ABSTRACT

The Railway Ticket generation using iot is basically derived from computer reservation system and upgrade to android based ticket generation using QR Code. Railway Ticket generation System contains the details about train schedules and its fare tariffs, passenger reservations and ticket records. A Railway inventory contains all train details with QR Code Information. The online QR Based ticket generation system has its database centrally located which is accessed through an Application Programming Interface (API).With the invent of Railway management system the traveller and the train got the freedom to get a ticket without standing in a queue. For travelling in unreserved section, the passengers have to stand in a queue to get the ticket. In our system, the passenger can generate the unreserved ticket through their android phone itself. The passenger can get the train details by scanning the QR code of a train to get the ticket. The passenger can get a ticket by entering number of seats and payment details. It has also become a hassle free transaction for both the train and the traveler. The Railway reservation system involves three main actors the database, online operator and a database scheduler. The database scheduler updates the database, One of the core functions of the inventory management of railway reservation system is the inventory control. Inventory control steers how many seats are available for the booking in unreserved section.

KEYWORDS: IOT, Raspberry, Smart railway, Fault detection, QR code.

INTRODUCTION

Indian Railway is India's third largest human transport system over which 2 core passengers travel daily all over India. The passengers accomplish their journey from their source station to destination in standing mode. The number of passengers in Indian Railway has been increasing drastically in every year, in a rate of 25 to 50 percent from its previous year. Such increase also increases the number of waiting queue passengers in station. Increasing number of waiting queue passengers, increase rushes in train which results "happy journey" slogan of Indian Railway in to "unhappy journey". In order to ease the ticket booking facility for passengers, as well as, boost paperless ticketing, railways is planning to introduces QR code system. The national transporter is also working to strengthen its Unreserved Ticketing System (UTS) for QR railway app.

EXISTING SYSTEM

The existing railway ticket generation system has many shortcomings associated with it. In the existing system railway used to set train ticket generation only by the computer operator. The passenger have to stand in the queue to get the ticket in the unreserved category. The emergency traveller cannot have to time to stand in the queue to get the ticket while the train departure time. In the existing system due to non-availability of a central server the railway and the agents suffered unwanted delays in ticket generation and payments. In the existing system integration of different train on a single platform was not met. With the advent of the railway ticket generation using QR Code for the unreserved category these flaws can be overcome.

Author	Title	Source	Findings
Naveen Bhargav et al. (2016)	Automatic Fault Detection of Railway Track System Based on PLC (ADOR TAST)	International Journal of Recent Research Aspects	The sensor is used to detect defect in the train track and the ultraviolet sensor is used to detect the obstruction in front of the train.
B. Siva Rama Krishna et al. (2017)	Railway track fault detection system using IR sensors and Bluetooth technology	Asian Journal of Applied Science and Technology (AJAST)	In the event of any defect on the track it will detect track defect using IR sensors and then it sends a message to the android phone using Bluetooth module.
Parvathy A. et al. (2017)	Automatic Railway track fault detection for Indian railways	IEEE	The Automatic Railway Route automatically detects the fares of the Indian IEEE Rail Automatically and detects cracks very quickly without human intervention.
Swati D. Patil & Pallavi. M. Taralkar (2018)	Train track fault detection system	International Journal of Current Engineering and Scientific Research (IJCESR)	Rail crashes have been identified as a major cause of accidents in the past. So, the solution to this problem is using the robot to detect cracks in the train track and when the robot detects an error it sends a message to the base station

Mansi R. Sarwan et al. (2018)	Automated Railway Track Fault Detection System Using Robot	International Conference on New Frontiers of Engineering, Management, Social Science & Humanities	An IR (Slot sensor) assembly that tracks the exact location of a faulty track was quickly repaired so that many lives could be saved.
M. Banupriya et al. (2019)	Self Powered For Railway Track Monitoring Using IoT	IOSR Journal of Engineering (IOSR JEN)	This has resulted in a rapid increase in surveillance of systems, buildings, vehicles, and machines using sensors.

FUTURE SCOPE

After successful registration, the user is given a user-ID and password, which the person can use to log-in and book tickets and scan QR. The passenger has to be present before one hour to the source station to be able to scan a ticket through the app. A passenger is allowed to book two or more tickets at a time.

CONCLUSION

In this paper a mobile ticket application developed for Android on the server side which can change the way in future. This kind of ticketing application can be applied to any kind of transport system. The android application is one of its kinds and finds huge application to buy sub-urban railway tickets through android mobile. Also this application saves work in ticket counters . At the station level security user can have Hardware devices to validate the QR codes before the user enters or leaves the station, where the user can have access towards platform after being validated by the hardware device. Time trains will be available will also ease the user to allot his time accordingly to reach the station, so in this project users will be using QR railway app here to find the location of the user and nearby train station to display the train. Hence problem of issuing local train tickets has been solved with new application

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