



Faculty of Engineering & Information Technology  
Quality and Accreditation Unit  
***ABET Center***

**FACULTY OF ENGINEERING AND INFORMATION  
TECHNOLOGY**

**Computer Engineering Department**

**Software Graduation Project**



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Presented in partial fulfillment of the requirements for a Bachelor's degree in  
Computer Engineering

jan 29, 2024

## **Abstract**

In today's fast-paced world, organizing and managing events can be an exhausting task. Whether it's a wedding celebration, a birthday party, or any other event, this Event Planner App is designed to streamline the entire process. This innovative mobile application offers a comprehensive suite of tools and features that empower users to plan, execute, and track their events with ease. In our app, there are two types of users: Admin (who is also the Planner) and User. If you're a User, you can choose the kind of event you want, such as a birthday or a wedding. But what makes our app stand out is the use of something called augmented reality (AR). With AR, you can see how your event's design would look by placing digital decorations and elements at your chosen venue. It's like having a sneak peek of your event's appearance before it happens! Furthermore, our app streamlines guest list management, allowing users to enter the guest list to see the maximum number for the guests, ensuring all guests receive event details promptly. The user can enter the budget so they can specify spending limits within the app, facilitating cost-effective decision-making. Additionally, our app contains a chat system where the user can contact their planner for any problems and provide reviews for the work.

We choose to use the Flutter platform for the front end because it has many libraries and it's a cross-platform. For the back end, we will use Node.js, which supports real-time communication, and we are already familiar with it.

## **1. literature review:**

Considerable research has highlighted the urgent need for efficient and trustworthy event planning services, particularly in the realm of mobile applications. Numerous studies have underscored the challenges users face when seeking suitable event planners, such as the difficulties that face the person when he manages his wedding, Multiple responsibilities and limited time. In response to these challenges, mobile applications have emerged as promising solutions, providing innovative approaches to connect users with skilled event planners and simplify the overall planning process.

Event Planner: Birthday, Party[1] worthy examples of successful event planner applications. It provides clear and simple steps that help the user to plan for his event, this platform introduces user-friendly interfaces to choose the services, and it has proven to enhance convenience for users and improve service delivery efficiency.

## 2. Methodology

### 2.1. Tools, Methods and Programming Languages

#### 2.1.1. Tools



Visual Studio Code was the primary IDE used for writing and executing the code. It provided essential features and tools for code editing, debugging, and project management.



Android Studio was utilized as an emulator to test the mobile application on different virtual devices, ensuring compatibility and smooth functionality.



We utilized GitHub for collaborative development, code management, and tracking changes.



We incorporated Firebase into our project to harness its real-time database and cloud storage functionalities. This integration enabled us to securely and effectively store messages .



Post Man plugin as our API testing tool, enabling us to test and validate our APIs. With its user-friendly interface, we could send HTTP requests and receive responses

## 2.1.2. programming language

We used different programming languages for different parts of our project: For the part users see and interact with (frontend), we used Dart and the Flutter framework. Dart is great for building how things look, and Flutter provided tools to make the mobile app visually appealing and interactive. For the (backend), we chose Node.js. It's a widely-used technology that handles server-side tasks efficiently, making our web applications strong and scalable.

## 2.1.3. Database

We used MongoDB Atlas as our database for the project. It's a cloud service that manages data well, providing scalability and security. We created different tables in MongoDB Atlas to organize various parts of our application's data.

We made various tables in the MongoDB Atlas database to handle different parts of the application, including:

Admin Table:



**test.admins**

STORAGE SIZE: 36KB   LOGICAL DATA SIZE: 130B   TOTAL DOCUMENTS: 1   INDEXES TOTAL SIZE: 20KB

[Find](#)   [Indexes](#)   [Schema Anti-Patterns](#)   [Aggregation](#)   [Search indexes](#)

[INSERT DOCUMENT](#)

[Filter](#)   Type a query: { field: 'value' }   [Reset](#)   [Apply](#)   [Options](#)

QUERY RESULTS: 1-1 OF 1

```
_id: ObjectId('65ac10bfe7a7f416edfe6d77')
username: "Hala"
password: "adminpassword"
email: "halahajali@gmail.com"
UserType: "admin"
__v: 0
```

### User Table:

**test.users**  
STORAGE SIZE: 36KB LOGICAL DATA SIZE: 2.02KB TOTAL DOCUMENTS: 17 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

INSERT DOCUMENT

Filter Type a query: { field: 'value' } Reset Apply Options

```
{
  "_id": ObjectId('6593c97aa385a14f03d93375'),
  "username": "shahd",
  "password": "123456",
  "email": "shahd@gmail.com",
  "mobile": "0569414754",
  "__v": 0
}
```

### Planner Table:

**test.planners**  
STORAGE SIZE: 36KB LOGICAL DATA SIZE: 251B TOTAL DOCUMENTS: 2 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

INSERT DOCUMENT

Filter Type a query: { field: 'value' } Reset Apply Options

QUERY RESULTS: 1-1 OF 1

```
{
  "_id": ObjectId('65986e857a04778ec971a6cc'),
  "username": "hala",
  "password": "121212",
  "email": "planner@example.com",
  "mobile": "1234567890",
  "__v": 0
}
```

### Packages Table:

This table related to each planner, when the planner need to add packages for the wedding , he enter the details for this package like the price and the location for the wedding

**test.packages**  
STORAGE SIZE: 36KB LOGICAL DATA SIZE: 1.13KB TOTAL DOCUMENTS: 3 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

INSERT DOCUMENT

Filter Type a query: { field: 'value' } Reset Apply Options

QUERY RESULTS: 1-3 OF 3

```
{
  "_id": ObjectId('65a013f12d871d3a2726bf94'),
  "name": "summer2024",
  "price": "6000",
  "planner": ObjectId('659805d48527a4c4d86c660c'),
  "mainPage": Object {
    "plannerName": "Hala Events",
    "location": "الرياض",
    "_id": ObjectId('65a013f12d871d3a2726bf95'),
    "hallName": "الجزيرة"
  },
  "imagePage": Object {
    "images": Array (9)
    "_id": ObjectId('65a013f12d871d3a2726bf96')
  }
}
```

Booked Table:

in this table we store all the user request for his occusiens when the user choose a specific Planner.

**test.bookedoffers**  
STORAGE SIZE: 36KB LOGICAL DATA SIZE: 568B TOTAL DOCUMENTS: 3 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns 0 Aggregation Search Indexes

INSERT DOCUMENT

Filter [🔗](#) Type a query: { field: 'value' } Reset Apply Options ▶

QUERY RESULTS: 1-3 OF 3

```
_id: ObjectId('65b270b4e70c7b99bb75d32c')
plannername: "haLa"
packagename: "summer2024"
username: "shahd"
color: "red"
food: "Lemon w n3n3"
date: "2024-09-30 00:00:00.000"
time: "6-8 PM"
__v: 0
```

Hall Table:

the hall table store all the halls that the user can booked, the user specifies his location for his party, and can choose the hall that is near from him.

