Intelligent Bus Tracking and Management System

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*Abstract--*The "Intelligent Bus Tracking & Management System" is a system which reduces the paperwork required in the office .It helps to manage all the data related to students and bus digitally, second module is it gives the realtime location of the bus so that we can easily findout bus location. Third module is student attendance in the bus, when student enters into the bus his attendance get marked and same time notification is send to the parents which increases security of the students.

I. INTRODUCTION

In today's world the child safety is bigger issue . To provide ensurity to the parents that their child is safe while travelling through bus, the "Intelligent Bus Tracking & Management System" is a system that will mainly focuses on child safety. Parents are more careful about their child's safety. So we are developing the system that will provide tracking of school bus so the parents as well as college admin will get the location of bus. Also the parents will get the notification through a message of whether their child is in bus or not, how much time it will take to reach the stop. Each child's and parent information is maintained .

We had implemented different sections for Admin Parent and Driver. Under the each section information is maintained to the respective login user. In admin login we can see Student information and Bus maintenance, cost estimation is one of the major sections in admin login which keeps the record of all the expenditure done on the bus. We can upload the bill of the expenditure to maintain the record of the bus. In parent login we can see Tracking and Notification section. In tracking parent can track the bus to get the information of child and can also get the notification if the bus is near to the stop so that they can quickly come to the stop. In driver login we have two sections Attendance and Cost updating. Attendance of student is done and driver updates the bill to maintain the record.

II. LITERATURE REVIEW

Due to non-availability of the prior information about bus arrival schedule, people have to wait for longer on bus stops. Providing tracking information for security purpose and avoiding use of bus for wrong purpose. Avoid paper work of maintaining bus management related task .Parents are also kept updated using this service. Get average and real-time speed. It go along with a safety of child .Parents on other side can be sent alerts as to when the bus is reaching their respective stop.

III. METHODOLOGY

1) Management Of Bus operation
2) Admit Student for bus
3) Record maintenance about bus fee and stops
4) Attendance monitoring
5) Real Time notification to parent
6) Detect And Recognize Location of bus

