Event Management System Smartphone Application

by

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Project report (CSE499) submitted in partial fulfillment of the requirements for the degree of

Bachelor of Science in Computer Science and Engineering

Under the supervision of

Sabrina Jesmin

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

UNIVERSITY OF LIBERAL ARTS BANGLADESH

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DECLARATION

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We declare that this project report entitled *Event Management System: A Smartphone Application* is the result of our own work except as cited in the references. The project report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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Gibson Modhu Eric
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Dedicated to
Almight God

– Gibson Modhu Eric

ABSTRACT

The Event Management System Smartphone Application is a mobile application that allows customers to manage their events and gives them access to various event management tools. Users can locate event planning-related businesses, venues, and organizing teams using the platform. It also includes services such as displaying portfolios and ratings of the vendors, as well as controlling the contact information and other website connections, and it will allow company owners to register their companies in this system. The program is designed to be straightforward and simple to use in order to provide users with a means of efficiently managing their events in a short amount of time. In addition, the program will allow users to design their own unique themes and backdrops for the events they host. Users that use the application will have the capability of simply organizing and managing events and having the added benefit of managing events on their smartphones. The program is meant to assist users in planning and managing events and resources, enabling them to remain organized and on top of their planning responsibilities.

Keywords: Event Management, Smartphone Application, Flutter, Google Dart, Firebase

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Chapter 1

Introduction

This report is to serve as an introduction to the smartphone application for the ”Event Management System.” It is a platform that combines the administration of events and services into a single, straightforward mobile application for users to use on their mobile devices. The tool makes the process of planning events like birthday parties and weddings more manageable for individuals, as well as for businesses, schools, and other organizations. Thanks to this feature, users can swiftly and simply organize their events from the comfort of their smartphones. The Event Management System Smartphone Application's purpose is to simplify the event management process for users by providing them with access to various useful tools in a centralized location. It has elements that connect the many sorts of organizing bodies and suppliers, such as venues, photographic agencies, and decorators, among many other forms of organizing organizations. Additionally, the program gives service providers the ability to personalize their events by adding images in order to advertise their company. The smartphone application for the ”Event Management System” is designed to be user-friendly and straightforward in its use. It is free to use and accessible on mobile platforms such as Android and iOS. AlSondos et al. (2020)

1.1 Motivation

This report's objective is to investigate the possibilities for enhancing the effectiveness of event management by using a smartphone application for an event management system. The present status of event management, the changes that are occurring within the sector, and the prospects for utilizing technology to boost efficiency and effectiveness will all be covered in this paper. It will also examine the features that ought to be included, the possible dangers connected with the development of such an application, and the benefits that may be gained by using a smartphone application for event management. In conclusion, the report will include a summary of the development process and some recommendations for achieving success. This paper aims to educate stakeholders and decision-makers about the possible influence this application may have on event management procedures.

1.2 Objective

The goal of this project is to consolidate all of the event-organizing-related vendors into a single platform, organized according to categories. This will allow customers to quickly allocate and contact suppliers based on the information and portfolios that are provided about them. with the purpose of ensuring that consumers are able to get the cuisine, photographer, decorator, or location of their choice for their event.

1.3 Expected outcomes

The goal of this project is to consolidate all of the event-organizing-related vendors into a single platform, organized according to categories. This will allow customers to quickly allocate and contact suppliers based on the information and portfolios that are provided about them. with the purpose of ensuring that consumers are able to get the cuisine, photographer, decorator, or location of their choice for their event.

1.4 Report Layout

Seven chapters are included in this report. The report format is provided below.:

Chapter 1: summary of the main concepts and goals of creating this project.

Chapter 2: A review of prior research has been presented in this chapter. Additionally, a comparison of the aforementioned works is provided.

Chapter 3: Here, we've talked about the approaches that were applied to the system's development.

Chapter 4: The fourth chapter discusses front-end design, back-end design, interaction design, and UX design, as well as project execution needs.

Chapter 5: Implementation of the database, implementation of the front-end design, testing implementations, and test results.

Chapter 6: The chapter discusses the application's societal impact, environmental impact, ethical considerations, and sustainability plan.

Chapter 7: The last chapter discusses conclusions and the scope for further developments.

Chapter 2

Background

2.1 Preliminaries/Terminologies

Some preliminary terminologies used in this paper are explained below: Event Management System: The Event Management System Smartphone Application is a mobile application that allows customers to manage their events and gives them access to various event management tools. Users can locate event planning-related businesses, venues, and organizing teams using the platform. Juliana et al. (2021)

2.2 Research Contribution

Event management is a vital aspect of planning and organizing events such as conferences, conventions, trade shows, and festivals. The increasing popularity of smartphones and mobile devices has led to the development of various event management applications that aim to assist users in organizing and managing events efficiently. In this research work, we propose the design and implementation of a smartphone application for event management. Juliana et al. (2021)

Recent studies have shown that the use of mobile devices for event management has increased significantly. Event organizers and attendees alike have adopted the use of mobile applications to manage events, as it provides convenience and flexibility. However, most existing event management applications have limited features and are not user-friendly. Our research aims to address this gap by proposing a comprehensive and user-friendly event management application that can be used by both organizers and attendees.

We will use a user-centered design approach to design and implement the proposed event management application. This approach involves gathering user requirements and feedback at every stage of development to ensure that the final product meets the needs of the users. We will use a variety of tools and techniques to design and implement the application, including wire-framing, prototyping, and user testing.