**test.halls**  
STORAGE SIZE: 20KB LOGICAL DATA SIZE: 101B TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 20KB

Find Indexes Schema Anti-Patterns 0 Aggregation Search Indexes

INSERT DOCUMENT

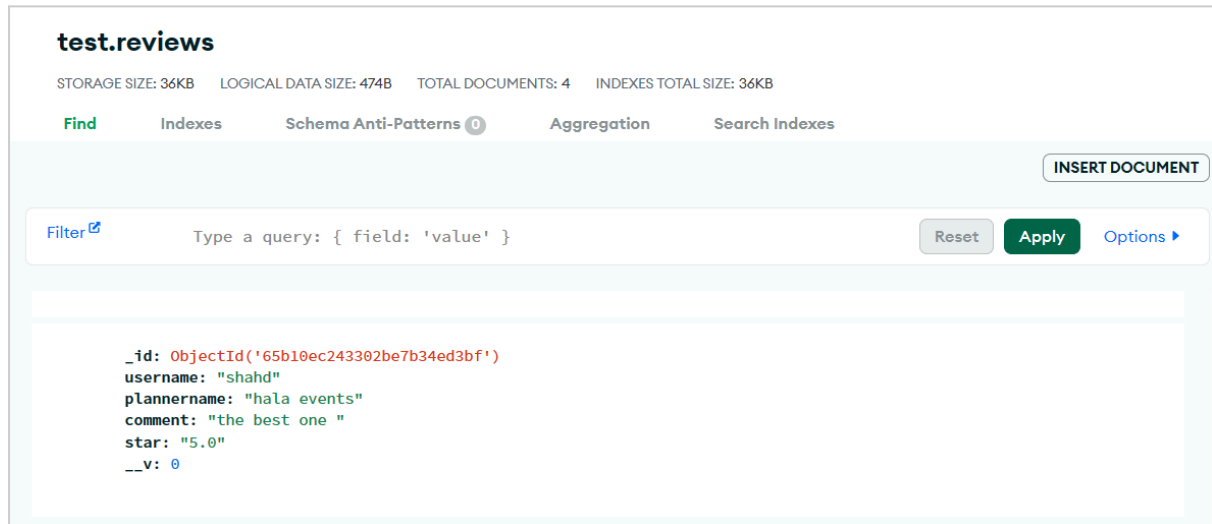
Filter [🔗](#) Type a query: { field: 'value' } Reset Apply Options ▶

QUERY RESULTS: 1-1 OF 1

```
_id: ObjectId('65ad770950c90fc33c9b9ece')
username: "Gardens"
date: "12-10-2024"
time: "6-8"
max: "400"
__v: 0
location: "Nablus"
```

Reviews Table:

this table for the users comment , that appear to the user , so he can choose his user depends on the reviews for the Customers.



The screenshot shows the MongoDB Compass interface for the `test.reviews` collection. At the top, it displays statistics: STORAGE SIZE: 36KB, LOGICAL DATA SIZE: 474B, TOTAL DOCUMENTS: 4, and INDEXES TOTAL SIZE: 36KB. Below this are navigation tabs: Find, Indexes, Schema Anti-Patterns (0), Aggregation, and Search Indexes. An `INSERT DOCUMENT` button is located in the top right. A search bar contains the query `{ field: 'value' }` with `Reset`, `Apply`, and `Options` buttons. The main area displays a document with the following fields:

```
_id: ObjectId('65b10ec243302be7b34ed3bf')
username: "shahd"
plannername: "hala events"
comment: "the best one "
star: "5.0"
__v: 0
```

## 2.2. System Features Implementation

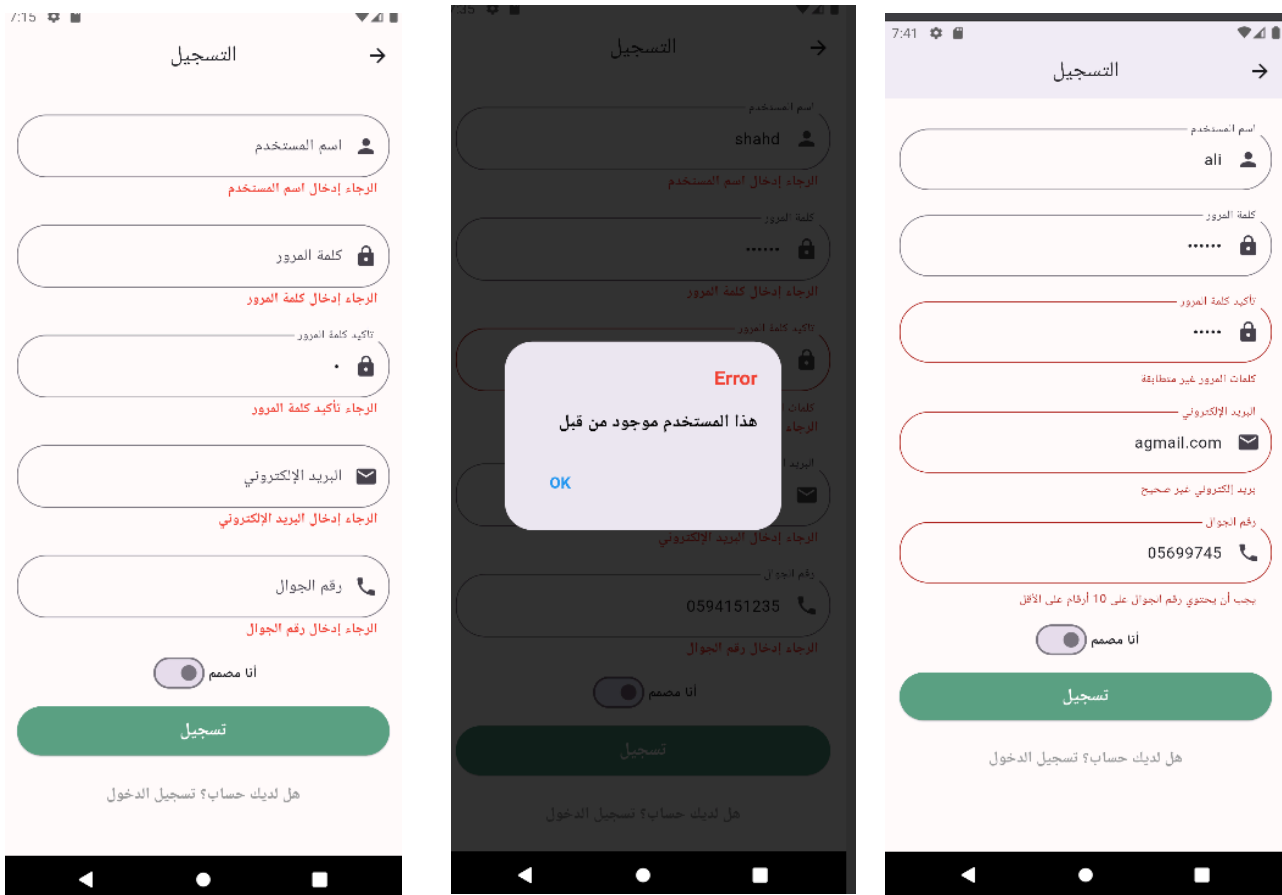
### 2.2.1. Mobile Application

The "Monasaba" mobile application was created to enhance smooth communication between users and planners, promoting clarity and ease in their interactions.

main page:



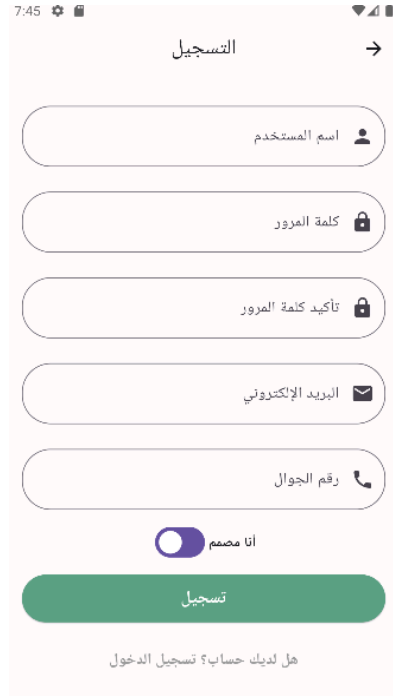
**sign-up page** the user can register to the application with the required information, and determine if he wants to register as a planner or stay as a customer.



signup page has been developed to cater to both planners and users, ensuring the accurate input of necessary information. The design of the page aligns with the provided visual representation, incorporating additional error handling to handle diverse scenarios. This encompasses the identification and prevention of instances where essential fields are left empty, weak passwords are employed, or incorrect email addresses are provided, among other potential issues.

