**Raosaheb** **Wangde Master Charitable Trust’s**

**Dnyanshree Institute of Engineering & Technology, Sajjan gad Road, Satara.**

**BTech Computer Science and Engineering Project Synopsis**

**Title: Public transport application for tracking and providing offline** **timetables of buses and** **trains in remote areas.**

**Category of Project: -** In Campus.

* **Area/Domain:** Android development.
* **Introduction:**

Today the transport system has been kind of a mess, especially in remote areas, bus arriving timing, depart timing has been a major issue. Also, if you are in a new area which is completely new, and you don’t have clue of the transport system, then you don’t have many choices in the market for doing the same. This application will solve the same problem, help travelers to find the nearest bus, train station also checks time of bus, train, live track it and check the ticket fare and also available to book tickets.

* **Literature Survey: -**

In year 2017 authors Jisha R C, Mathews P Mathews, Sidharth P Kini, Vineeth Kumar, Harisankar U V, Shilpa M, [1] an Android Application for School Bus Tracking and Student Monitoring System.

In year 2016 authors Fatin Balkis Binti Alzahri, Maziani Sabudin, [2] published vehicle Tracking Device. This paper discuss the process of developing a Vehicle Tracking Device (VTD).

In year 2019 authors Shubham Jain, Adarsh Trivedi, Shweta Sharma, [3] proposed Application Based Bus Tracking System This research is based on Bus Tracking System.

In year 2011 authors Mohammad A. Al-Khedher, [4] Dec 2011 an integrated GPS-GSM system is proposed to track vehicles using Google Earth application.

In year 2008 authors Noppadol Chadil, Apirak Russameesawang, etc.all , [5] real-Time Tracking Management System Using GPS, GPRS and Google Earth.

* **Problem Definition:** To build a public transport application for tracking and provide offline timetables using android studio, Java or React Native.
* **Objectives: -** Our objective with this application is to provide the following **t**o build an android application that is used to located near bus and train station, available to track your bus, train, can predict arrival and depart timings, available to book bus and train stations.
* **Specification:**

Software:

1. Android studio (v 2021.3.1)
2. Firebase (v 31.0.2)
3. Java (v 8)
4. React Native (v 0.68)

Hardware:

1. 8 GB RAM, with i3 11th generation processor.

* **Significance:**

The significance of the application can be easily evaluated by the features we aim to provide. The proposed application is developed to provide.

1. Help people to locate nearby bus and train stations.
2. Live track buses and trains.
3. Offline timetables.
4. Check ticket fair and book ticket's.
5. Hence it helps people to make their travel experience better.

* **Proposed Platform:**

|  |  |  |  |
| --- | --- | --- | --- |
| Snr. | Platform Tools | Availability | |
|  |  | In Campus (Laboratory/Workshop) | Out of Campus (Name of Industry) |
| 1. | Android studio | Laboratory | - |
| 2. | Firebase | Laboratory | - |
| 3. | Java, React Native | Laboratory | - |

* **Selection Criteria for Platform /Tools: -**

1. **Android studio:** Android studio is an official-integrated development environment tool for android app development, based on IntelliJ IDEA.
2. **Firebase:** Firebase is a set of hosting services for any type of application.
3. **Java:** Java is a high-level, class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible.
4. **React native:** React Native is an open-source UI software framework created by Meta Platforms, Inc. It is used to develop applications for Android, Android TV, iOS, macOS, tvOS, Web, Windows.

* **Estimate Budget and** **Cost: - Rs. 5000 [approximately]**
* **References:**

[1] Jisha R.C, Aiswarya Jyothindranath, Sajitha Kumary L “School Bus Tracking and Arrival Time Prediction” 978-1-5090-6367- 3/17 ©2017 IEEE

[2] Fatin Balkis Binti Alzahri, Maziani Sabudin, Vehicle Tracking Device – ©2016 IEEE.

[3] Shubham Jain, Adarsh Trivedi, Shweta Sharma, Bus Tracking System – ©2019 IEEE.

[4] Mohammad A. Al-Khedher, “Hybrid GPS-GSM Localization of Automobile Tracking system”, International Journal of Computer Science & Information Technology (IJCSIT) Vol 3, No 6, Dec 2011.

[5] Chadil, Noppadol, Apirak Russameesawang, and Keeratiwintakorn. Real-Time Tracking Management System Using GPS, GPRS and Google Earth, In IEEE 5th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology, vol. 1,2008, pp. 393-3.

[6] Android Studio [en.wikipedia.org]

[7] Java [en.wikipedia.org]

[8] Firebase [en.wikipedia.org]

[9] React native [en.wikipedia.org]

**Name and Signature of Students:-**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr.**  **No.** | **Roll No.** | **PRN No.** | **Name of the Student** | **Sign** |
| 1. | 4307 | 1967971242007 | Junghare Prasad Shridhar |  |
| 2. | 4310 | 1967971242010 | Kadam Yash Vitthal |  |
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**[****Guide]**  **[Project** **Coordinator]**  **[HOD]**