Mobile Application of Dalili in Rustaq to Booking Halls and Parks

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ABSTRACT

The city of Rustaq has numerous community halls, parks, and reserves that are used for a variety of activities including children's playgroups, health, wellness, and wedding services, art activities, and community gatherings. Through the advent of technology in our day, we can make life simpler and more effective by designing new applications and services. This idea is to create a Mobile Application of Dalili in Rustaq to Booking Halls and Parks. This mobile application aims to help customers wishing to book halls and parks in the city of Rustaq easily without much effort and in the comfort of their home. Agile methodology was used to develop the mobile application, questionnaire and interview were used to collect data to gather the usability and requirement analysis. The application provides easy processing, searching and locating the resources. The application was useful for the people living or visiting Rustaq city for tourism and leisure purposes.

Introduction

Oman has many halls and parks that provide people with a suitable place to hold some events and conferences, as it provides them with some comfort and luxury. And that by providing facilities and services that suit the comfort and well-being of people. However, what makes it difficult for these people to search and go to the hall or park headquarters at specific times specified by the hall or park owner to make reservations. Thus, these people need an application that helps them in the search and reservation process instead of going to the hall or park headquarters to search and book.

Therefore, we have created a mobile application that solves all search and reservation problems that hinder people who want to book, so the user will not have to waste time searching and go to the hall or park headquarters for reservations. The name of this application is mobile application of Dalili in Rustaq to booking halls and parks. This application displays several realistic pictures of the halls and parks of especially in the Wilayat of Rustaq, making it easy for people to search and booking. It will be easier to complete all reservation procedures through this application faster. Customers wishing to book can choose whether they want to reserve the hall or park for a graduation party, birthday party, wedding, conference, family gathering or etc., by booking through this application. In addition to that, users can choose the date and time appropriate for them to book. If the date chosen by the user is reserved, then a red color will appear on that date indicating that date is reserved. But if a green color appears, this indicates that the date is not reserved, and thus he can reserve on that date. The user also works on writing the number of individuals who will attend the hall or park, so that seats arranged for all attendees. After completing the selection process, the application provides the user with the ability to pay a deposit or the full amount via the electronic bankcard.

Literature Review

Literature review is one that summarizes and compiles scientific research and information on a specific topic. The form of literature review is in the form of academic writing that used in several fields such as the sciences, social sciences and humanities. By reviewing the literature, students or academics can produce a large research paper for a specific project (Walter & Stouck, 2020).

The aim of the project is to provide a mobile application to booking halls or parks in the state of Rustaq. This application works to save time, reduce effort for people wishing to booking, and provide them with all the details related to the reservation process for halls or parks. As the state of Rustaq does not have an application for the reservation process for halls or parks and thus the customer forced to go to the hall or park for reservations.

Application for Wedding Booking provides a form for the reservation process, as this form includes some of the conditions and laws that must be follow when booking. This form also contains some of the questions that the customer will fill out according to the conditions and laws. In addition, putting a map of the reserved location and a picture of the place shall be attach to this form. Booking.com is especially used for hotel reservations. As this application is

similar to the application that we will design, by specifying the date and time suitable for booking. Also, photos of some hotels preferred by the customer are displayed in this application, indicating the number of individuals who will stay in the hotel. Makemytrip.com is for air ticketing and hotel reservations. Through this application, plane, car, train determine how the customer wants to travel, and so on. The customer can also specify the type of trip that he will spend, either to spend vacations or to end some activities. In addition to determining the type of accommodation in which they resides, either in a hotel or villa, etc. Banquet Halls in Muscat system displays halls for Muscat Governorate. As this system is similar to our application, that our application displays the halls and parks of the Wilayat of Rustaq. Through the system, the customer can choose the type of reservation he wants, for either meetings, weddings, birthday, etc. This app display different types of booking. Also through the system, the customer can specify the day and hour in which he prefers to booking. Function Hall Booking provides a group of different halls is display. Whereas, this app is similar to my application, in that this app features a display of reserved days in red and unreserved days in green.