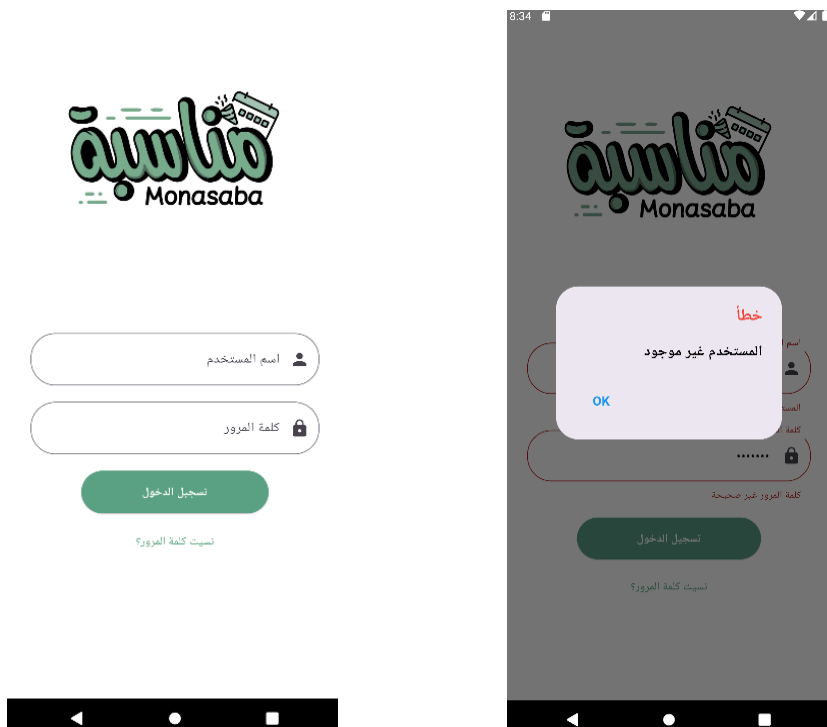
after entering the correct information the user can select if he needs to register as a planner or as a customer.

### sign up as a planner

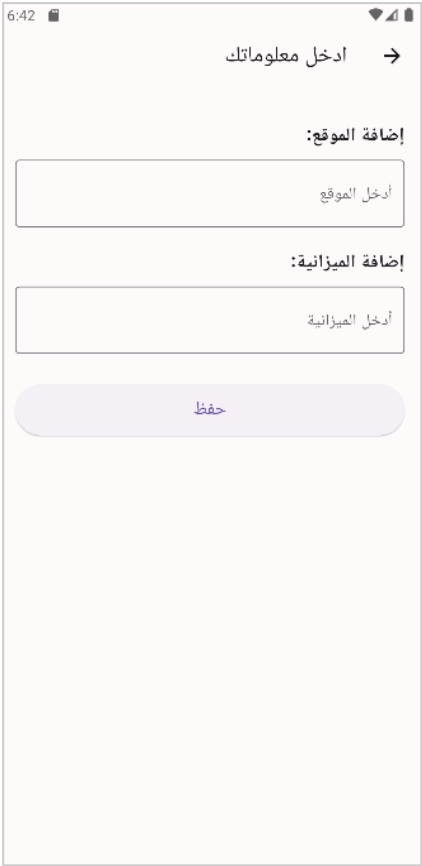


The screenshot shows a mobile application interface for registration. At the top, the title is "التسجيل" (Registration) with a right-pointing arrow. Below the title are five input fields: "اسم المستخدم" (User Name), "كلمة المرور" (Password), "تأكيد كلمة المرور" (Confirm Password), "البريد الإلكتروني" (Email), and "رقم الجوال" (Mobile Number). Each field has a corresponding icon (person, lock, lock, envelope, and phone). Below the fields is a toggle switch labeled "أنا مصمم" (I am a designer) which is currently turned on. A large green button labeled "تسجيل" (Register) is positioned below the toggle. At the bottom, there is a link that says "هل لديك حساب؟ تسجيل الدخول" (Do you have an account? Login).

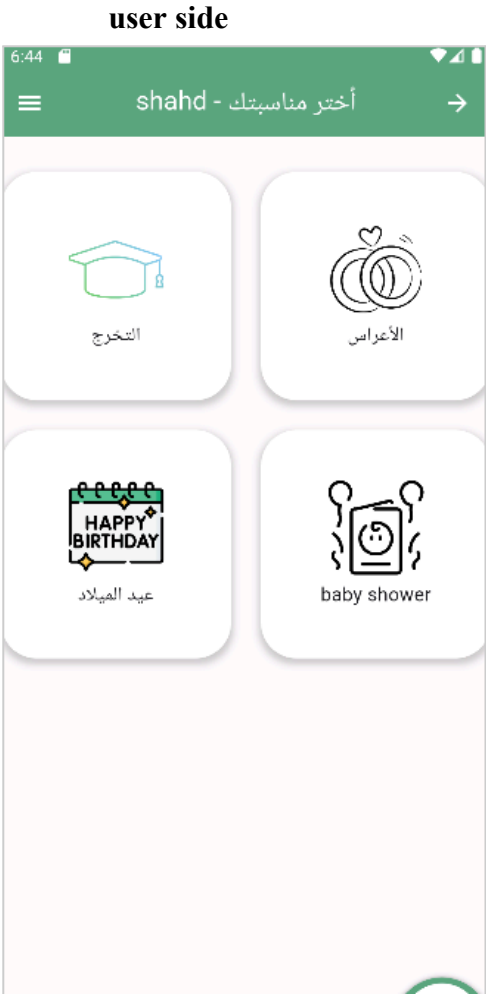
after signup correctly from user and worker the system convert them to log in pages for the login page, the user can only log in if he was previously registered either as a planner or user.



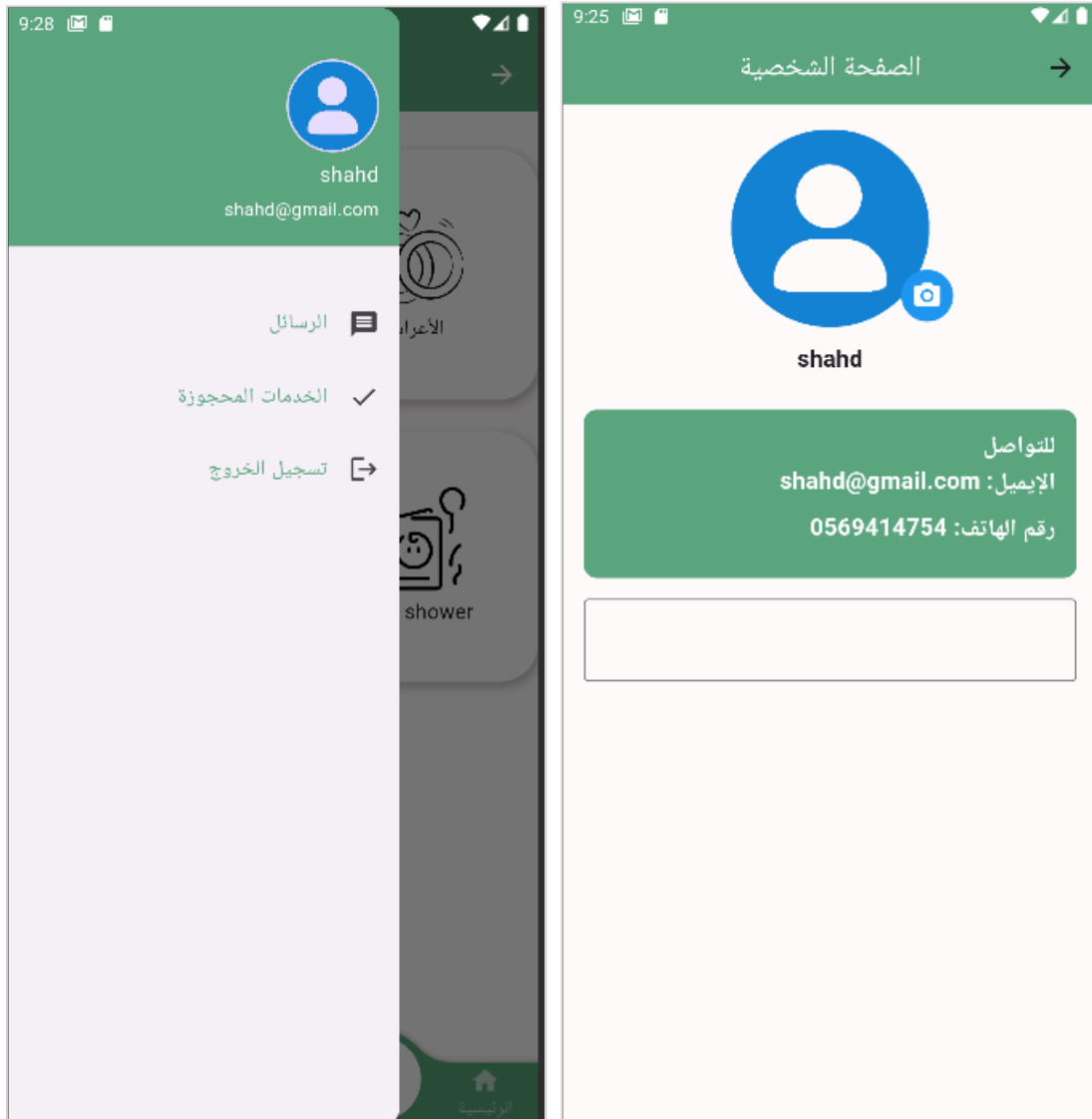
when login correctly the , the first page that appear to the user this one , that make the user enter his occasion budget and location.