2.3 Survey Results and Requirements

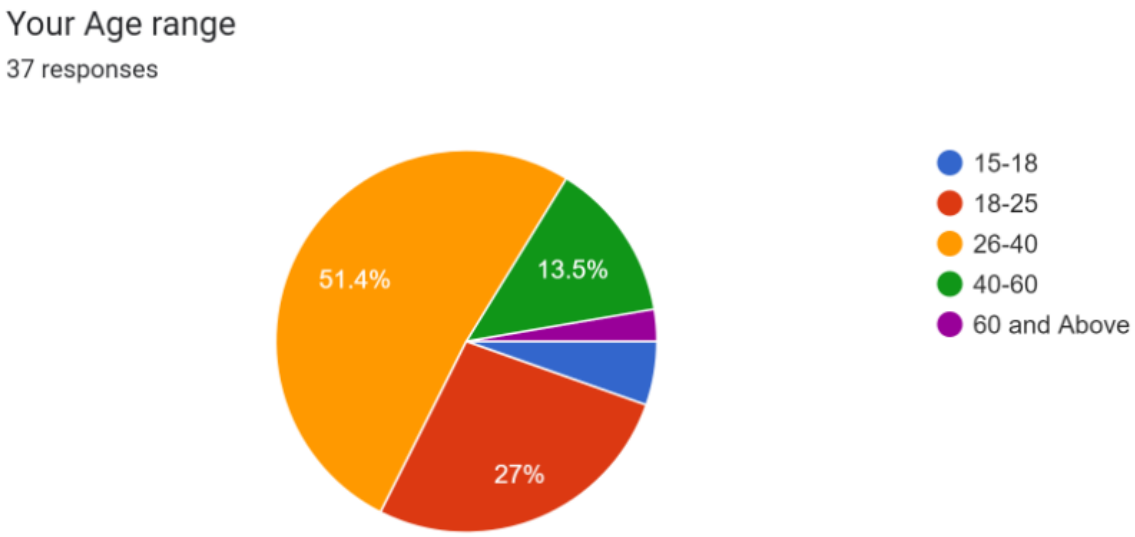

Figure 2.1: Age group of the survey

The above pie chart shows the age group of participants who took part in the survey. Where it shows that there were mostly senior or middle-aged participants. Here it showed that prominently who wants to use this service are in an age group of 26-40 years, and next biggest groups are the youth from age 18-26 years, Other groups has moderate responses for this survey.

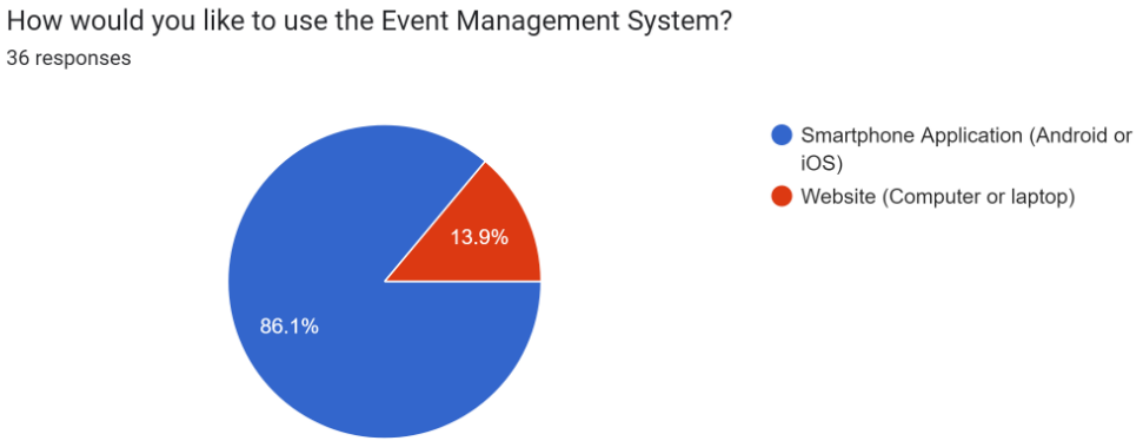

Figure 2.2: Choice of the Participants

This pie chart shows what platform the users preferences to use for the smartphone application. This pie chart shows how the dominant portion of the users wants this service to be in Google Android Platform rather than that of the iOS.

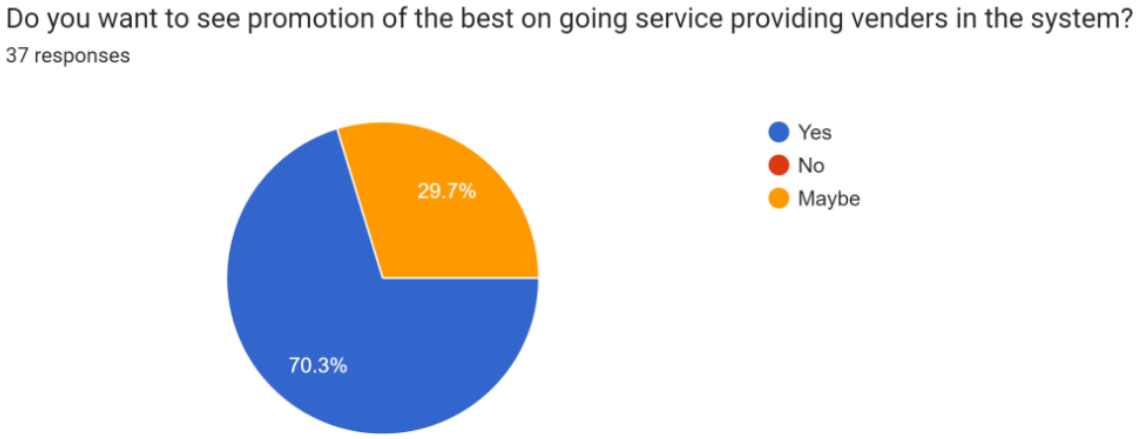

Figure 2.3: Choice of the Promotion

The participants from the survey show their preference for receiving promotions about specific vendors from this app. As with the users it is clear, that even though

users prefer the application to be promotion-less, but the will be comfortable if any brands are to be highlighted in promotional purposes.

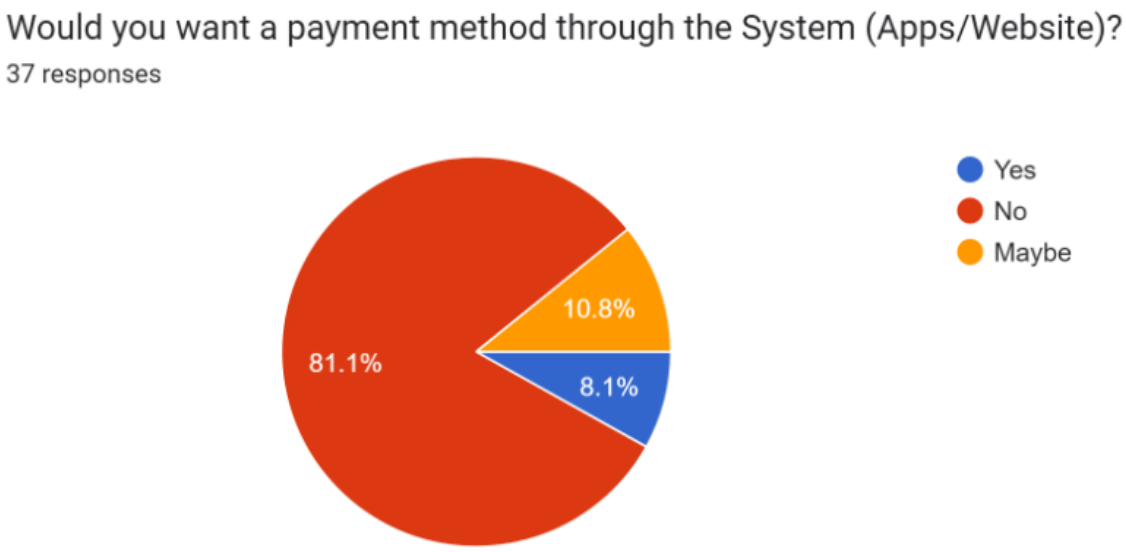

Figure 2.4: Preference of the Participants about Payment Methods

The above pie chart states the preference of the about using payment method through this app. Where it was extracted that most of them were discouraged to use an in-application payment system.

