**TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY**

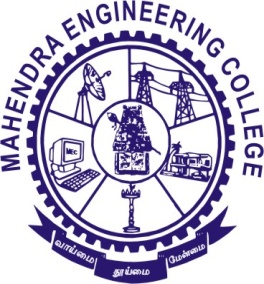
DOTE Campus, Chennai-600025

**PROPOSAL FOR STUDENT PROJECTS SCHEME**

**Title: “SMART TRAIN TICKET CHECKING SYSTEM USING**

**ANDROID FOR TRAIN TICKET EXAMINER”**

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**“SMART TRAIN TICKET CHECKING SYSTEM USING ANDROID FOR TRAIN TICKET EXAMINER”**

**INTRODUCTION:**

This proposal aim is for TTE (Travelling Ticket Examiner) to reduce the work load and to identify the passengers who are travelling without tickets by using the smart phone, tablets, etc.... The main role of Travelling Ticket Examiners has to travel over their 'beats' to check irregularities of passengers travelling without tickets, with tickets out of date. Sometimes TTE’s cannot be able to manage the crowd, so the passengers who are travelling without tickets have chances to escape. In order to overcome these problems, this proposal gives solution to TTE without paper documents.

**OBJECTIVE:**To reduce the paperless work of TTR, this proposal come up with

smart train ticket checking system using android for train ticket examiner

**METHODOLOGY**

This proposal has following main Modules

1. Digital Master Chart

2. Additional chart report

3. Checking of the passenger’s List

4. Exception data record

5. Wi-Fi

**THE FUNCTIONALITY OF THE MODEULES**

**1.DIGITAL MASTER CHART**

Master chart has prepared and send it to the authorized TTE four hours before from the train starting time. The master chart contains PNR Numer, Train number, name, age,general,quota, from and to , passenger mobile number, seat number,coach, ticket number whether it is booked in counter. After checked the passenger’s identity then marked in the master chart.

**2.ADDITIONAL CHART REPORT**

Some times, most of the seats are vacant in the train . The online registration and opening tickets are available for the particular compartment in the train half an hour before the departure time of the train. Additional chart are prepared by the train authorities. It has also sent to the authorized TTE through internet.

**3.CHECKING OF THE PASSENGER’S LIST**

The TTE has checked the passenger’s name ,mobile number, age, PNR NO, coach No, seat No and identity card (AADHAAR,voter’s id,PAN id).Whether it is correct, he marks in the master chart with the passenger’s details by using the paper. Suppose the passenger requested to change the seat in the coach, the TTE has satisfied the passenger needs whether the particular seat is available or not. It is marked in the master chart. The above details has to be filled in the prescribed format through the internet. So the TTE has not aware of the paper documents and its things.

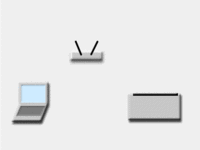
Some times unreserved ticket passenger wants the reserved seat whether the seat is available in the coach, The TTE calculate the difference between reserved ticket amount and unserved ticket amount and get tis amount from passenger . The TTE name,sex,age, unreserved number, receipt number ticket from and to are updated in the master chart.

**4.EXCEPTION DATA RECORD**

Suppose the passenger is not present in the seat, he notified a passenger PNR NO, Name ,age,sex,from and to , coach are notified in the exception data record. These details are sent to the concern chief ticket inspector in the destination through the E-mail. He has utilized the internet by using Wi-Fi connection.

**5.WI-FI TECHNOLOGY**

Usually, the TTE uses paper for the checking of passenger’s details. It is hard to maintain the paper and safely surrender the details to the destination station. To avoid this problem,the railway department has to be implemented these devices in each compartment.



Wi-Fi or WiFi is a technology that allows electronic devices to connect to a [wireless LAN](https://en.wikipedia.org/wiki/Wireless_LAN) (WLAN) network, mainly using the 2.4 gigahertz (12 cm) [UHF](https://en.wikipedia.org/wiki/UHF) and 5 gigahertz (6 cm) [SHF](https://en.wikipedia.org/wiki/Super_high_frequency) ISM radio bands. A WLAN is usually password protected, but may be open, which allows any device within its range to access the resources of the WLAN network.

The [Wi-Fi Alliance](https://en.wikipedia.org/wiki/Wi-Fi_Alliance) defines Wi-Fi as any "wireless local area network" (WLAN) product based on the [Institute of Electrical and Electronics Engineers](https://en.wikipedia.org/wiki/Institute_of_Electrical_and_Electronics_Engineers)' (IEEE) [802.11 standards](https://en.wikipedia.org/wiki/IEEE_802.11).[[1]](https://en.wikipedia.org/wiki/Wi-Fi#cite_note-1) However, the term "Wi-Fi" is used in general English as a synonym for "[WLAN](https://en.wikipedia.org/wiki/Wireless_LAN)" since most modern WLANs are based on these standards. "Wi-Fi" is a trademark of the Wi-Fi Alliance. The "Wi-Fi Certified" trademark can only be used by Wi-Fi products that successfully complete Wi-Fi Alliance [interoperability](https://en.wikipedia.org/wiki/Interoperability) certification testing.

Increasing the number of Wi-Fi access points provides network redundancy, better range, support for fast [roaming](https://en.wikipedia.org/wiki/Roaming) and increased overall network-capacity by using more channels or by defining smaller [cells](https://en.wikipedia.org/wiki/Cellular_network). Except for the smallest implementations (such as home or small office networks), Wi-Fi implementations have moved toward "thin" access points, with more of the [network intelligence](https://en.wikipedia.org/wiki/Network_intelligence) housed in a centralized network appliance, relegating individual access points to the role of "dumb" transceivers. Outdoor applications may use [mesh](https://en.wikipedia.org/wiki/Mesh_networking) topologies.

When multiple access points are deployed they are often configured with the same SSID and security settings to form an "extended service set". Wi-Fi client devices will typically connect to the access point that can provide the strongest signal within that service set.

The wi fi network is connected to each compartment . when the train moves the TTE got the signal from the WI-FI and access the internet.

By using the android application, the TTE get the authentication from the respective station and get the master chart . The TTE complete his work without paper documents.

**WORKFLOW**

**Data Base**

**Digital Master Chart**

**Exception data record**

**Online data sent to Destination office**

**TTE**

**Chief Ticket Inspector**

**PROJECT REQUIREMENTS**:

1. A Laptop with all types of configuration

**BUDGET**

|  |  |  |
| --- | --- | --- |
| S.NO | PARTICULARS | COST |
| 1 | A laptop | 38,000 |
| 2 | Smart Ticket Application | Download from playstore2000 |
| 3 | Internet Connectivity | 198/per month |
| 4 | Code development cost | 20,000 |
| 5 | Total Cost (Approx) | 60,198(approx) |

**OUTCOME**

The project proposal is planned to implement for saving the time for Train Ticket Examiner(TTE) work. WiFi router has to be attached in each compartment of the train. The TTE will easily access the internet through the authentication. It causes the TTE uses the system instead of the paper documents. By implementing this system in future to its entire nation, this proposal can improve the TTE work fast in the passenger’s train also. This project also enforces the paperless for all TTEs if it is implemented for entire country.