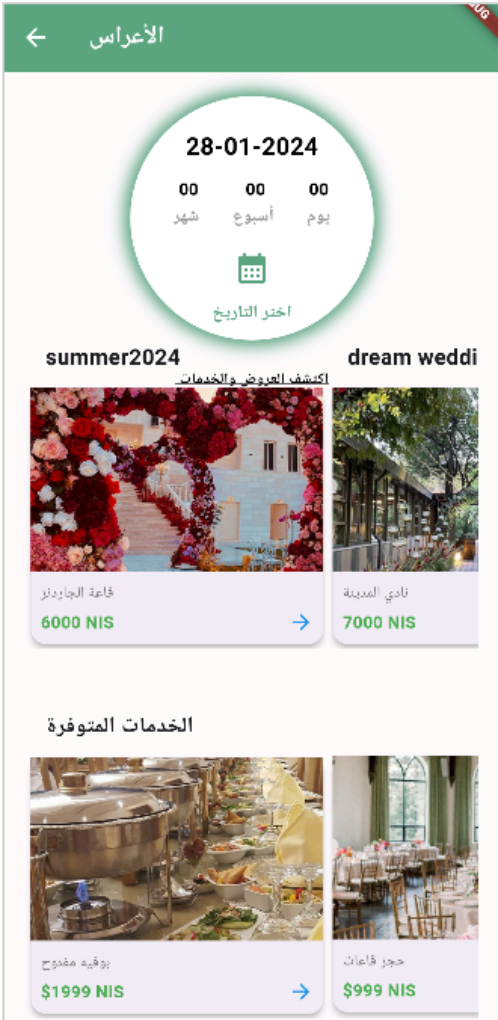
when login correctly to the planner and user as shown:



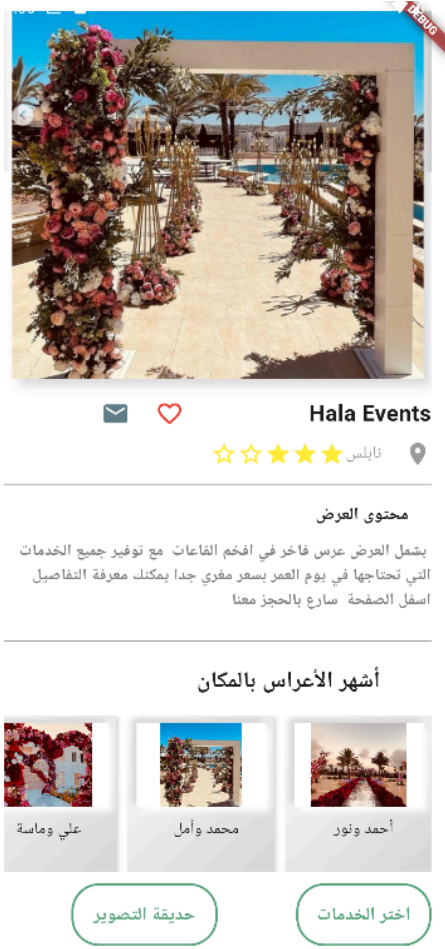
2.2.1.1. **user side - profile page** The profile screen for the user contains his information and after he books an occasion it will appear on his page we will show it soon, in addition to the endDrawer.



Next, when the user need to book for his occasion, first we will start with the weddings , because it is the most occasion that needs time and effort to make it, in our application, when the user choose wedding, he can explore the packages and offers that the planner can add to the users, the planner add details of the offer, the place , the location , the prices , and it appear to the user depends on the location that he entered at the first page, for example if he from nablus , the packages that contain halls in Nablus will appear to the user.



if he choose the first package that is in Al-Gardens hall in Nablus , then the next page will show more details for the offer as it shown below :

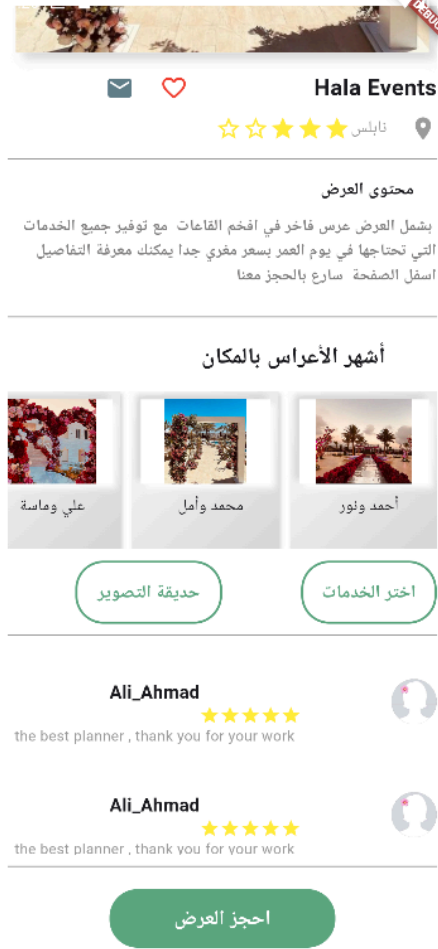


**Hala Events**  
نابلس

**محتوى العرض**  
يشمل العرض عرس فاخر في أفخم القاعات مع توفير جميع الخدمات التي تحتاجها في يوم العمر بسعر مغري جدا يمكنك معرفة التفاصيل أسفل الصفحة سارع بالحجز معنا

**أشهر الأعراس بالمكان**  
علي وماسة  
محمد وأمل  
أحمد ونور

حديقة التصوير  
اختر الخدمات



**Hala Events**  
نابلس

**محتوى العرض**  
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أحمد ونور

حديقة التصوير  
اختر الخدمات

**Ali\_Ahmad**  
★★★★★  
the best planner , thank you for your work

**Ali\_Ahmad**  
★★★★★  
the best planner , thank you for your work

احجز العرض

when he click on the service button, it will show the list of services that the planner provided in this package and details on, the user in this case have to choose from these choices for his wedding



الخدمات : تنسيق الزهور

**تنسيق الزهور**  
لدينا سيكون بإمكانك إختيار لون الزهور الذي تريد وضعه في مناسبتك وسيتم عرض الزهور التي تطابق اللون الذي قمت بإختياره  
تنسيق الزهور

**قائمة الطعام**  
في قائمة الطعام لدينا تجد كل الأصناف التي قد تحتاجها على العائدة في مناسبتك وأيضاً ستجد أفضل الأماكن التي ستعد لك أشهى أنواع الحلويات  
قائمة الطعام

**القاعة**  
لدينا ستجد إقتراحات للمكان الذي ستقيم به مناسبتك بمختلف التصاميم والإطلالات للقاعات الخارجية , وأيضاً يمكنك تطبيقنا من تحميل صورة المكان الخاص بك إن كنت تملك مكاناً تود إنشاء مناسبتك به وأيضاً أتحنى لك إمكانية التواصل مع القاعات المتوفرة لدينا وقراءة التفاصيل عن كل قاعة من حيث عدد الحضور المناسب وبقيّة التفاصيل

القاعة

**قائمة الحضور**  
باستخدام قائمة الحضور المدرجة في تطبيقنا تستطيع إضافة أسماء كل شخص تود دعوته إلى مناسبتك ومن ثم تستطيع تعديل الاسم أو حذفه وأيضاً عند الإنتهاء من هذا الشخص تستطيع وضع إشارة بجانب إسمه