Methodology

The methodology is guidelines for solving problems with components such as tasks, method, and phases. Also, the methodology defined as a system of procedures, practices, laws and rules used in project. The model we chose for my project was the agile methodology because the agile model will help us complete the project in a correct manner (K.U. Sarker et al., 2020)(Kamal Uddin Sarker, 2020)(Raza Hasan, Sarker, et al., 2020)(Kamal Uddin Sarker et al., 2019)(AL Hamdania et al., 2020)(K.U. Sarker et al., 2018)(Khalifa, 2019). There are several reasons for choosing this model and they are the ease of making new changes with length of development time. Also, this model works in regular and repetitive cycles. In addition, this model helps in solving and handling small and large problems. Using this template in my project will provide ease of administration and faster job development.

Design and Implementation
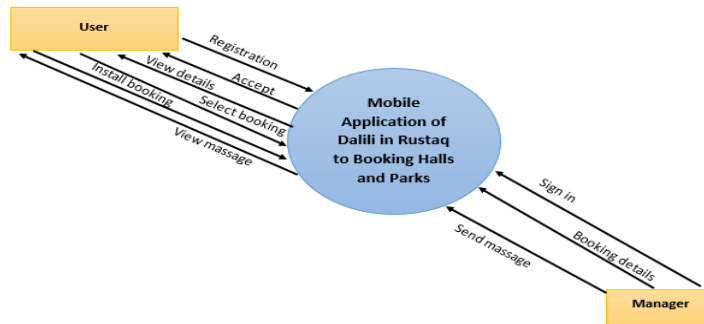
Figure 1. shows context diagram of the application.

Figure 1. Context Diagram.
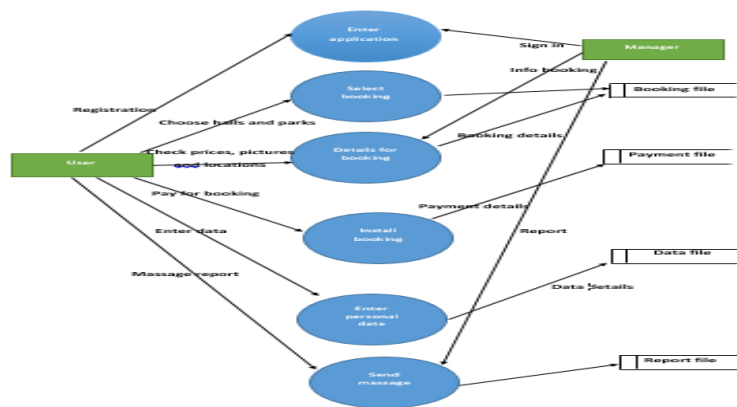
Figure 2. shows data flow diagram (DFD Level 0).

Figure 2. DFD Level 0.

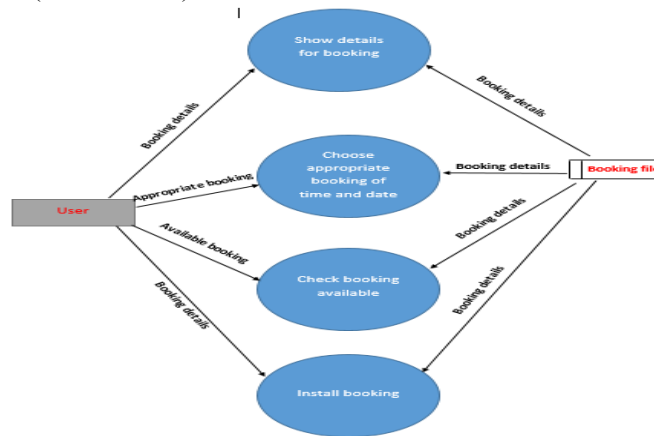Figure 3. shows data flow diagram (DFD Level 1).

Figure 3. DFD Level 1.