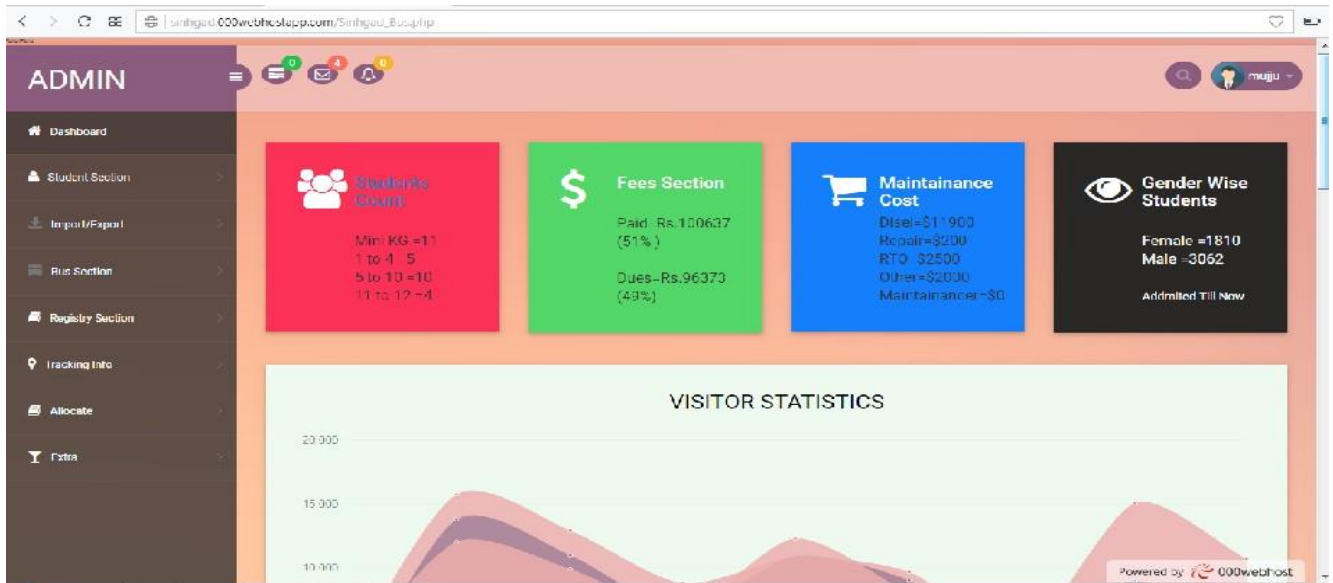## IV. EXECUTION

1 .Admin :

Fig1 .Admin module

In this module we can manage all the information related to students , routes, buses etc. Only admin can see the all information. Admin can update ,delete, add information of students and buses.

2. Student:

Fig2 .Student section

In this section all information related to student is present .In this we can add student, remove, search the students. It contains class, division , name , address etc. Information.
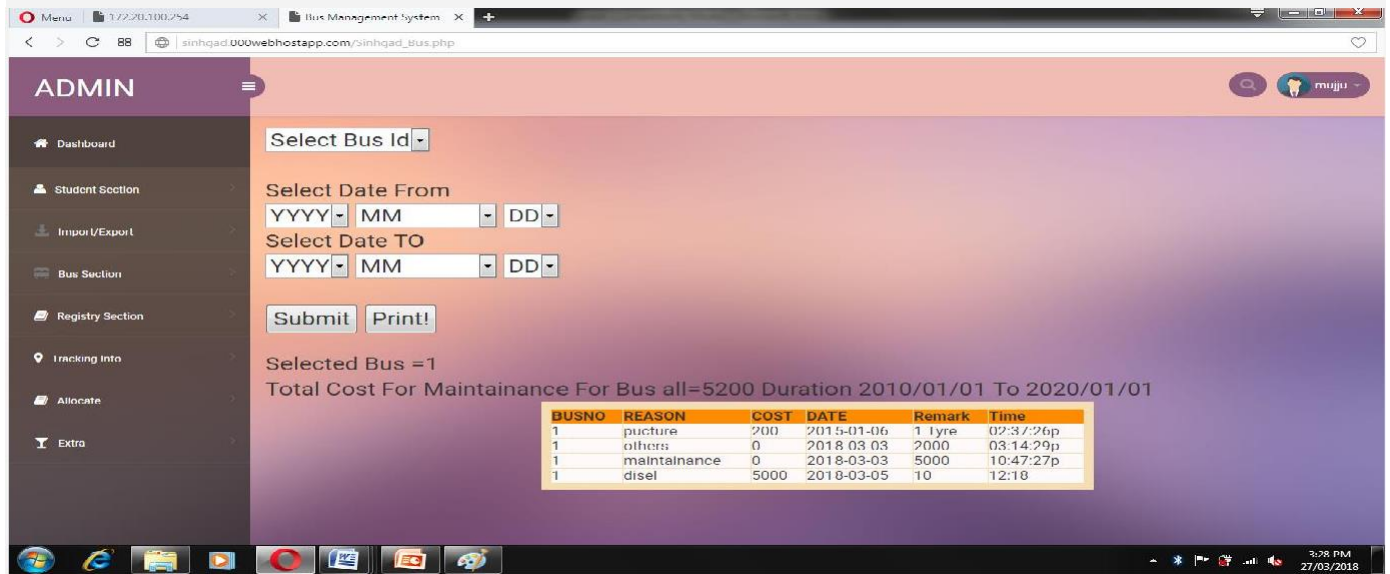
3. Cost Estimation :

