

DESIGN THINKING APPROACH FOR ANDROID APPS FOR FINDING THE FUEL BUNK NEAR YOU

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ABSTRACT

On-road fuel supply applications for developing on-demand fuel supplies depend on user orders and requirements. Fuel consumption is increasing due to the growth of automobiles in the market. Unfortunately, if the vehicle stalls due to lack of fuel, for some reason. People need to push a car or get help to reach the nearest gas station. In the above steps, the vehicle owner spends time and manual work. It becomes even more difficult for some older people and those who are medically ill. People have to go to gas stations to get fuel to fill the generator. We bring new solutions for vehicle refueling and emergency power supplies. Development of applications for fueling on demand. To ensure good quality and quantity. This application provides door-to- door coverage. The advantage of using this system is that the end user can choose the type of fuel they need, order and receive the fuel, and simplify the user's process. This is an Android application that uses Android Studio as an IDE. Java is used for coding and XML is used for user interface design. The database connection is made through the BACK4APP database. It mainly contains three modules: ADMIN, USER and FUEL STATION. Users include modules such as card modules, payment modules, and orders. The gas station contains modules such as creating, updating, and deleting gas stations. Administrators can access and modify all aspects of the application. The result of the project will be an Android application that allows customers to order fuel. Customers can find out the availability of all gas stations and gas stations nearby. It also helps owners track orders and available stations. Administrators can schedule and update availability status in the portal.

Key words: Android fuel log app, Fuel consumption app for android, Design thinking.

INTRODUCTION

It's an app-based service that acts like a fuel Uber. This means that if you need to fill your car without going to the gas station, download the app and register. Then tap the button in the downloaded location-based app to request fuel delivery. On Road Fuel Demand is an on-demand app for gasoline and diesel delivery. It ensures

timely delivery of fuel to customers. The car must be physically arriving at the gas station to refill. The fast pace of modern life and busy business demands innovation. To meet these demands. On Road Fuel Demand uses digital technology to remove this location constraint. On Road Fuel Demand works in a simple, safe and reliable way to satisfy your customers. It uses state-of-the-art technology and streamlined delivery mechanisms. On- Road Fuel Demand the B2B portal provides customers with online fuel ordering services, including a comprehensive online fuel purchasing process such as online order booking and order tracking. There is a huge market for Uber's future scalability and scalability for fuel services like business. There are several end users that can be targeted. **Just figure out the right place.** This should be your starting activity. For example, if you plan to start on-demand fuel delivery in India, you need people to easily access, connect to, and choose where your services are available. One of the reasons for setting up the company, as you may not know, is that 36% of India's electricity in urban areas is generated solely by diesel generator sets. The next 74 million liters of fuel supplied by diesel generators will be transported by dabba, which has gathered not only these people, but also those around them who need to go to gas stations. In addition, the number of gas stations currently in India needs to be more than doubled to meet the growing demand for problems. How do you deal with it? We have found a solution that not only solves this problem, but also addresses problems that may worsen in the future. Very simple solution A few clicks on your cell phone and mobile gas station will start charging. Your car will be refueled or just as it is at a gas station.

LITERATURE SURVEY

This section presents current innovations and accepted practices that were previously integrated into various journals and articles related to Fuelon Demand. The purpose is also to briefly introduce the advances in the technology used. The first trusted distribution associated with the selected project will be done by Nielsen. The

title of the report is "All India Survey on Diesel and Gasoline Demand by Sector". This report is from the Ministry of Oil and Gas of India. This shows India's oil demand.[1]

The following paper was written by Sunil Chandrasiri. The title of the paper is "Demand for Road Fuel in Small Developing Countries". This paper was disseminated in a 2016 ResearchGate article. Reveal the economic impact on fuel demand.[2]

The following paper was written by Areeg Abubakr, Siddig Ali and others. The title of the paper is "Fuel Management System". This paper was published in the Institute of Electrical and Electronics Engineers (IEEE) Journal on January 16-18, 2017. Clarify monitoring of fuel sales.[3]

The following article was written by Luis Rivera Gonzalez, David Bolognio and others. The title of the article is "Long-term Forecast of Energy and Fuel Demand for Ecuador's Sustainable Road Transport Sector (2016- 2035): Applying the LEAP Model". This article was published in the MDPI Journal on Energy and Fuel Requirements for 2019.[4]

The following paper was written by Pradeep Agarwal. The title of the article is India's Oil Demand: Empirical Estimates and Future Forecasts. This paper was published at IEG University in Delhi in 2012. This clarifies India's oil estimates.[5]

The next application, Cafu, is one of the leading UAE companies helping to free gas stations.[6]

IMPLEMENTATION

The project mainly consists of Register module, bunk information module, order fuel, trace order.

Register module

The registration module requires users and fuel stations to register with the application before it can be used. The registration module requests specific information from users and gas stations. User registration requires you to provide information such as your name, contact number, email ID, username, and password. Gas stations need to provide information such as the name of the gas station, contact number, email ID, user name, password, and location of the gas station in order to identify the gas station on the map.