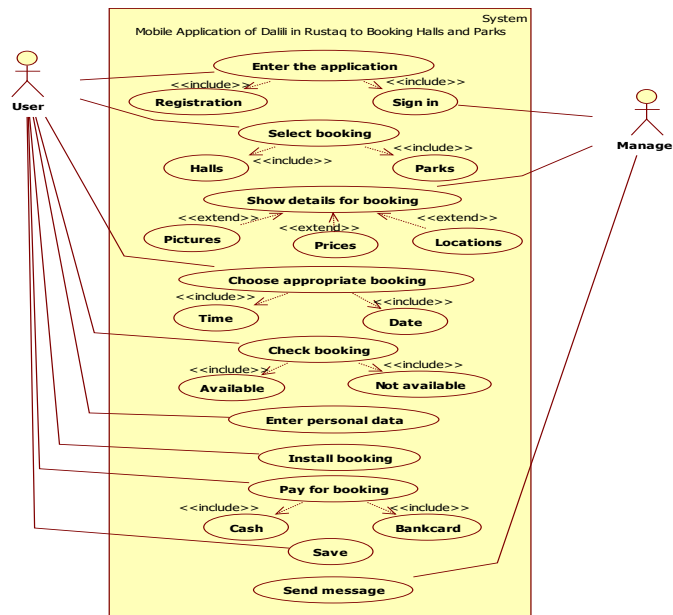Figure 4. shows the use case diagram.

Figure 4. Use Case Diagram.

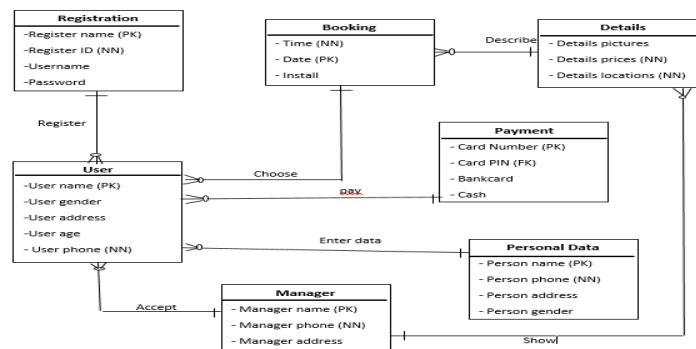Figure 5. shows the entity relationship diagram.

Figure 5. ERD Diagram.

Figure 6. shows the login screen of the application developed as the first prototype, Figure 8. Shows the login screen and Figure 8 shows the Booking screen.
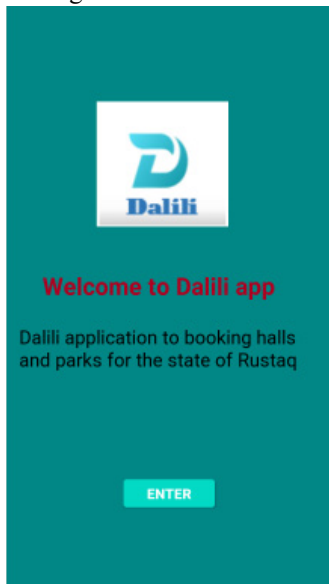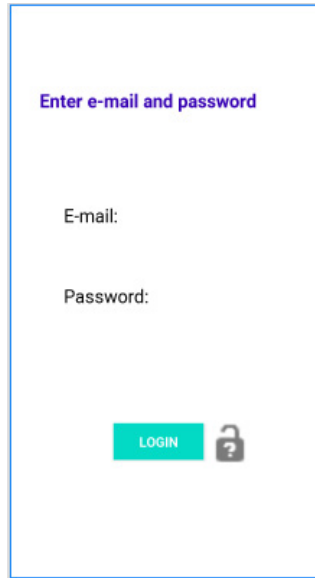

Figure 6. Login Screen.
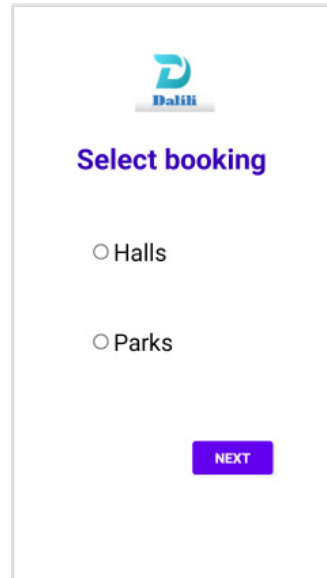
Figure 7. Login Screen.