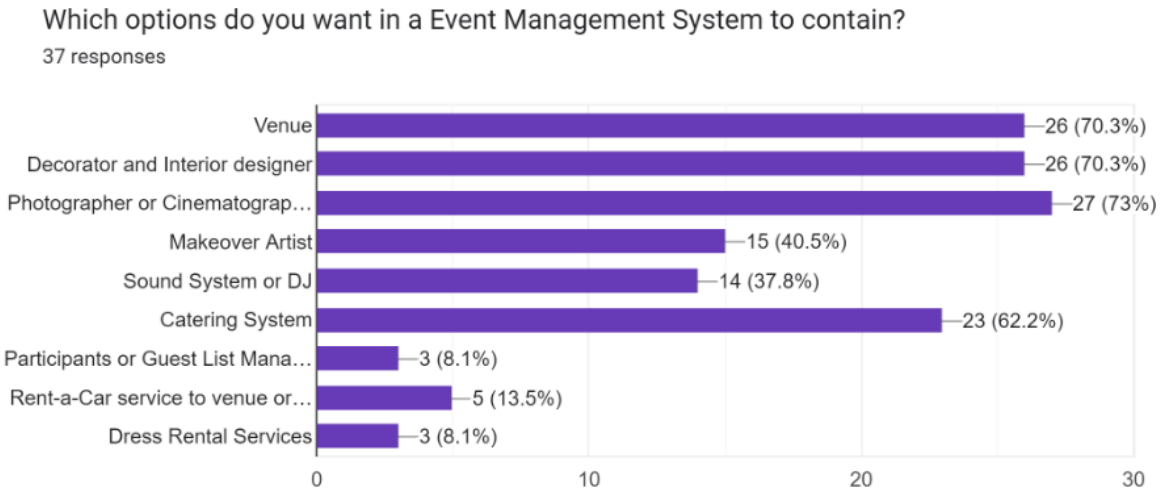

Figure 2.5: Preference of the Participants about Options in app

The above data shows how the participants showed their preferences and requirements about the option that can be added to the app. Here the surveyors have the freedom to suggest within some given parameters that what sort of products and option they might want in the application.

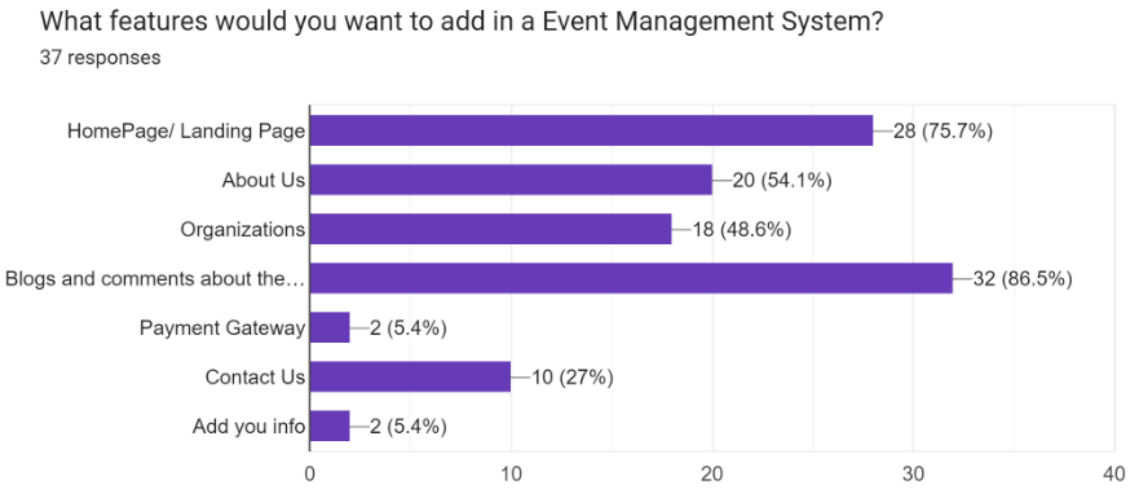

Figure 2.6: Preference of the Participants about new features in app

The above data again shows what their preferences for new features that can be added to the app. Here is the in application they might want to use in the platform, as a result they can perform their variable tasks.

2.4 Conclusion of the Survey

The above survey was taken by over 37 participants, who participated from the users' perspective, and concluded that most of them don't support a payment gateway for this sort of application. And age range is mainly 26-40 years and above. From the given dynamic data collected from the survey participants it was clear that an smartphone application like this can be useful for organizing any light weighted events or to source any fragments of events. Where the sustainability of this kind of platforms will provide useful support to many regular users.

2.5 Related Event Organizing Platforms

In Bangladesh, there is no proper Event Smartphone Application that can help the user get all the service providers together in one place. Though there are other brands that have their own Event Management system, what are their own brands only. But no event organizing platform is present in the Bangladeshi perspective from our country, meaning that there this kind of platform, that can compete in the market to put impact on the society and regular users to find their preferred vendors or service providers in just one platform.

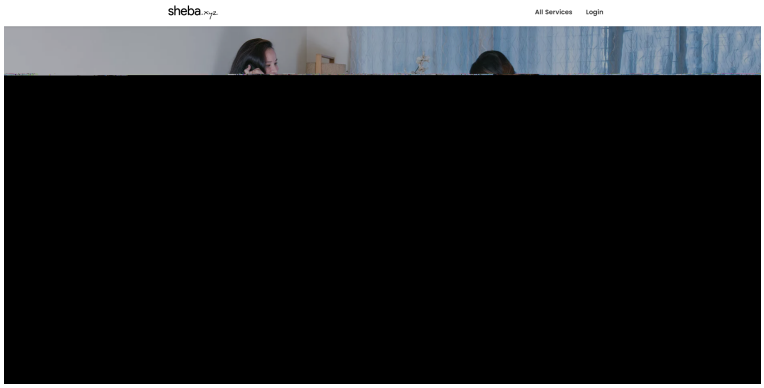

Figure 2.7: Sheba XYZ

Sheba.XYZ 2.5*Get Expert Professional Services at Home in Bangladesh — Sheba.xyz* (n.d.) provides various services that are similar to the application we are developing, but they don't have some of the features that we are offering. The user interface is not particularly intuitive, and loading times for online pages are frequently significantly longer than expected.