Bunk Information

The fuel station must provide information on fuel availability, prices, types of fuel available, and

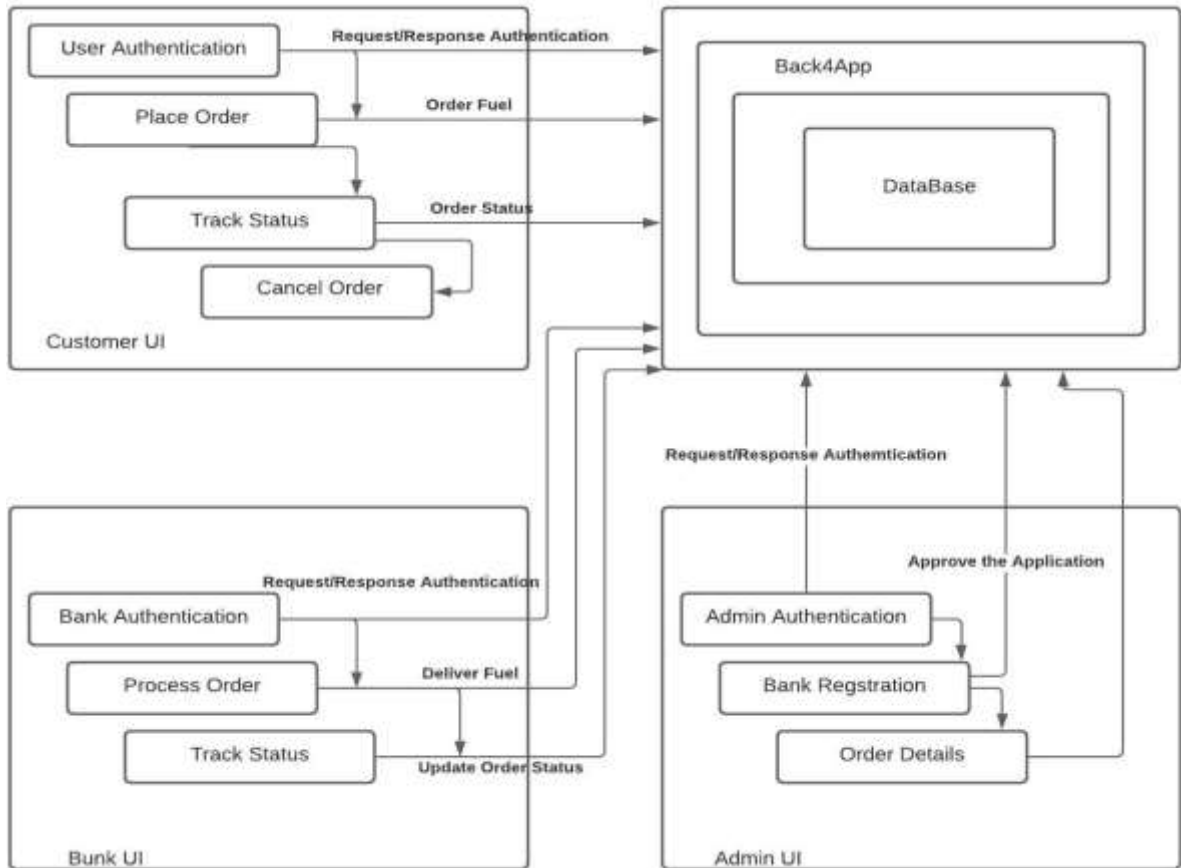
services. Since fuel is the most important factor for any vehicle, its price changes daily, and the price of fuel also changes depending on the location of the gas station. Therefore, it is the gas station's responsibility to update fuel prices daily.

Order Fuel

When users register with the application, they can order fuel as needed. Users must enter their credentials after they have access to the services provided by the application before they can use the application. To order fuel, users must first find a nearby gas station and check the availability of fuel at that particular gas station. After checking the availability of fuel and services, users can order fuel as needed.

Trace Order

Once an order is placed, the user can track the order, whether the order was accepted, and whether the order was delivered. To receive order updates, the gas station must approve or reject the order and update the order status. The block diagram of the project is simple but robust. This is a block diagram consisting of all the important modules. The following figure shows the complete flow of the project architecture and process. It shows the overall architecture of the constructed system.



I. ANALYSIS REGISTRATION PAGE

This is the page where users and bank admins need to enter the details required to register with the application, where the username must be unique.

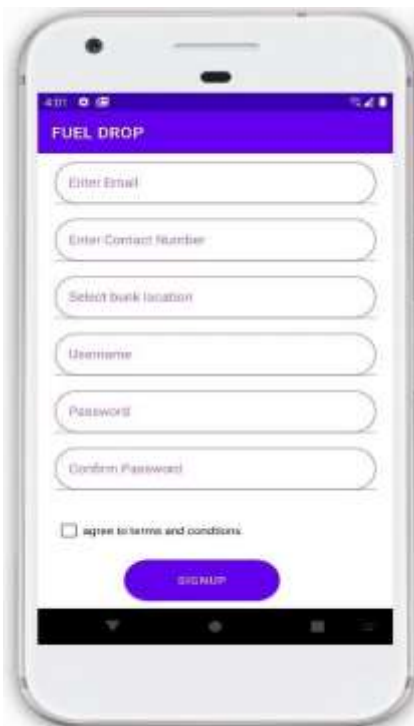


Fig: Registration page



Fig: Main Activity Screen

Main Activity: This is an activity that is displayed when the application is launched and allows the general public to select a profile to log in to.