Figure 8. Booking Screen.

Figure 6. shows the login screen of the application developed as the first prototype, Figure 8. Shows the login screen and Figure 8 shows the Booking screen.
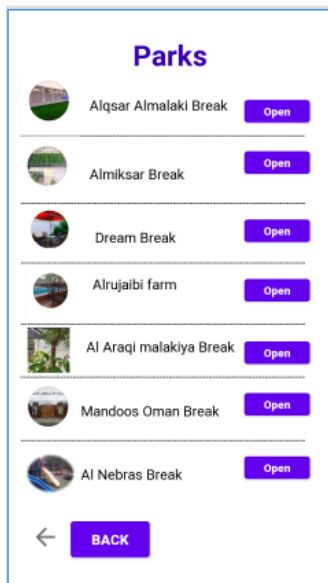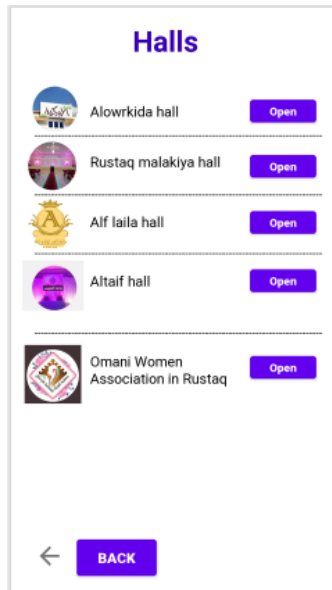

Figure 7. Park selection.
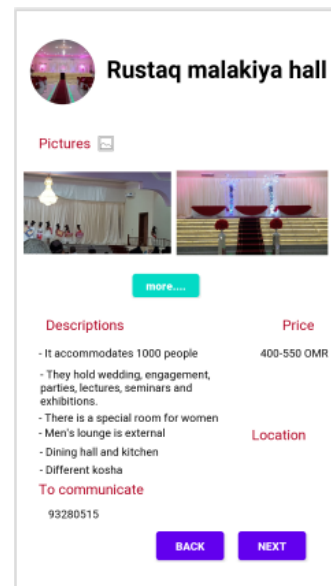
Figure 8. Halls selection.

Figure 9. Main Screen.

Result and Discussion

Data gathering is a process of obtaining information in a specific context. Data is collecting through interviews, questionnaires, pictures, graphs, etc. Questionnaire is selected for the data collection process. A questionnaire is a method for collecting data by means of a questionnaire that is filling out by the respondent. Where the questionnaire is distributing to a large number of people during an appropriate period in order to obtain the information.

In Figure 10. 86.7% of respondents found that they prefer to book halls and parks via the Internet (mobile app). As for 13.3%, they prefer to go to the hall or the park for reservations.
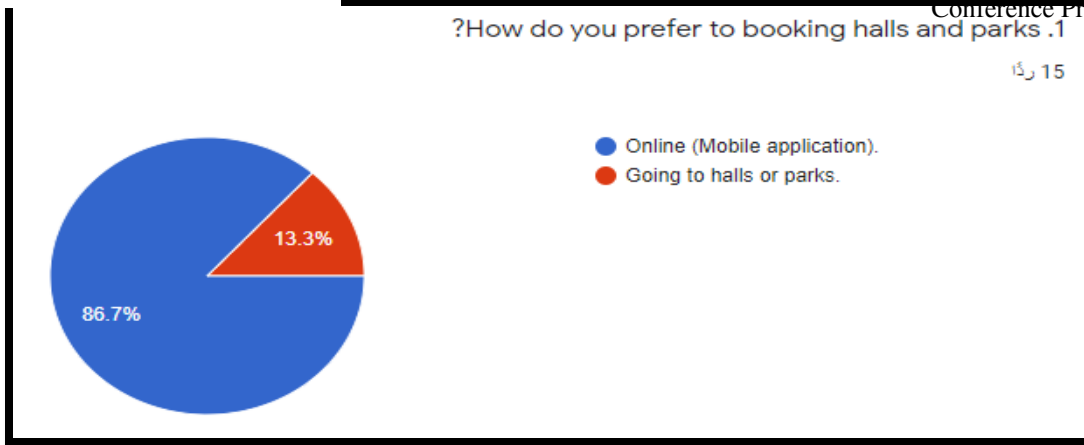
Figure 10. Question 1.

