On-Demand Fuel Delivery Mobile App for OmanOil

Yousuf Sarker[1]

[1]Middle East College, Muscat, Oman

ABSTRACT

This project is a mobile application that allows users to order fuel for delivery to their location. Developed using Android Studio and SQLite, it offers a convenient and hassle-free way for users to refuel their vehicles without having to visit a gas station. The app allows users to select their preferred fuel type, quantity, and delivery location and provides real-time updates on the status of their order. Payment is securely processed through the app, and users can track the progress of their delivery in real time. The app aims to improve the fuel delivery experience for users by offering a fast, convenient, and secure way to order fuel. With the growing trend of on-demand services, it is well positioned to meet the needs of today's busy, mobile consumers.

Introduction

An Omani petroleum marketing firm is called Oman Oil Marketing Company SAOG (OOMCO). OOMCO engages in the marketing and distribution of petroleum and lubricant goods and conducts business in the fields of retail fuel sales, direct fuel sales to the public sector and the private sector, lubricants, aviation refueling, storage, and distribution. The firm has also started to develop and diversify into retail and client services.

When Oman Oil Company purchased shares of what was formerly known as BP Oman in December 2003, OOMCO was established in October 2003 along with its new corporate name. In order to sell gasoline to the city's fleet of cars and to distribute lubricants in Kenya and other Eastern African markets, OOMCO struck agreements with the Muscat Municipality and with Hass Petroleum in 2018.

In 2018, the business partnered with Thawani Technologies to enable e-payment using an app at its service stations. OOMCO made intentions to extend their network of service stations into Saudi Arabia public in September 2018.

According to (Han et al., 2014) By establishing a connection between citizens and their local heritage, local communities want to foster and strengthen collective identity. The production and consumption of digital historical information offered by both official historical organizations and private persons have been made possible and assisted by technologies. There is a lack of research on how people perceive and interact with digital cultural heritage that is created by a community and linked to specific locations, especially in regards to the creation of a sense of community and preserving local history, despite a significant amount of research on the technical and social aspects of this type of content. To solve this, we created the Lost State College (LSC) mobile application and interviewed 34 locals as participants in user research. According to the study's findings, participants paid particular attention to significant historic sites, and those who had lived in the neighborhood for a longer time tended to contribute more to local efforts to preserve its legacy. Participants used social features to reflect on their own experiences and tales, learn about local history, and create rich layers of knowledge about that history from their points of view.

According to (Golhar et al., 2016) mobile applications are a fast-expanding part of the global mobile market in today's constantly developing technological environment. In a meteor space, mobile applications

are being developed to provide users with a rich and quick user experience. This article describes an application for an institute's Android base operating system that will give precise and in-depth information about an institute. The administration, accounts, students section, student, and many other modules of an institute are all connected by this straightforward yet effective program. We have observed over time that the manual process of posting important academic notifications to notice boards is not only time-consuming but also ineffective. We can receive emails from the institute notifying us of announcements using this app.

Methodology

Chosen Model: Incremental Model

The incremental model of software development involves dividing requirements into several independent modules and completing each module through the stages of requirements analysis, design, implementation, and testing. Each module adds new functionality to the system, and the process is repeated until the full system is complete. The requirements analysis phase is crucial for identifying the functional requirements of the system. The design and development phase involves creating the design of the system's functionality and the development method. The testing phase evaluates the behavior of both new and existing features using various techniques. The implementation phase includes coding and testing the functionality, with the goal of improving and enhancing the overall functioning of the final product.

Feasibility of the Project

Technical Feasibility
Technical feasibility is the process of evaluating the production and operation of a product or service to determine if it is viable for a business. This process involves planning all aspects of business operations, including sourcing materials and tracking sales. Technical feasibility is an important step in the planning process for a new product or service, as it helps to ensure that the business has the resources and capacity to successfully produce and sell the offering. In this case, the product that is going to be delivered is fuel and fuel is already being manufactured by the Oil companies. They are just going to deliver it in a different way, instead of pumps we'll use petrol trucks to deliver.

Operational Feasibility
Operational feasibility is a measure of how well a proposed system addresses problems and takes advantage of opportunities identified during the planning phase, and meets the requirements established during the analysis phase of system development. It assesses the practicality of implementing a new system in the current organizational environment. This system will provide convenience to the customer and resolves other issues as well, for example not having to go to the pump physically.

Economic Feasibility
A cost/benefit analysis is often conducted before committing financial resources to a project to help businesses evaluate the feasibility, costs, and benefits associated with the project. This analysis is useful for helping businesses make informed decisions about whether to pursue a particular project and can be used to assess the potential return on investment. This project is economically feasible because this system is just like other delivery systems, and how all other delivery apps are feasible this app is also feasible. The fuel is delivered at the same market rate with just an extra minor delivery charge. That delivery charge and service charge are the profits for the company.

Legal Feasibility

An intended restructuring or its steps plan is checked for potential legal problems during a legal feasibility assessment. A plan is then prepared to be put into action during the restructuring's implementation phase, ensuring that the intended restructuring includes a comprehensive and integrated tax and legal assessment. In this project, there will be no legal issues since such a project is already done by the competitor of Oman Oil.

Social Feasibility

A social feasibility study is an evaluation of the potential impact a project will have on society, and how society may influence the project. This type of study helps to assess the potential social consequences and benefits of a project and can be used to identify any potential issues or challenges that may arise during implementation. For this project, this project will affect the society in a good way, it will create new job opportunities for the people, it will increase the customer's convenience and it will give a whole new approach for refueling ones vehicle.

Methods

User interviews: Interviewing users can provide valuable insights into their needs, preferences, and behaviors. This can be done through in-person or virtual interviews, depending on the context.