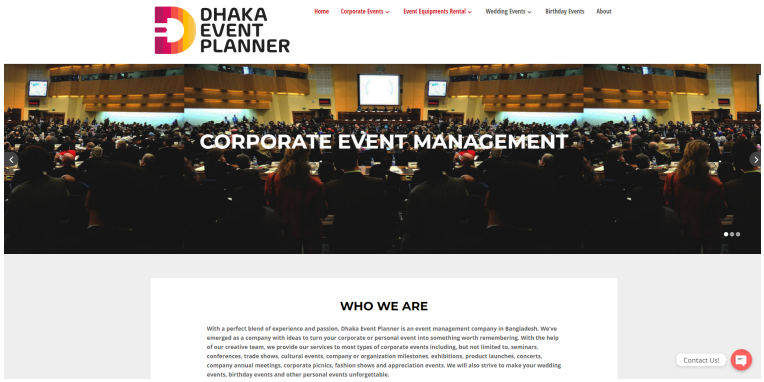

Figure 2.8: Dhaka Event Planners

Dhaka Event Planner 2.5*Corporate Event Management Company in Bangladesh* (n.d.), through this website, has similarities with the services we are developing, in most cases, this is their private business, and there isn't any space for other service providers to access it to propose services.

2.6 Scope of the Problem

This challenging location offers a vast array of prospective inquiry possibilities, and there is great room for development in this field of study. LEXHAGEN et al. (2005)

1. A single platform for Event Management will help elderly citizens to grab their needs in a go.
2. Increase local vendors' participation in more events, including those outside their immediate area.
3. An online platform will also help the vendors to spread their business and widespread their popularity, and customers will also be able to do events at a reasonable price.
4. A way to record events.

2.7 Challenges

Throughout the development of the program, the developer experienced numerous hurdles. For example:

1. There is not enough information in related literature on implementing a collaborative online event management system from a Bangladeshi perspective.
2. Similarly, it was very difficult to find technical details about creating a module to record bookings in Firebase. Therefore this functionality had to be developed without having prior implementation data on this topic.
3. Conducting a requirement survey for the establishment of this kind of Person-to-Business platform.

Chapter 3

Methodology

3.1 Overview

Research technique refers to the specific actions or procedures that are followed in order to locate, select, process, and evaluate material pertaining to a topic. The reader is provided with the opportunity to evaluate the general validity and dependability of an investigation in the methodology portion of a research report.

The software industry utilizes the Software Development Life Cycle (SDLC) methodology for the purposes of conceptualizing, developing, and testing software. Various methodological frameworks, such as the Agile model, the Waterfall model, the incremental model, and the spiral model, are utilized within the context of the software development life cycle (SDLC). The needs of a particular project often guide developers in deciding which of these models to use for a given project. Each of these models has a unique set of advantages and disadvantages.

3.2 Research Framework: Waterfall

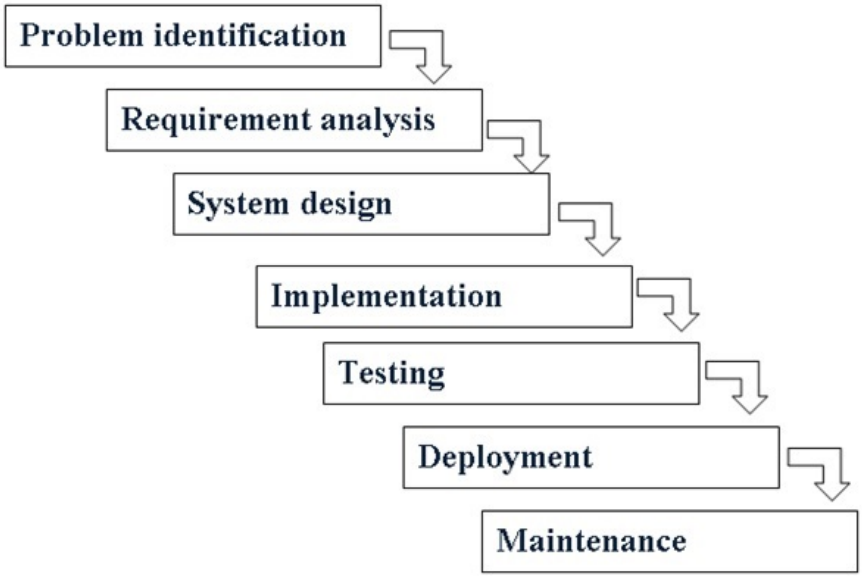

Figure 3.1: Waterfall Model

Waterfall software development methodology is implemented, so that this task can be completed as it is basically a solo project.

The requirements analysis, design, coding, testing, and deployment phases make up the six steps that comprise the waterfall paradigm. During the stage known as the requirements stage, developers are responsible for compiling a requirements document that details all of the potential needs of a system.

1. Requirement Analysis
2. Design
3. Coding
4. Testing
5. Deployment

6. Maintenance

Every software module must pass through each of the steps. Every subsequent version adds new functions to a module. This process is continued until the entire system has been assembled.

- Requirement Analysis: The first step of requirements comprises determining what needs to be designed and its function, purpose, etc. Here, the input and output specifications of the finished product are evaluated and rated.
- System Design: In this phase, the first phase's required specifications are analyzed, and the system design is created. System Design aids in determining hardware and system requirements, as well as the system's general architecture. Now, the software code to be produced in the subsequent phase is being created.
- Implementation: With inputs from system design, the system is initially built as tiny programs known as units, which are combined in the subsequent phase. The process of developing and testing each unit's functionality is known as Unit Testing.
- Integration and Testing: Integration and Testing: After testing each unit generated during the implementation phase, each unit is integrated into a system. The proposed program must be subjected to continuous software testing to identify any defects or problems. Testing is performed so that the client encounters no issues during software installation.
- Deployment of the system: After complete functional and non-functional testing, the system is deployed in the customer's environment or launched to the market.
- Maintenance: This process occurs after installation and entails modifying the system or a specific component to adjust its characteristics or enhance its performance. These adjustments result from either customer-initiated change requests or the discovery of faults during live system use. The client receives routine support and maintenance for the program.