In Figure 11. shows the respondents' belief about whether the services provided during the application will meet all their needs. Where they chose 80% yes and 20% no.
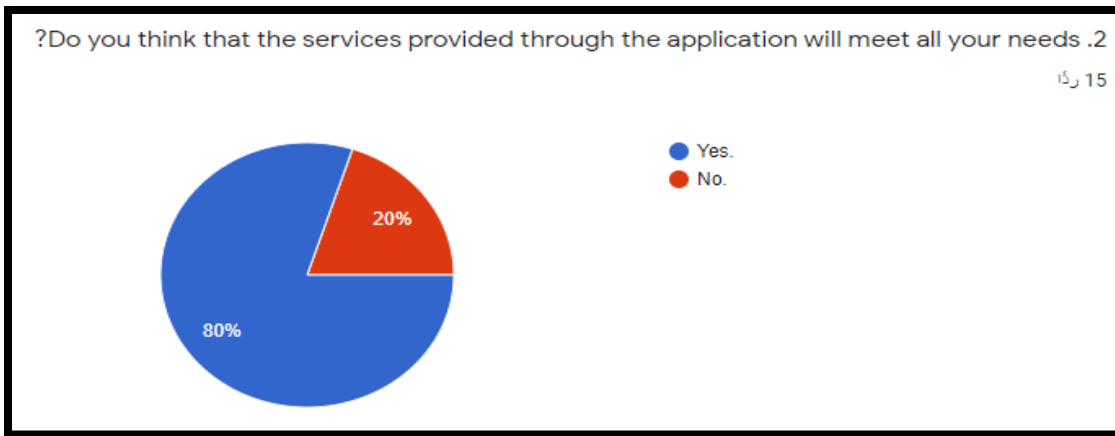

Figure 11. Question 2.

Figure 12 shows the type of reservation they prefer. Where 33.3% prefer booking for wedding and 40% prefer booking for meetings. As for 66.7%, they prefer booking for parties. And 13.3% prefer booking for conferences.
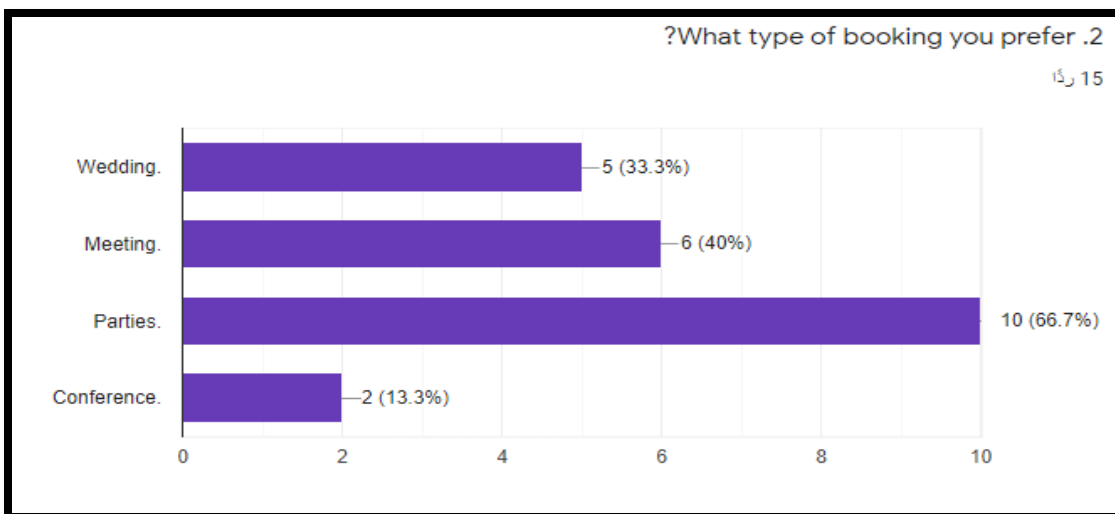

Figure 12. Question 3.