Data Collection Method & Justification

1. User insights: User interviews allow you to gather insights and perspectives directly from the people who will be using your product or service. This can be particularly valuable if you are trying to understand their needs, motivations, and behaviors.

2. In-depth understanding: User interviews allow you to delve deeper into a particular topic or issue. You can ask follow-up questions and probe for more information, which can help you gain a more thorough understanding of the subject at hand.

3. Contextual information: User interviews often take place in a natural setting, such as the user's home or office. This can provide valuable contextual information about how the user interacts with your product or service in their everyday life.

4. Flexibility: User interviews are highly flexible and can be tailored to meet your specific research objectives. You can ask a wide range of questions and cover a wide range of topics, depending on what you are trying to learn.

5. Cost-effective: User interviews can be a relatively cost-effective data collection method, especially when compared to more expensive methods such as usability testing or focus groups.

Results

User Interviews were conducted between 17 people and the aim of the interview was to find out that if the fuel delivery app will be a success or not and to get opinion and reviews from the users.
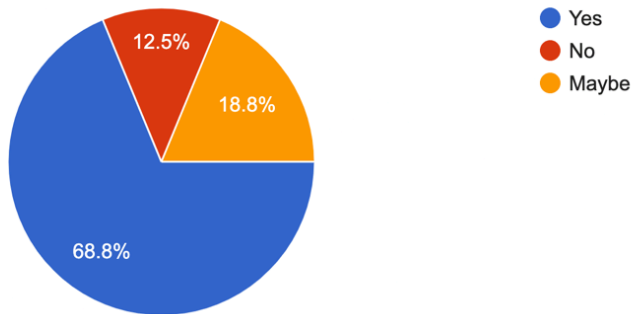
Male or Female?
17 responses
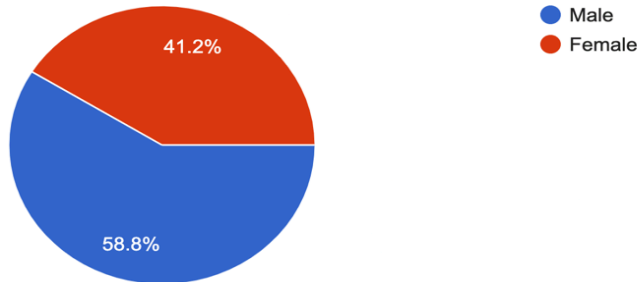
The response shows that there are almost equal number of respondents from both genders. The respondents were 10 male and 7 female.

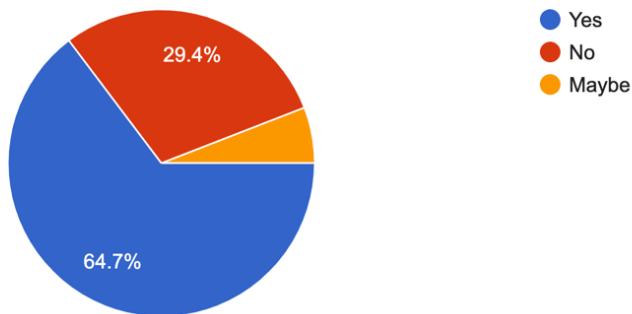## Would you be interested in having fuel delivered to you?
16 responses

The response shows that the majority (68.8%) are interested in having fuel delivered to them and 18.8% of people have chosen which means that they are not completely against it.

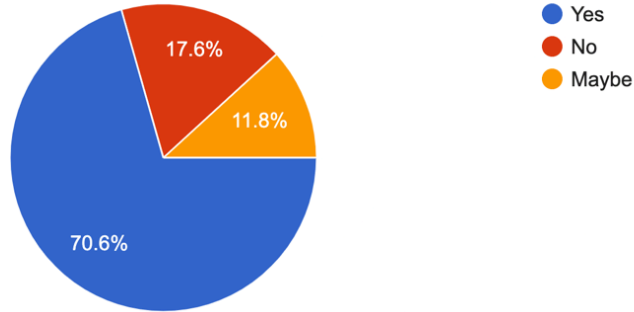## Would you prefer paying a small service fee and getting fuel delivered to wherever you are?
17 responses

The response shows that the majority (64.7%) doesn't mind paying a small service fee for getting fuel delivered to them.

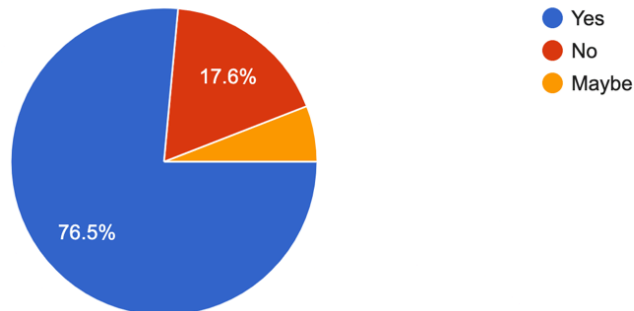## Do you think this service is needed here in Oman?
17 responses

- Yes
- No
- Maybe

17.6%

11.8%

70.6%

The response shows that the majority (70.6%) of people think that this service is needed here in Oman.

Do you think OmanOil should develop an app that allows this feature?
17 responses

- Yes
- No
- Maybe

17.6%

76.5%

The response shows that the majority (76.5%) of people want OmanOil to develop an app for fuel delivery.

Do you think such an app will work in Oman?

17 responses

Yes
Maybe
yes I think people would love it
Sure
Yes It will work and would bring ease for people
naaah man
Yes only if it is free of cost
No
Yess

For the open-ended question, the responses are quite positive, people think that such a service will work in Oman and the response indicate that people want such a feature and are willing to pay for it.

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