3.3 Use Case Diagram and Explanation

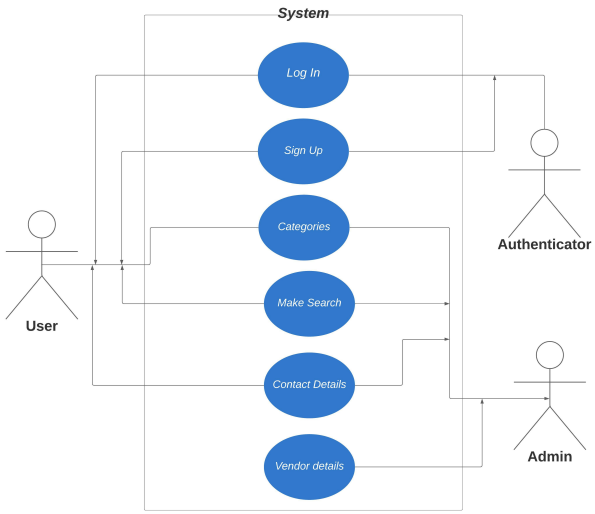

Figure 3.2: Use Case Diagram

The Use Case Diagram above shows how the actors are acting in various scenarios of this platforms, where the admin can authenticate the vendors viability, and can also shows that which actors can access to what services or options in the smartphone application.

The use case diagram above shows the different use cases of the system and how they relate to the actors, i.e., users. As can be seen in the diagram, the administrator's duties are to add new vendors, users, and service providers to the system. The vendors can use the dashboard to provide their services, and he/she can also view the comments the users are making on their services. The user can view the dashboard from their user interface (UI) and choose from the dashboard to avail information about the vendors. Rowland (2013)

3.4 Design Requirement

When creating the user interface, several design considerations were taken into account due to the application's web browser compatibility. Boukhary & Colmenares (2019)

- The website must be simple to navigate and user-friendly;
- It must be compatible with all major web browsers.
- It must be quick and efficient.
- Its design must be responsive across all devices.

Chapter 4

Design Specification

4.1 Front-end Design

The front-end of a program refers to the part of the program that the typical user sees and interacts with, the graphical user interface. Anyone can use the front end without knowing how to code. It's important to make the software's front end user-friendly so people can actually use it. Wu (2018)

4.1.1 Functional options of the system

There are 13 web pages in the application.

1	Log In
2	Sign In
3	Admins Dashboard
4	About page
5	Homepage
6	Decorator
7	Photographer
8	Sound System
9	Venue
10	Catering
11	Log Out
12	Add Vendor
13	Delete Vendor

Table 4.1: Funtionality Table

4.1.2 Descriptions of the Functionality table

1. Log In: Here the users can log in to this platform and access to it's corresponding services.

2. Sign In: The Users can create a new account and get register for this application, and can later log in to their preferred options.

3. Admins Dashboard: These works particularly works for the admins, who will be authenticating the vendors and add or delete the vendors and service providers.

4. Homepage: These consist of the all the buttons and all the options where the users can avail all the options and services. Through these they can contact and book the services from the vendors.

5. Decorators: Information about the vendor and service provider profiles is presented on this page. who is advertising the services of their decorator.

6. Photographers: Information about the vendor and service provider profiles is presented on this page. who is advertising the services of their photographers.

7. Sound System: Information about the vendor and service provider profiles is presented on this page. who is advertising the services of their sound system providers.

8. Venue: Information about the vendor and service provider profiles is presented on this page. who is advertising the services of their venue services.

9. Catering: Information about the vendor and service provider profiles is presented on this page. who is advertising the services of their catering services.

10. Log out: These option prompt the users to end their session from this system.

11. Add Vendors: Through this panel the admins can add new vendors. Which will be immediately displayed in the Homepage specific pages.

12. Delete Vendors: Through this panel the admins can delete existing vendors. Which will be immediately displayed in the Homepage specific pages.

4.2 Back-end Design

The application was built using Google's DART language and the Flutter framework. The development procedure adhered to a client-server design. A SQLite database is being utilized to keep all the necessary information safe and secure. It is through this database that all data management operations (insertion, retrieval, modification, and deletion) are carried out. Wu (2018)

4.3 Interaction Design and User Experience (UX)

Good interaction design and user experience are crucial to the success of any piece of software. To facilitate quick and simple movement between the app's many websites and functions, we've included a number of GUI components, including a navigation bar, a sidebar, and clickable cards. The Flutter framework was used in the UI's development to boost the readability of its visual components. It will increase user engagement. Hassan (2022)

4.4 Implementation Requirements

The requirements for implementing this project are as follows:

Operating System:	Windows 10 Pro
Development Environment:	Visual Studio Code, Android Studio
Front-End Technologies:	Dart, Flutter
Back-end Technologies:	SQLite, Firebase
Hardware specifications:	AMD Ryzen 5 3600X (3.9-4.1 GHz),, 16GB DDR4 RAM

Table 4.2: The requirements for implementing this project

4.4.1 Description of the system specification

The application is developed under the above specification, and as a more professional approach the engineer requires a mid-range PC setup, that has the capability to run Android Studio, for further the progress of future works. Even though the system can be developed initially in MS VS Code. *https://www.intuz.com/android-app-development-guide* (2021)

Chapter 5

Implementation and Testing

5.1 ER Diagram and Explanation

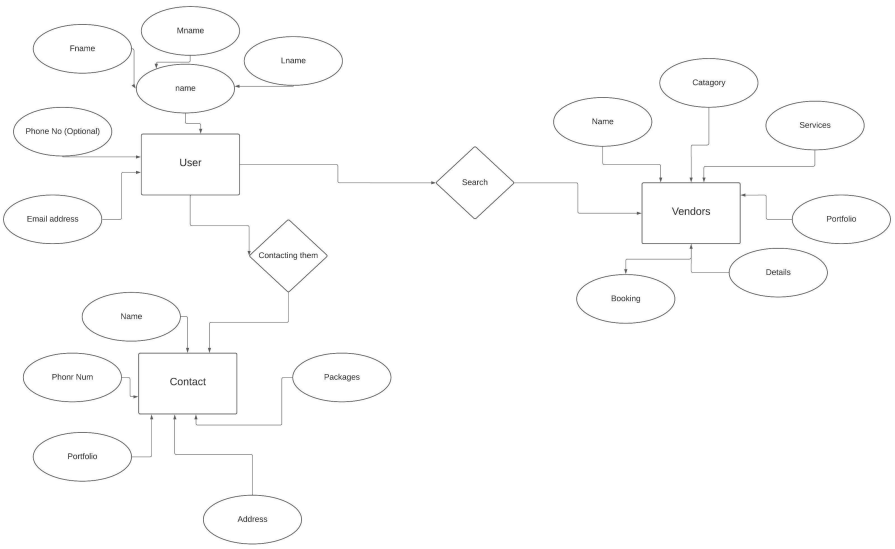

Figure 5.1: Entity Relationship Diagram

An Entity Relationship (ER) diagram is a visual representation of the structure of a database. It shows the relationships between different entities in the database. An entity is a person, place, or thing that interests an organization and is represented in the database. The relationships between the entities are represented by lines between the entities. The lines may be labeled with verbs describing the entities' relationship.