Figure 12 shows that 60% of respondents agree to book through the app than to go to a hall or park. As for 40%, they strongly agree to the reservation through the application.
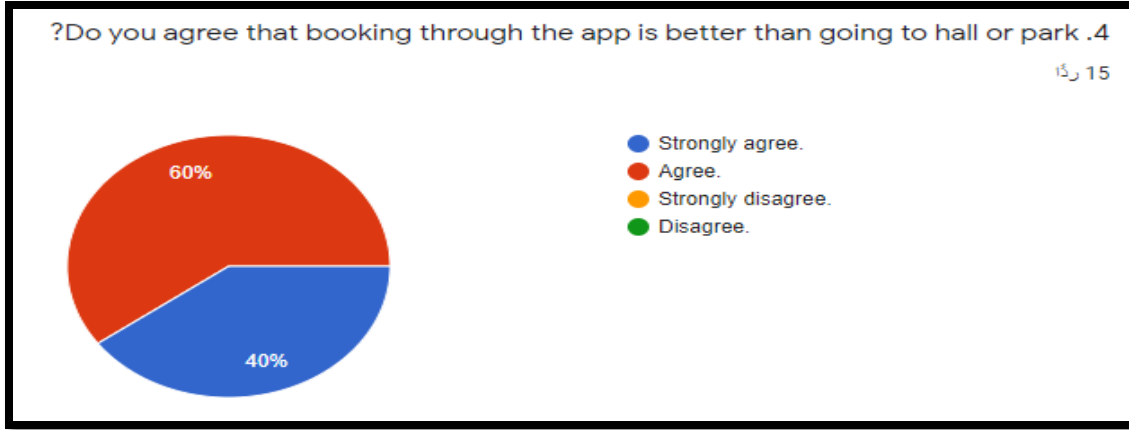
Figure 13. Question 4.

Figure 14. shows the respondents' opinion about any problems after booking through the application. 33.3% chose Yes, and 66.7% chose No.
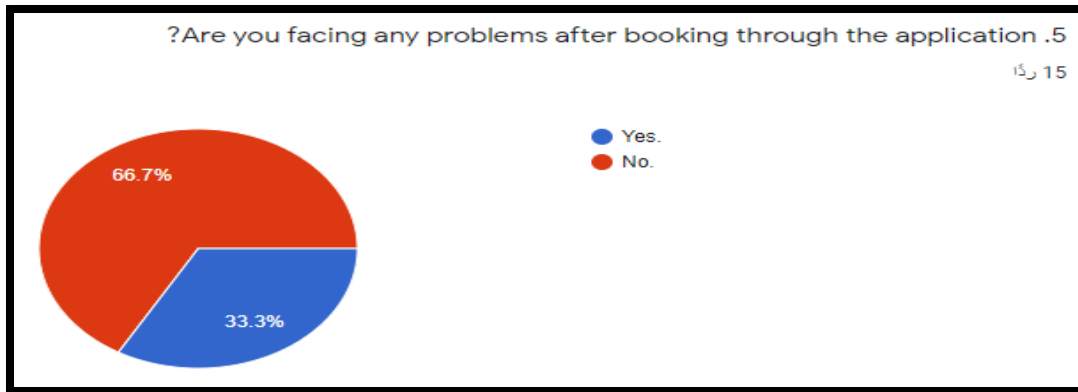
Figure 14. Question 5.