الخدمات : قائمة الطعام

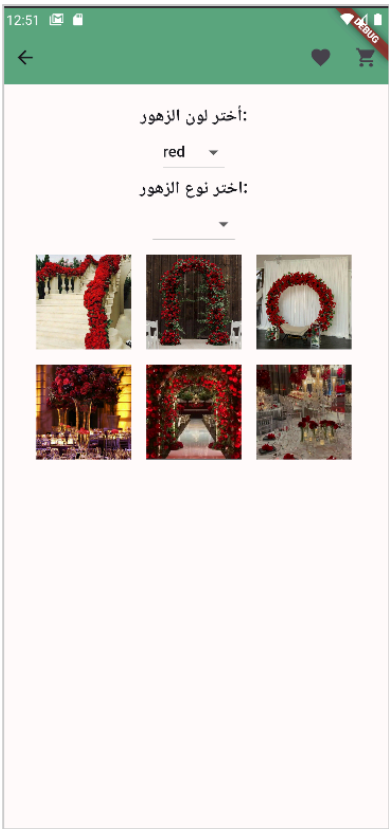
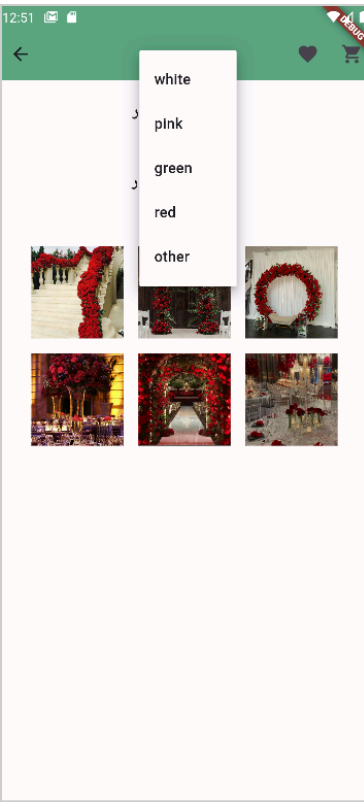
**قائمة الطعام**  
في قائمة الطعام لدينا تجد كل الأصناف التي قد تحتاجها على العائدة في مناسبتك وأيضاً ستجد أفضل الأماكن التي ستعد لك أشهى أنواع الحلويات  
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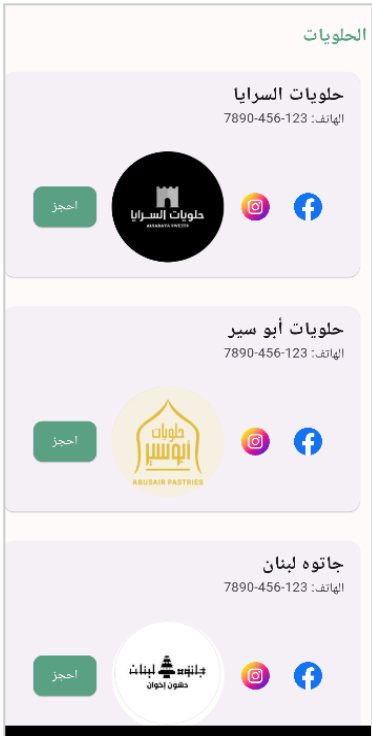
القاعة

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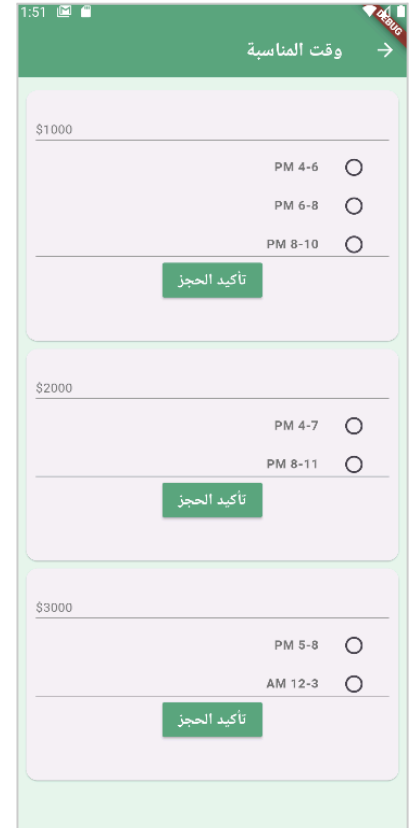
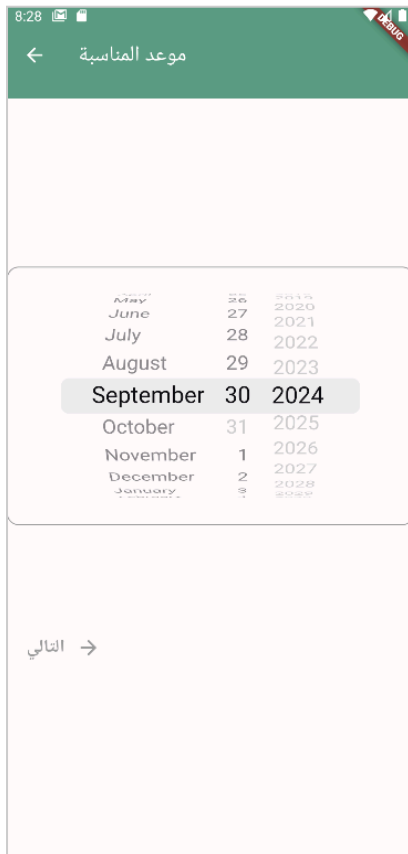
The first item is the decoration color , he can choose his color for the flower decoration for the wedding.



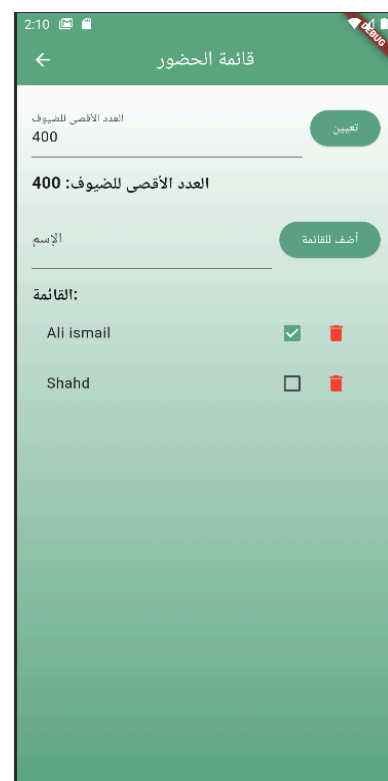
the second item is the restaurant list , the user can choose restaurant from the list that the planner provided :



After that the user should select the date and time for his wedding, in our app we make that the user can book before his wedding In two months or more until the end of the year , for example if his wedding in may, he should book in march or befor , its not valid to book a date befor a month , the planner open the booking throw on year, from Jan to Dec, and take one weeding in the day only.