Map Activity: An important activity that a bunk bed owner will see when trying to register a gas station. The exact location should be marked using the activity map markers.



Fig: Map Activity



Fig: User Home Activity

User Profile: This activity provides users with information on the display so that they can see their information.

Place Order: This form is displayed when the user tries to order fuel. This form contains many fields for collecting the information needed to deliver fuel.

Bunk List

This activity provides a list of currently active gas stations that can be fueled and the nearest gas station with price and distance details.

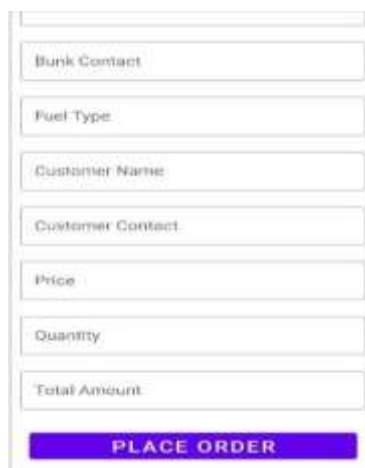


Fig: Bunk List activity

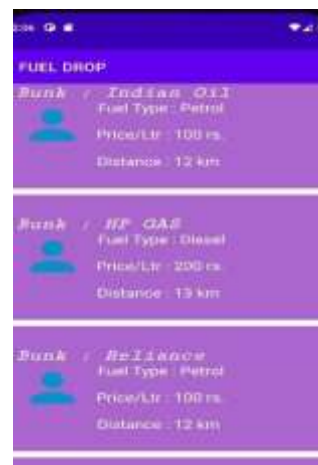


Fig: Place Order activity

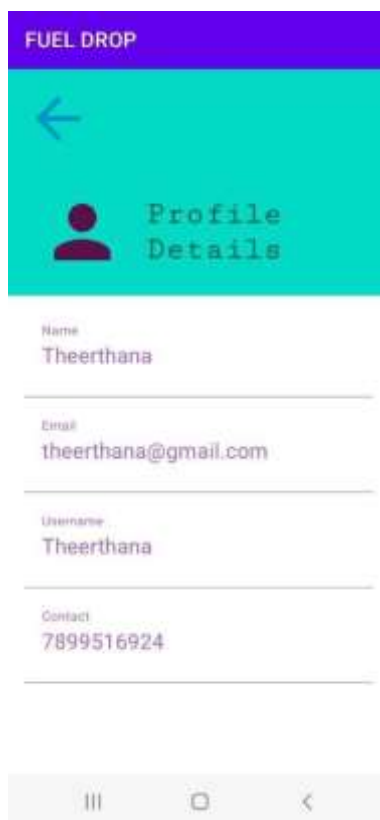


Fig: Profile Page

CONCLUSION

This project will reduce the amount of fuel required by supplying fuel. If the user is in urgent need of fuel, the user has the option to order fuel from their current location. The application has three options: home screen administrator, bank, and user, so users must select the appropriate option to log in to the application. The first time a user uses the application, they have the opportunity to register. So, he has to enter and register the required data. Users can order or cancel fuel. To order fuel, you need to enter the amount of fuel. The user's location is tracked using the device's live location, allowing the user to view and select the closest gas station within a particular threshold. When a user reserves fuel, the order is sent to their respective floor managers and the order placed by the user must be processed.

REFERENCES

[1] Areeg Abubakr Ibrahim Ahmed, Siddig Ali Elamin Mohammed, Mohamed Almudather Mahmoud Hassan Satte "Fuel management system" In Proceedings of the IEEE Conference on 2017 International Conference on Communication, Control, Computing and

- [2] Electronics Engineering (ICCCCEE) 2019.
- [3] Sunil Chandrasiri "Demand for road-fuel in a small developing economy" in proceedings of research gate on 2016.
- [4] Nielsen india private limited "All India Study on Sectoral Demand of Diesel & Petrol" submitted in the Ministry of Petroleum and Natural gas in 2013.
- [5] Luis Rivera-González, David Bolonio and others "Long-Term Forecast of Energy and Fuels Demand Towards a Sustainable Road Transport Sector in Ecuador (2016-2035): A LEAP Model Application" in proceedings of MDPI journals in 2019.
- [6] Pradeep Agarwal "India's Petroleum Demand: Empirical Estimations and Projections for the Future" published in IEG university New Delhi in 2012.
- [7] Cafu is the automobiles service company which helps break free from petrol stations, and provides other services to the UAE automobiles industry.

- [7] Brief Introduction to the android application published by google-developer-training Explained about android, its features and advantages.
- [8] Brief Introduction to the android software development kit provided by google-developertraining Explained about android SDK, its features and advantages.
- [9] Brief Introduction to android studio in the official website developer.android.com "Meet Android Studio"
- [10] "Back4App" is the database service provider to the application. The working methodology and process in the official website Back4App.com.