Figure 15. shows whether users prefer to pay for reservations by bankcard or cash. Where 66.7% prefer to pay by bankcard. As for 33.3%, they prefer to pay by cash.
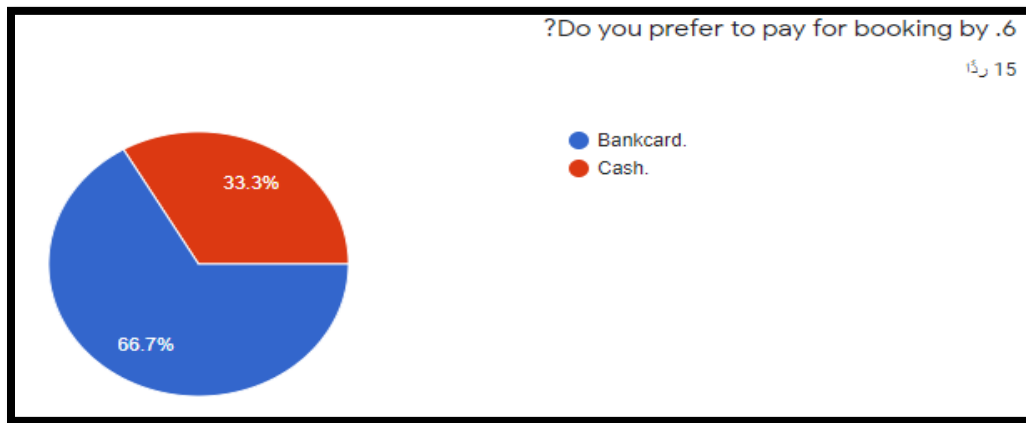
Figure 15. Question 6.

Figure 16. shows the respondents were giving an open question about their proposals to develop reservations for halls and parks. Where some of them suggested that, the application be developing to include all halls and parks of the Sultanate of Oman. And some of them suggested creating more services in the application.
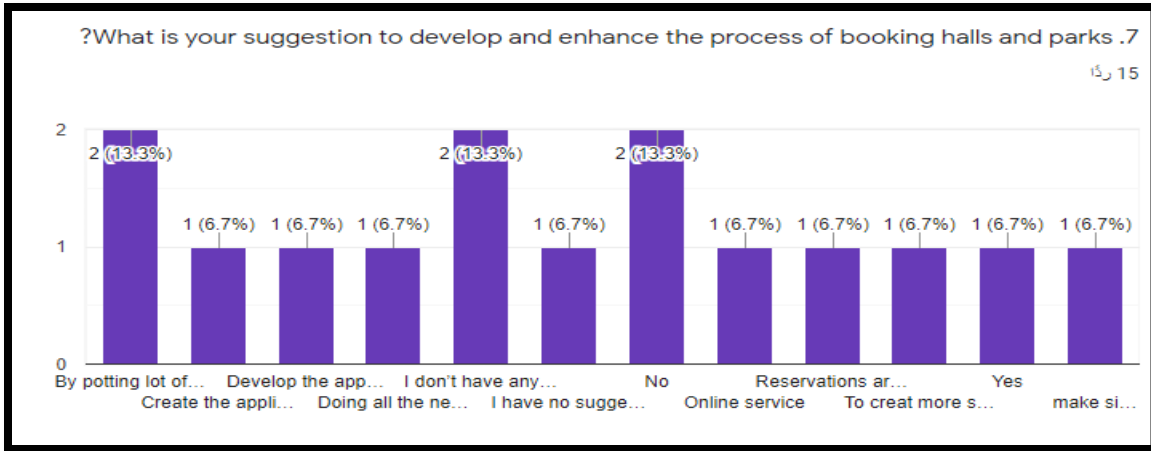

Figure 16. Question 7.

Conclusion

In conclusion, the project aims to design and implement a mobile application to booking halls and parks located only in the Wilayat of Rustaq. Where the application displays a set of details for the halls and parks of the state of Rustaq. Thus, customers can search and book through this application with ease. One of the advantages of this application is the appearance of the green color in the date that is not reserved. As for when the red color appears, it indicates the reserved date.

Limitation is the security mechanism which can be enhanced further to secure the data and can be helpful in making an e-commerce application capabilities for future(R. Hasan et al., 2015a)(R. Hasan et al., 2015b)(R. Hasan et al., 2012).

Data stored in the application can be useful to do predictive analysis using churn prediction to keep track of the registered users and provides offer whenever applicable (Raza Hasan et al., 2018)(Raza Hasan, Palaniappan, Mahmood, Abbas, et al., 2020)(Raza Hasan et al., 2019)(R. Hasan et al., 2011)(Raza Hasan, Palaniappan, Mahmood, Sarker, et al., 2020)(K.U. Sarker et al., 2019)(Khalifa, 2019).

Acknowledgements

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