5.2 Activity Diagram

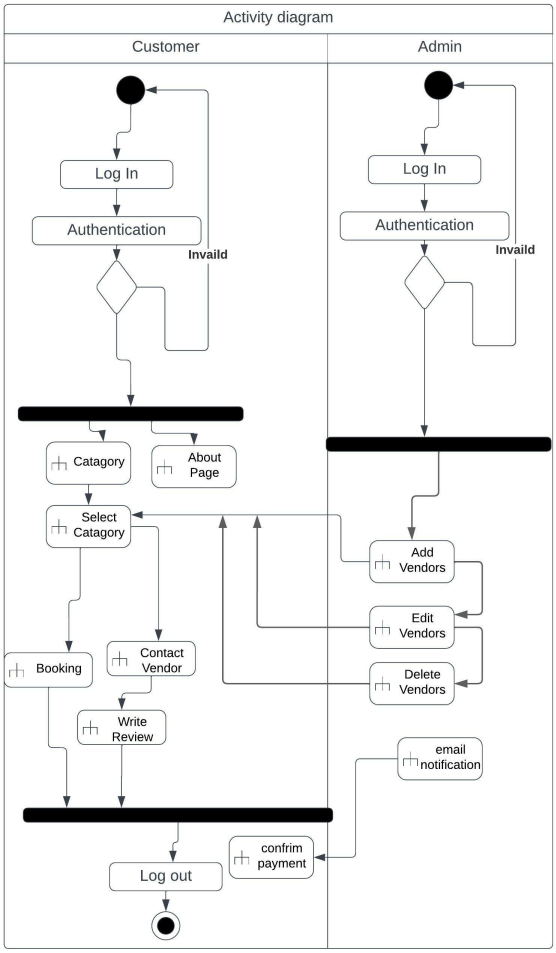

Figure 5.2: Activity Diagram

This diagram shows the activity diagram for the users or the admins to select what role are they playing. This activity diagram closely represents how all the sectors of the roles are properly being played by each actors. An activity diagram is essentially a flowchart that depicts the flow from one activity to another. The action can be described as a system operation. The control flow is directed from one operation to the next. This flow can be sequential, branching, or concurrent in nature.

5.3 Implementation of Front-end Design

This application currently has a few categories to select from. this application provides a user end and admin end service for all of it's users based on their requirements. Front-end development is the process of creating user-interactive components. User experience (UX) features include the user interface, buttons, user-entered data, and websites. The front end seeks to satisfy user needs and provide a great user experience. **?**

5.3.1 User's Side:

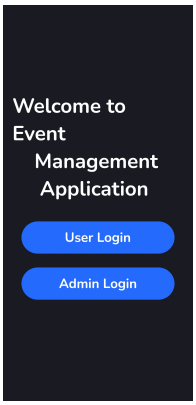

Figure 5.3: Front Page

This page shows the option for the users or the admins to select what role are they playing and log in. Where as this is authenticated by FireStore authentication system. from this page the users can choose to create new account for this application, or can log in immediately supported by the Google Firebase real time database authentication system. The Firebase will store every information of the users in the FireStore and also gives us every crash report for it.

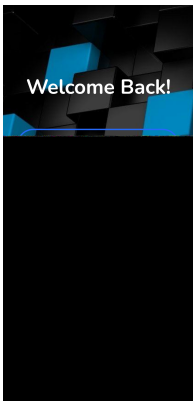

Figure 5.4: Sign In

The users can log in to their account and can proceed to the next page, from this page, where they can log in as follows. These pages are FireBase authenticated. Firebase provides a secure authentication solution for Flutter apps, allowing users to sign in.

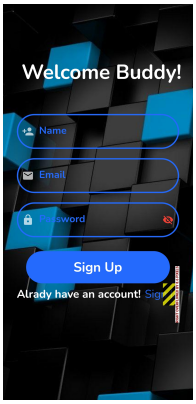

Figure 5.5: Home Page: Sign Up

This is the Signing In process. With the Firebase authentication system, the Page can let the user create new account for this app. Here new users can get registered to this specific platform.

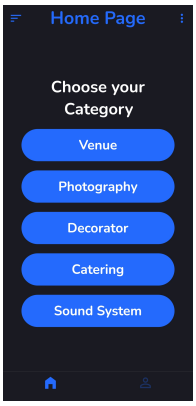

Figure 5.6: Category Page

This shows all the categories of services the system can show here. From where the users can choose what they are looking for, and they can proceed to the next topic from this menu. Menu is an important UI component in Android that is used to provide certain common functions throughout the application. Users can have a seamless and consistent experience across the program by using the menu.

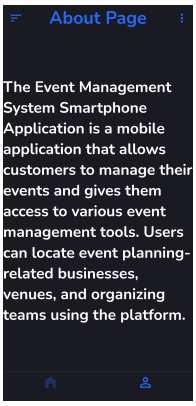

Figure 5.7: About Page

This page gives a short detail about the purpose of this app and what it is capable of. This also gives a personalised description of what is the purpose of this project. This also maybe referred as the developers note that what is done in here.

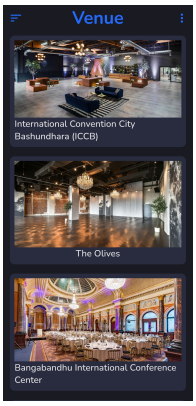

Figure 5.8: Category: venue

This page displays information about the profiles of the vendors and service providers. Who are posting about their Venue services. This page provides all the details for the vendors and their contact details, and also the booking system.

Figure 5.9: Category: Decorator

This page displays information about the profiles of the vendors and service providers. Who is posting about their Decorator services. This page provides all the details for the vendors and their contact details, and also the booking system.

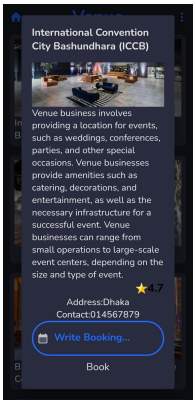

Figure 5.10: category: Decorator Details

This page displays information about the profiles of the specific service providers and their contact details and booking system. This page contains description and in later purpose can put comment in this page.