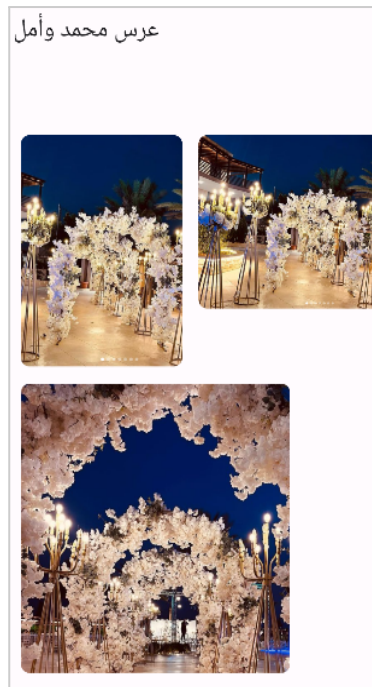
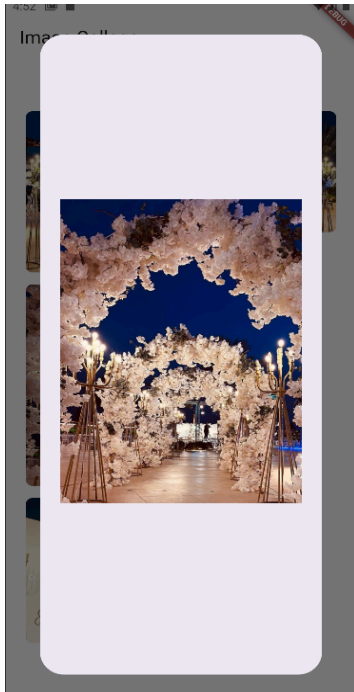
The guest list, depends on the capacity for the hall, if he choose hall with 400 guest , he should add only 400 guest like this:



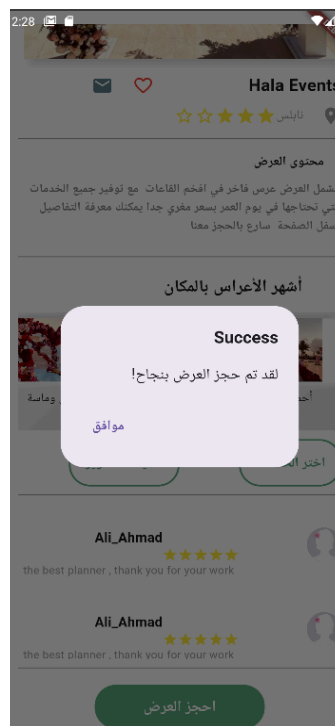
After the user enter his information and choose the thing he need , he can see a previous weddings that made by the same planner in the same place , and he can see the place that he can make a photo session on it .



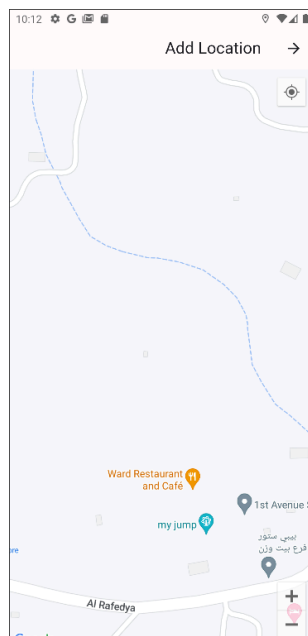
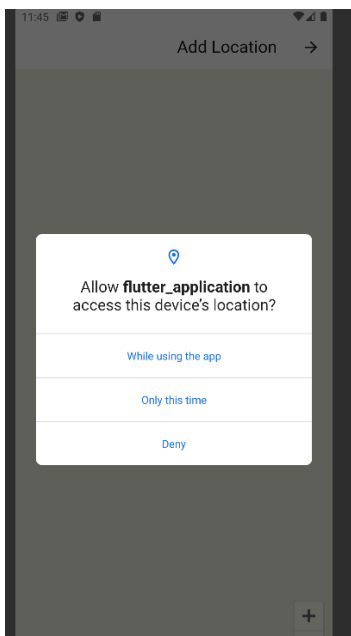
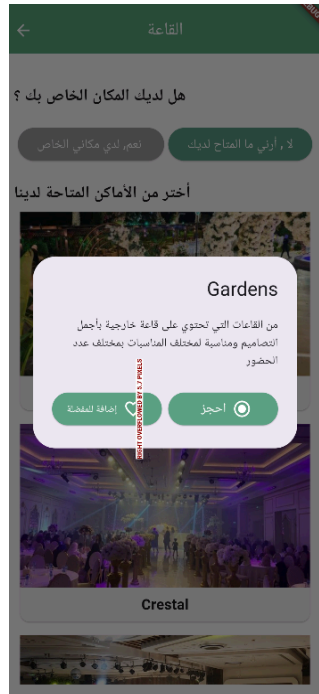
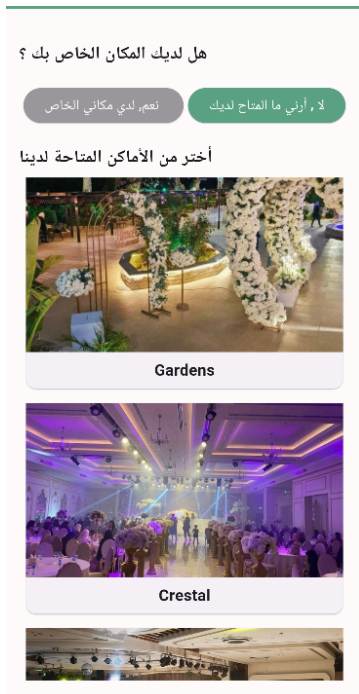
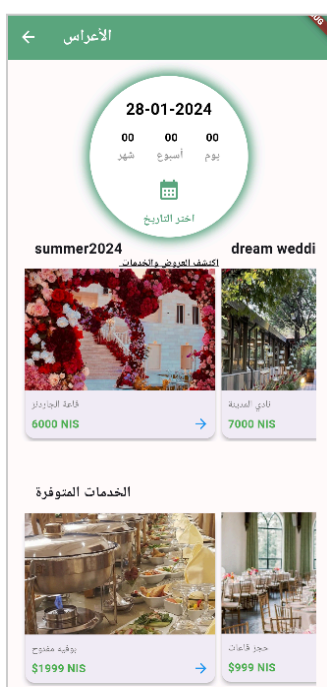
Also the user can see a previous experience with the same planner in the same hall, and can see the reviews for the planner.



Finally, the user can send the request for his planner and then the planner handel the request.



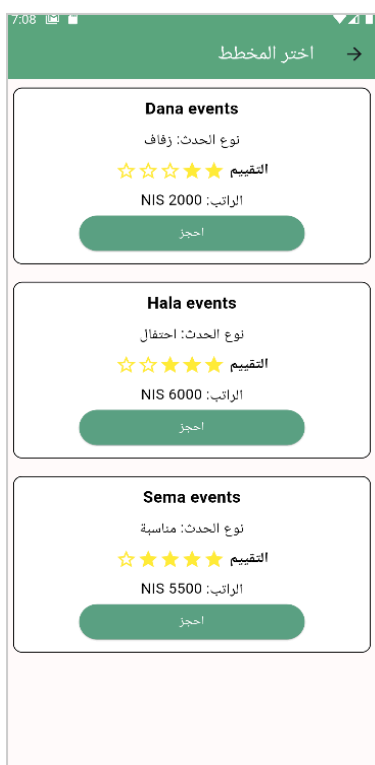
If the user does not want to choose a full package for his wedding, he can only choose the service he needs , for example if he only needs to choose a hall , that's valid to him, if the user need to choose his hall, here we apply an AR idea, the user can open the camera and try to add 3d objects to take an Initial image for the place, using 3d\_object library.



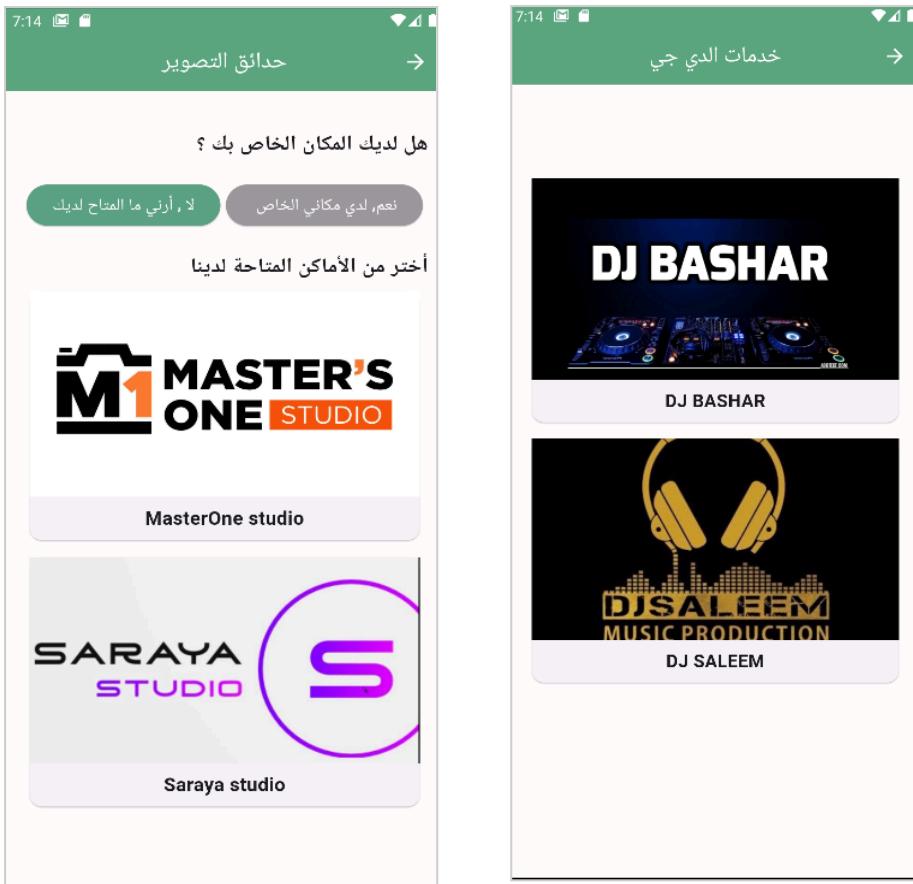
now, if the user have a small occasion like a graduation party, its easy to plan it, the planner offer many services to the user, as the image showen below:



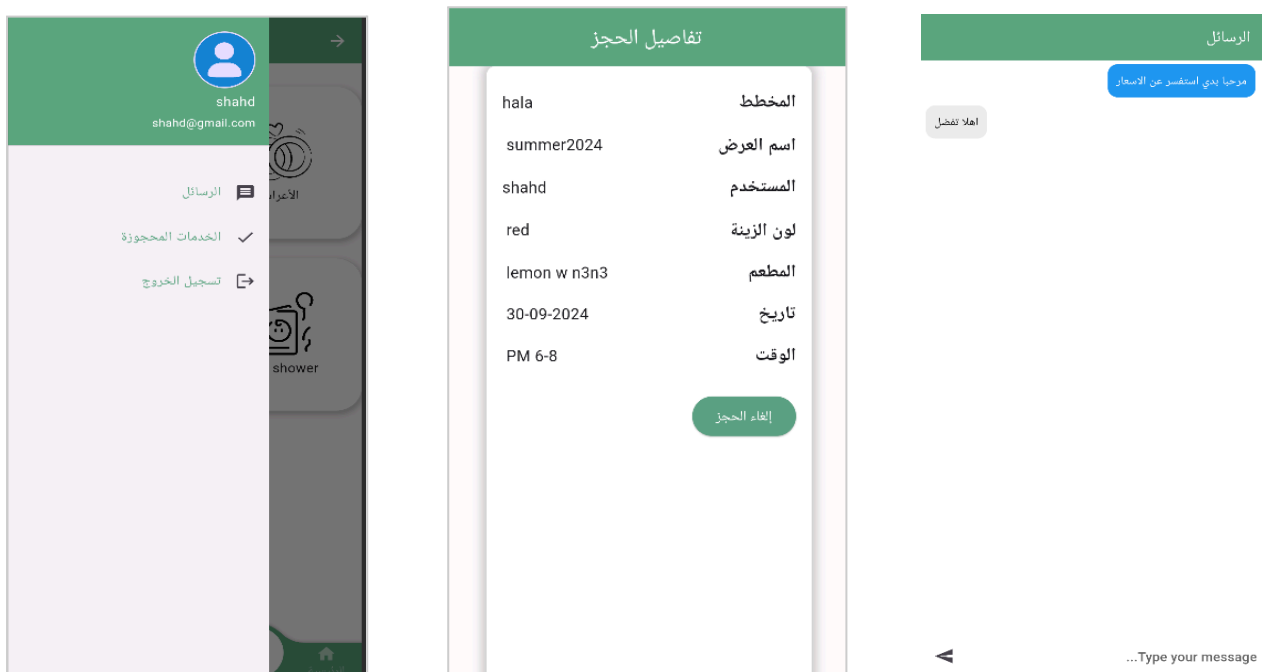
When the user try to choose a planner for his occasion, there is three Standards that he can choose depends on them , the planner salary, the reviwis and the occasion that the planner plan, for example, it's not necessary that all planners plan for a wedding , maybe a planner plan only small events like birthday.



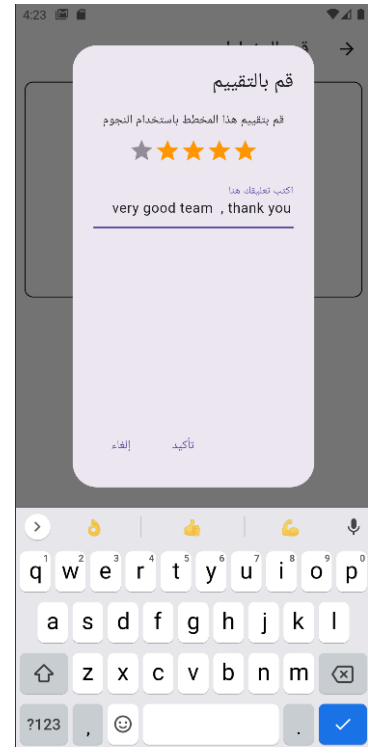
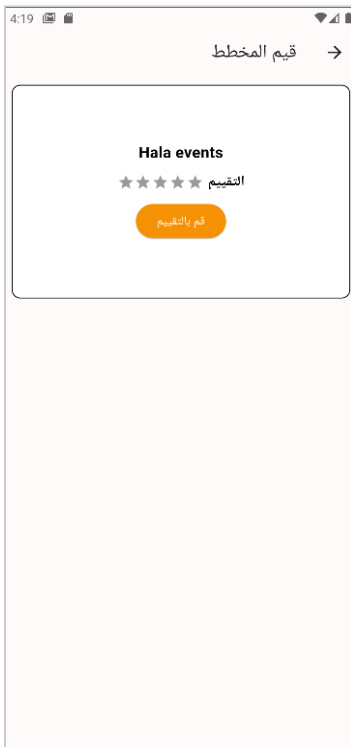
also the user can choose the dj and the studio service:



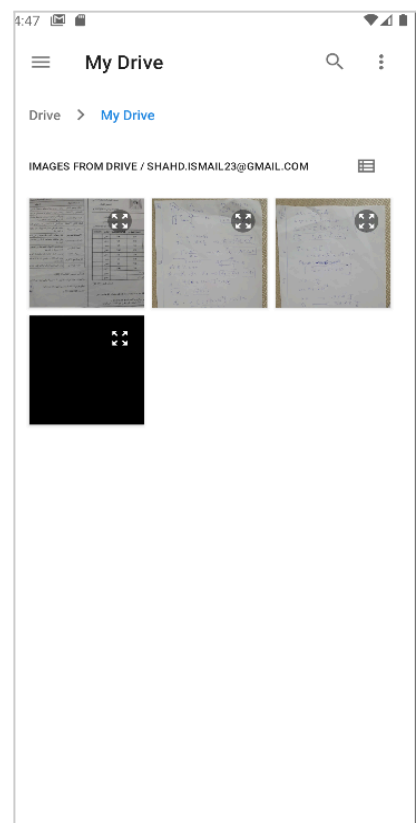
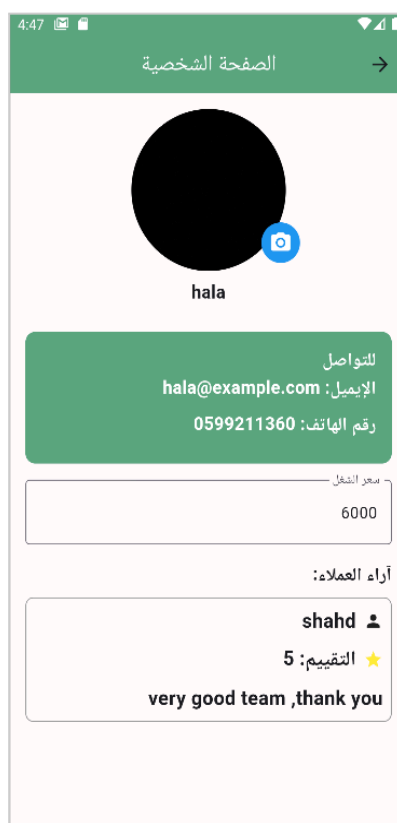
In the endDrawer when the user clicks on the Reservations, it stores all the Reservations that the planner booked, offers or any services, for example this figure shows the Reservations for the summer 2024 offered by the user Shahd, in addition to the chatting ayatem that allows both users to contact, and asking about the details for the event.



