identifying the data needed, specifying the characteristics of each data item, capturing and preparing data for computer processing and ensuring correctness of data. The following forms are present in the project.

V. OUTPUT DESIGN

Output design generally refers to the results and information that are generated by the system for many end-users; output is the main reason for developing the system and the basis on which they evaluate the usefulness of the application the output is designed in such a way that it is attractive, convenient and informative. Forms are designed in Android with various features, which make the console output more pleasing. As the outputs are the most important sources of information to the users, better design should improve the system's relationships with user and also will help in decision-making. Form design elaborates the way of output is presented and the layout available for capturing information.

VI. TESTING AND IMPLEMENTATION

6.1 SYSTEM TESTING

After the source code has been completed, documented as related data structures. Completed the project has to undergo testing and validation where there is subtitle and definite attempt to get errors. The project developer treads lightly, designing and execution test that will demonstrates that the program works rather than uncovering errors, unfortunately errors will be present and if the project developer doesn't find them, the user will find out.The project developer is always responsible for testing the individual units i.e. modules of the program. In many cases developer also conducts integration testing i.e. the testing step that leads to the construction of the complete program structure. This project has undergone the following testing procedures to ensure its correctness.

1.Unit testing
2.User Acceptance Testing
3.Integration testing

6.1.1 UNIT TESTING

In unit testing, we have to test the programs making up the system. For this reason, Unit testing sometimes called as Program testing. The software units in a system are the modules and routines that are assembled and integrated to perform a specific function, Unit testing first on the modules independently of one another, to locate errors. This enables, to detect errors in coding and logic that are contained with the module alone. The testing was carried out during programming stage itself.

6.1.2 USER ACCEPTANCE TESTING

In these testing procedures the project is given to the customer to test whether all requirements have been fulfilled and after the user is fully satisfied. The project is perfectly ready. If the user makes request for any change and if they found any errors those all errors has to be taken into consideration and to be correct it to make a project a perfect project.

6.1.3INTEGRATION TESTING

Integration testing is any type of software testing that seeks to verify the interfaces between components against a software design. Software components may be integrated in an iterative way or all together.Normally the former is considered a better practice since it allows interface issues to be localized more quickly and fixed. Integration testing works to expose defects in the interfaces and interaction between integrated components (modules). Progressively larger groups of tested software components corresponding to elements of the architectural design are integrated and tested until the software works as a system.

VII. SYSTEM IMPLEMENTATION

When the initial design was done for the system, the client was consulted for the acceptance of the design so that further proceedings of the system development can be carried on. After the development of the system a demonstration was given to them about the working of the system. The aim of the system illustration was to identify any malfunction of the

system. After the management of the system was approved the system implemented in the concern, initially the system was run parallel with existing manual system. The system has been tested with live data and has proved to be error free and user friendly.Implementation is the process of converting a new or revised system design into an operational one when the initial design was done by the system; a demonstration was given to the end user about the working system. This process is uses to verify and identify any logical mess working of the system by feeding various combinations of test data. After the approval of the system by both end user and management the system was implemented. System implementation is made up of many activities. The six major activities as follows.

7.1 Coding

Coding is the process of whereby the physical design specifications created by the analysis team turned into working computer code by the programming team.

7.2 Testing

Once the coding process is begin and proceed in parallel, as each program module can be tested.

7.3 Installation

Installation is the process during which the current system is replaced by the new system. This includes conversion of existing data, software, and documentation and work procedures to those consistent with the new system.

7.4 Documentation

It is result from the installation process, user guides provides the information of how the use the system and its flow.

7.5 Training and support

Training plan is a strategy for training user so they quickly learn to the new system. The development of the training plan probably began earlier in the project.

VIII. CONCLUSION

Through this application, the activities of the college transport management are carried out automatically without any physical records. This interface helps the admin to allocate the student to corresponding bus easily. The bus incharge can maintain all the records with less effort without any hard copies. This project includes the feature of updating of fee structure. Since the application is designed as android application, any device with android operating system can be used to view the application. The change password helps to protect the accessibility of students. The application is tested well and end users satisfaction is found to be more. The application is designed such that minimum smart phone knowledge is required for end users to use the app.

IX. SCOPE FOR FUTURE DEVELOPMENT

The application become useful if the below enhancements are made in future.

1. If the application is designed as web service, it can be integrated in many web sites.
2. The consolidate complaints details can be send as mail to admin.
3. The application is developed such that above said enhancements can be integrated with current modules.

REFERENCES

[1] http://www.android.com
[2] https://en.wikipedia.org/wiki/Android_%28operating_system%29
[3] https://en.wikipedia.org/wiki/SQLite
[4] http://www.tutorialpoints.com15