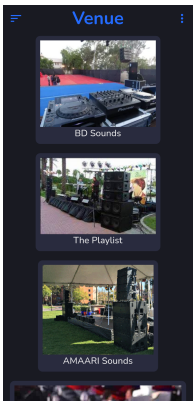

Figure 5.11: Category: Sound Systems

This page displays information about the profiles of the specific service providers and their contact details and reviews. Here this page is displaying sound system vendors, so that the users can choose among them and proceed according to their requirements. Luxford & Dickinson (2015)

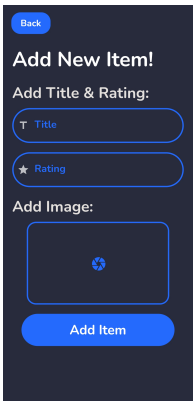

Figure 5.16: Admin Adding Page

The Admin can add here new vendors and can add the details for their details for the new vendor, description, name, contact information, adding photos. This panel will help the admin to register any new vendors who has contacted them to be a part of this platform, and furthermore will be displayed in the homepage specific panel as soon as the vendor is added to the system.

5.4 Database Management

The back-end was developed by FireBase, where the system is a No SQL Database, and all the data are stored as an object rather than any SLQL. Backend-as-a-Service (BaaS) platform Firebase offers numerous services for mobile and online apps. Firebase may be used to bring a variety of functionalities to a Flutter application. The DBMS stored all the data of the users and all the inquiries for the admins to understand the flow. Software systems used for data storage, retrieval, and querying. A DBMS acts as an interface between an end-user and a database, enabling users to create, read, modify, and remove database data. NoSQL databases, often known as ”not only SQL” databases, are non-tabular and store data differently than relational tables. Based on its data model, NoSQL databases exist in a variety of forms. Document, key-value, wide-column, and graph are the main types.

Document ID	img	rating	title
XBtwBQSNo0t7OYdzaE5p	"https://firebasestorage.googleapis.com/v0/b/my-project-ab976.appspot.com/o/photography%2Fp5.jpeg?alt=media&token=1dc5cf6f-f8d2-4b41-a032-e08f6e229bd1"	"4.8"	"photo5"
Yj4XColKfBG8qMxeBWhZ	"https://firebasestorage.googleapis.com/v0/b/my-project-ab976.appspot.com/o/photography%2Fp2.jpg?alt=media&token=29a6fc3e-f6e0-4dea-9748-7be454ea6036"	"4.8"	"photo8"
a4R3CmEasZocyzUVahpZ	"https://firebasestorage.googleapis.com/v0/b/my-project-ab976.appspot.com/o/photography%2Fp4.jpeg?alt=media&token=6af1afee-e52c-4250-8be6-be2cf05d6fe1"	"5.0"	"photo4"
b3XQhv9bI03Trl88eXIa	"https://firebasestorage.googleapis.com/v0/b/my-project-ab976.appspot.com/o/photography%2F70394853-51b1-4dc4-98a4-701a168f6ceb2228809884147356862.jpg?alt=media&token=e4618485-7948-4294-8500-15e10c87b73f"	"4"	"Bd Photos"
gwh26AA59h7NpoRMYQTV	"https://firebasestorage.googleapis.com/v0/b/my-project-ab976.appspot.com/o/photography%2F2a0736e5-9653-4afc-967c-bd1cad2435895552010269758034035.jpg?alt=media&token=884d9382-c5ab-4b22-9fb2-7b394c7cb753"	"4"	"Amar Photography "
s68Al25Qwnxnu4523XES	"https://firebasestorage.googleapis.com/v0/b/my-project-ab976.appspot.com/o/photography%2Fp1.jpg?alt=media&token=6b87f96f-cf15-4071-a7c9-1c156ff60f95"	"4.9"	"photo1"
yFjRPOpCLztm05d57UK0	"https://firebasestorage.googleapis.com/v0/b/my-project-ab976.appspot.com/o/photography%2Fp3.jpg?alt=media&token=6a561cfb-47eb-46c0-b3dc-07c49d2b64f2"	"4.7"	"photo3"

Figure 5.17: FireStore Database

This is the Database for the admin panel, which is retrieved from Firebase FireStore, from the real time data that are stored. This contains all the data in No SQL format, as JSON Objects, which are embedded a link. So all the images are embedded in as a link, where this images can me compressed sufficiently according to it’s requirements. Here this is the name of the vendors and their Unique ID and rating system information and also the JSON image object links. **?**

Identifier	Providers	Created ↓	Signed In	User UID
synthia@gmail.com	✉	Jan 14, 2023	Jan 19, 2023	r4h1eyHnLQUgvV6VUVKmWvMjLr...
ericonoiy@gmail.com	✉	Jan 8, 2023	Jan 12, 2023	QLN1j1K0MGQphi6FohGUKYqw2J...
erionoi@gmail.com	✉	Jan 8, 2023	Jan 8, 2023	8fv6aegRkcTXBlWEmu3qqSwLdYz2
ericono@gmail.com	✉	Jan 8, 2023	Jan 8, 2023	tOQzfVTTpScsODl3xb7bUBhcoJn2
hope@gmail.com	✉	Jan 8, 2023	Jan 8, 2023	pDbOSVCQaqMBShDvlJSyQtoq2q...
testing@gmail.com	✉	Jan 8, 2023	Jan 8, 2023	axQGaqTm8HWjSH3yfuquYeDjhw...
gibson@gmail.com	✉	Jan 8, 2023	Jan 8, 2023	c0ZdfTKzlONkTmC2N98MyTlxrHD3
mahimkhan992@gmail.com	✉	Jan 7, 2023	Jan 8, 2023	EGzh9yV9ikV7BX19TFRl44giG4m2

Figure 5.18: User Authentication Database

This is the Database for the authentication panel, which is retrieved from Firebase FireStore, from the real time data that are stored. Firebase's real-time database that enables Flutter applications to store and retrieve data in real-time. This indicates that changes to the data are reflected in the application in real-time. **?**

5.5 Test and Implementation

Testing is a highly important component of software development. The developer conducted tests to evaluate the functionality. Test a specific software helps the user understand what they should reflect more for their works in the future.

Test Case	Expected Result	Result Obtained	Test passed/failed
User Sign Up	User can register	User can Register	Passed
User login	User login	User login	Passed
Categories	Categories View	Categories View	Passed
Admin Login	Login	Admin Login	Passed
Admin Add	New Addition	Display	Passed
Admin Remove	Deletion	Don't Display	Passed
Admin Edit	Edition	Edited Display	Passed

Table 5.1: Test and Implementation table
All of the testing results are displayed in the table above, along with check-marks indicating what aspects of the application can be successfully carried out. This demonstrates how the application can perform for its users by using a variety of tests, and the results of those tests.