Fig. 3 Cost estimation

In this module driver can add the receipt of work done on buses and average cost can be calculated. It contains the expenditure related disel , puncture, maintanace etc. Using this the maintaining data related to the cost get easier.
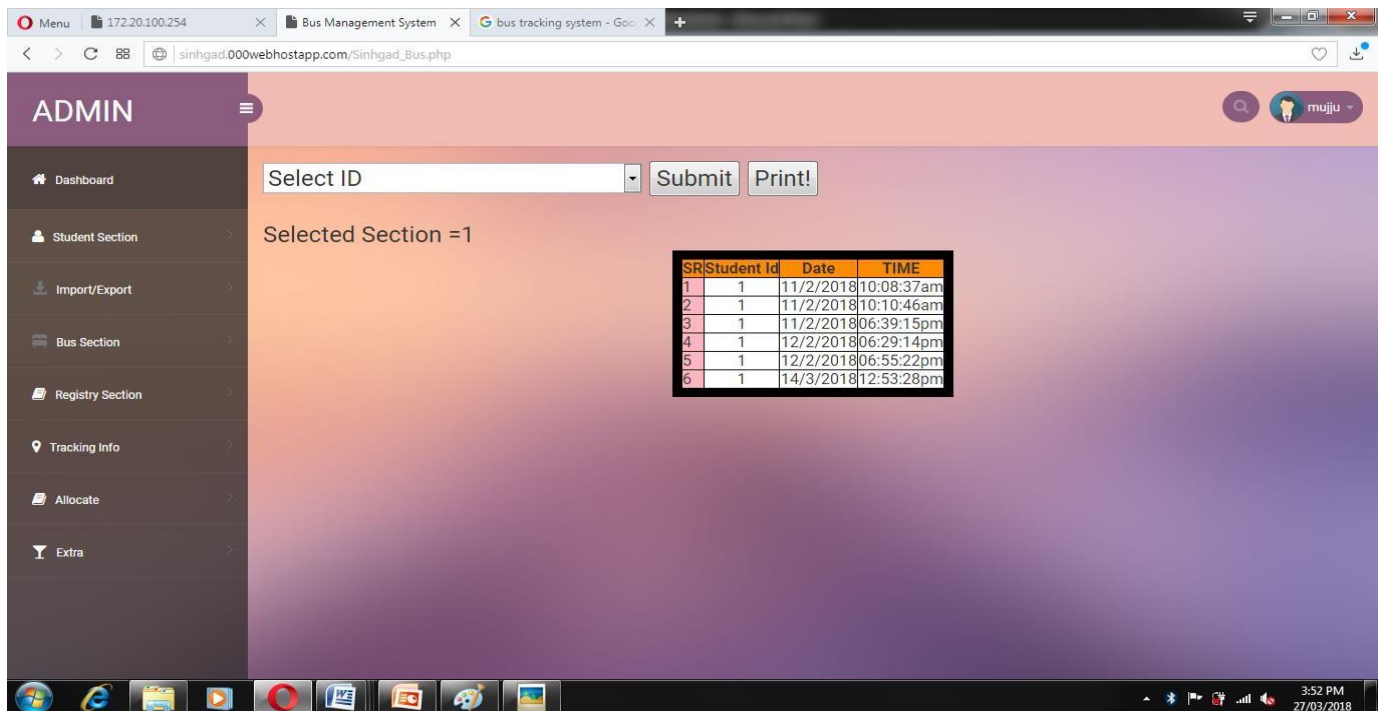
4.Digital Attendance

Fig4 .Digital Attendance

In this module attendance of student is maintained and also that notification is send to the parents. It ensures that student safely entered into the bus which helps in increasing the security of students.

CONCLUSION

By using the intelligent bus tracking and management system the bus admin can easily maintain the students and bus information digitally which helps to reduce the paper work. This system also contains tracking feature using this parents can easily get the location of bus.

FUTURE SCOPE

The intelligent bus management and tracking system can manage all information related students and buses digitally .In this we can also get the realtime location of bus .It also sends the notification to the parents when student entered into the bus .In the future we can get the bus location using android apk.

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