5.5.1 Discussion

Backend-as-a-Service (BaaS) platform Firebase offers numerous services for mobile and online apps. Firebase can be used to add the following functionality to a Flutter application. Firebase provides a secure authentication system for Flutter apps, allowing users to sign in with their email address and password, phone number, or popular social media platforms such as Google, Facebook, and Twitter. Real-time Database: Firebase gives Flutter apps a real-time database that lets them store and get data in real time. This means that any changes to the data are reflected immediately in the app. And the Event Management Application does pass all these test, that it is implemented with all these functionalities and systems for the users to securely and comfortably access to the application. The log in, register and choosing vendors and booking process works properly and pass the local user tests flawlessly.

Chapter 6

Impact on Society, Environment, and Sustainability

Numerous mobile applications inform their users about the environmental impacts of products and services, allowing them to make decisions that are more environmentally sustainable. These technologies and the information they carry have the potential to reach previously inaccessible audiences for conventional means of scientific and technical communication. Carvalho & Silva (2021)

6.1 Impact on Society

The emergence of event management smartphone applications has had a positive impact on society. Such applications enable event organizers to manage their events better, saving time and money. This has made it easier for event organizers to plan, organize, and manage events more efficiently. Additionally, these applications have given event attendees more information about the events they are attending, allowing them to plan their participation more effectively. Finally, event management smartphone applications have helped to reduce the environmental impact associated with paper-based event management.

6.2 Impact on Environment

It will result in less paperwork being used, which means that it will be better for the environment. It does not have any characteristics or functions that might be harmful to the surrounding environment.

6.3 Ethical Aspects

1. Proper authentication functions have been incorporated to prevent one type of user from accessing the features meant for another type of user.
2. No vendors will be added to the platform who can be frauds or can cause harm to others.
3. Not advertising anything inappropriate for society.

6.4 Sustainability Plan

A smartphone app for event management depends on several elements. These include the application's quality, the number of users, customer support, features, and pricing. Application quality affects sustainability. It should be user-friendly, reliable, and have helpful features. It should be updated, so people receive the newest features. Sustainability depends on user numbers. A sustainable app has many users. A huge user base helps attract new users, engage existing users, and generate income through ads or in-app sales. Sustainability requires customer support. Customer assistance should respond rapidly to inquiries, feedback, and issues. Sustainability depends on the app's features and operation. The software should offer handy features that simplify event administration. New features should be added to keep users interested. Finally, application cost affects sustainability. The application should be affordable.

Chapter 7

Conclusion and Future Scope

7.1 Discussion

Event management smartphone applications have become increasingly popular in recent years, enabling event planners to manage all their events in one place. These applications provide a variety of features and services, including event registration, ticketing, payment processing, venue management, and more . They also allow users to easily access and track event information, such as time and location. Additionally, these applications often offer a range of customization options and integration with other services, such as social media accounts and email campaigns. Event management smartphone applications have easily enabled event planners to manage all aspects of their events in one place. These applications provide a range of features and services that can be customized and integrated with other services. They also make accessing and tracking event information easy, allowing for greater efficiency and organization. As such, event management smartphone applications are becoming increasingly popular and are a valuable tool for event planners.Khalil Pinjari & Nur (2016)

7.2 Future Work

The system will eventually be expanded to include a plethora of additional options, such as the selection of a location based on maps. Monitoring of the users' actions and behaviors. Making it more accessible for both users and vendors by utilizing machine learning systems and advanced event management techniques. Also,

implementing QR code technology as a verification system for valid users to attend any event, the guest management of which would be managed from this particular platform; this would be possible by using QR codes Dr et al. (2020). a chatting system for both the user and the service provider, allowing users to communicate directly with service providers via the application itself.

7.3 Conclusion

To conclude, the smartphone application for the event management system is a cutting-edge solution that simplifies the process of event preparation while also improving event execution. This application may be customized to the needs of a particular event due to its intuitive user interface, which makes it suitable for users with varying degrees of technical expertise. The project was considered a success because it was completed on schedule, without going over its allotted budget, and it satisfied all of the requirements outlined by the stakeholders. The results of the demo testing have been encouraging, and it is anticipated that the market would respond favorably to the product. My accomplishment is something I am very proud of, and I am certain that this application will bring about a revolution in the event management business.

References

AlSondos, I. A. A., Salameh, A. A. M., & Engineer, M. (2020, 07). *Organizing event ubiquitous with a proposed event mobile application in bahrain.* Retrieved 2023-02-12, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3658982

Boukhary, S., & Colmenares, E. (2019). A clean approach to flutter development through the flutter clean architecture package. In *2019 international conference on computational science and computational intelligence (csci)* (pp. 1115–1120).

Carvalho, A. A. d., & Silva, E. A. d. (2021, 12). Life cycle assessment principles in smartphone apps. *Cleaner Environmental Systems*, *3*, 100041. doi: 10.1016/j.cesys.2021.100041

Corporate event management company in bangladesh. (n.d.). Retrieved 2023-01-25, from https://dhakaeventplanner.com

Dr, H., Juliana, R., & Kumar, N. (2020). Evecurate -a smart event management app using flutter and firebase. *International Journal of Scientific Research Engineering Trends*, *7*, 2395-566. Retrieved from https://ijsret.com/wp-content/uploads/2021/07/IJSRET_V7_issue4_570.pdf

Get expert professional services at home in bangladesh — sheba.xyz. (n.d.). Retrieved 2023-01-25, from https://www.sheba.xyz

Hassan, A. M. (2022). The design and implementation of a libyan salary mobile application using flutter. *Al-Mukhtar Journal of Sciences*, *37*(3), 251–260.

(2021). Retrieved from https://www.intuz.com/android-app-development-guide

Juliana, H., Naveen Kumar, V., Richard, G., & Shivadarshini, P. (2021). Evecurate–a smart event management app using flutter and firebase. *International Journal of Scientific Research & Engineering Trends*, *7*(4), 2519–2524.

Khalil Pinjari, A., & Nur, K. (2016). Smart event management system. *International Journal of Computer Science Trends and Technology*, *4*.

LEXHAGEN, M., NYSVEEN, H., & HEM, L. E. (2005, 01). Festival coordination: An exploratory study on intention to use mobile devices for coordination of a festival. *Event Management*, *9*, 133-146. doi: 10.3727/152599505774791167

Luxford, A., & Dickinson, J. E. (2015, 04). The role of mobile applications in the consumer experience at music festivals. *Event Management*, *19*, 33-46. doi: 10.3727/152599515x14229071392909

Rowland, J. (2013, August 13). *Method and system for event planning.* Google Patents. (US Patent 8,510,145)

Wu, W. (2018). React native vs flutter, cross-platforms mobile application frameworks.