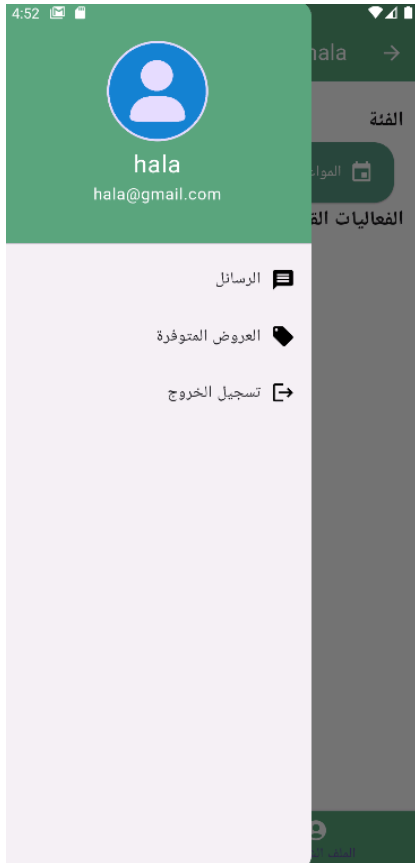
after the user have his occasion, he can add reviews for the planner he chose, by adding the stars, and adding comment for the planner work.



Now for the planner side, in his profile page he can add details about his work like the salary. and the user reviews will appear on his page.

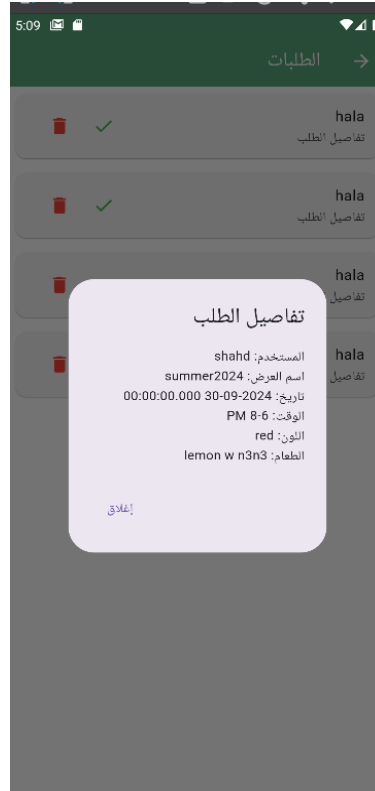
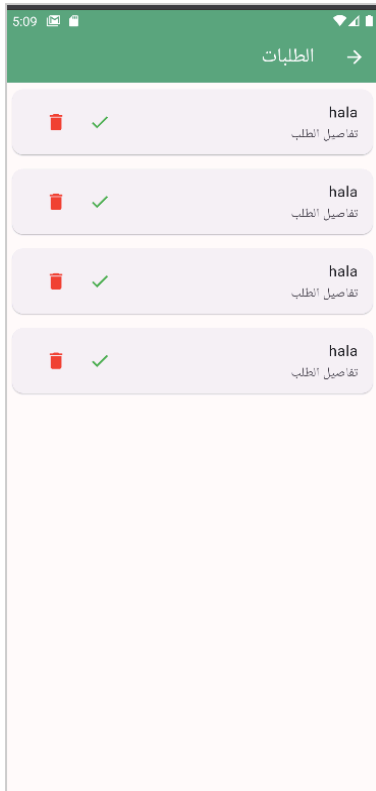


Every planner can add offers and packages by adding the details for this offer, and the discount that the planner adds, he provides the user a full package for his wedding from a to z , to make it easy for the user to manage his wedding, all the details are done by the planner.



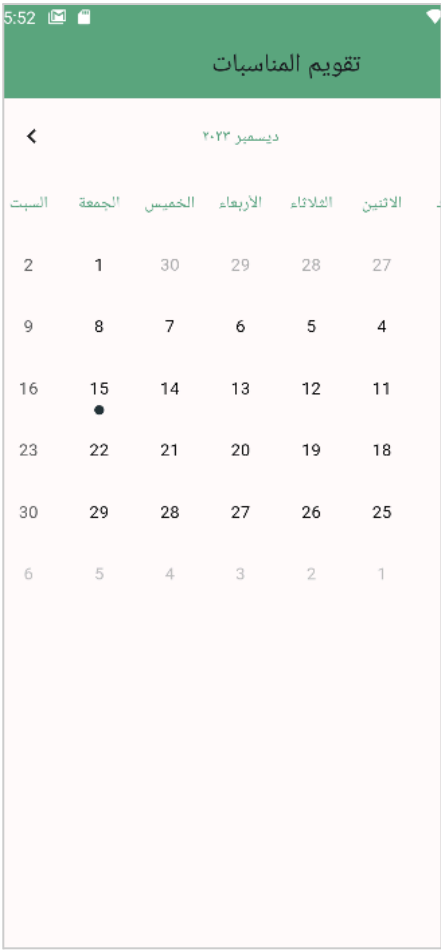
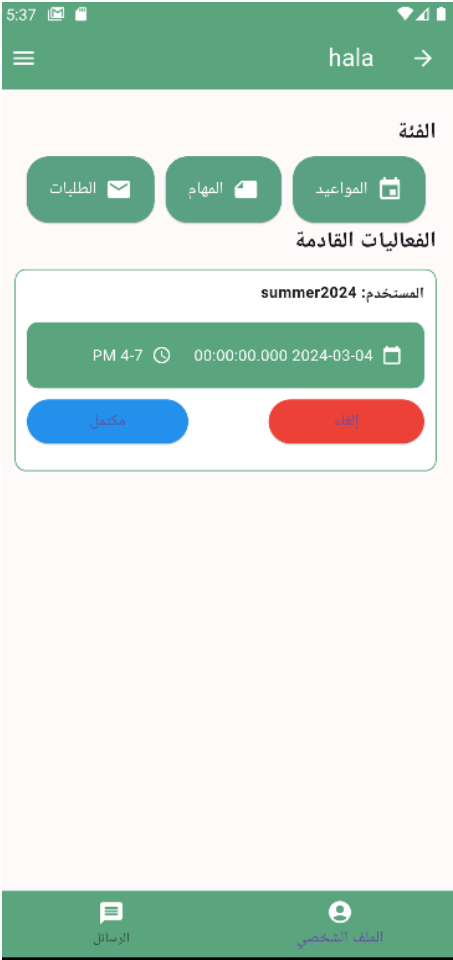
A screenshot of a mobile application form titled 'أضف عرض جديد' (Add New Offer) with a right-pointing arrow. The form contains several input fields with Arabic labels: 'اسم المستخدم' (User Name), 'اسم العرض' (Offer Name), 'السعر' (Price), 'اسم المخطط' (Plan Name), 'اسم الشركة' (Company Name), 'الموقع' (Location), 'الصورة' (Image), 'الصورة 2' (Image 2), 'الصورة 3' (Image 3), and 'تفاصيل' (Details). At the bottom, there is a rounded rectangular button labeled 'أدخل العرض' (Add Offer). The top status bar shows the time 4:53 and various system icons.

the request part continue the requests that the user made, and it continue the details that the user add for his request, the planner have two choices , one to accept and in this case the request is added to the waiting list or to the execution list, depends on the date of the occasion, the other case he can reject the request if there was an occasion like wedding at same day, because the planner can take one wedding at a day to plan, he cant take more.



In the task list, the date of the occasion is exactly after two months , because it's a wedding , then the request that is after more than two months is moved to the waiting list until it's time to come.

then the planner can put a dashboard for his upcoming events in his main page, and have a calendar with the events to remind him, and not forget the work.

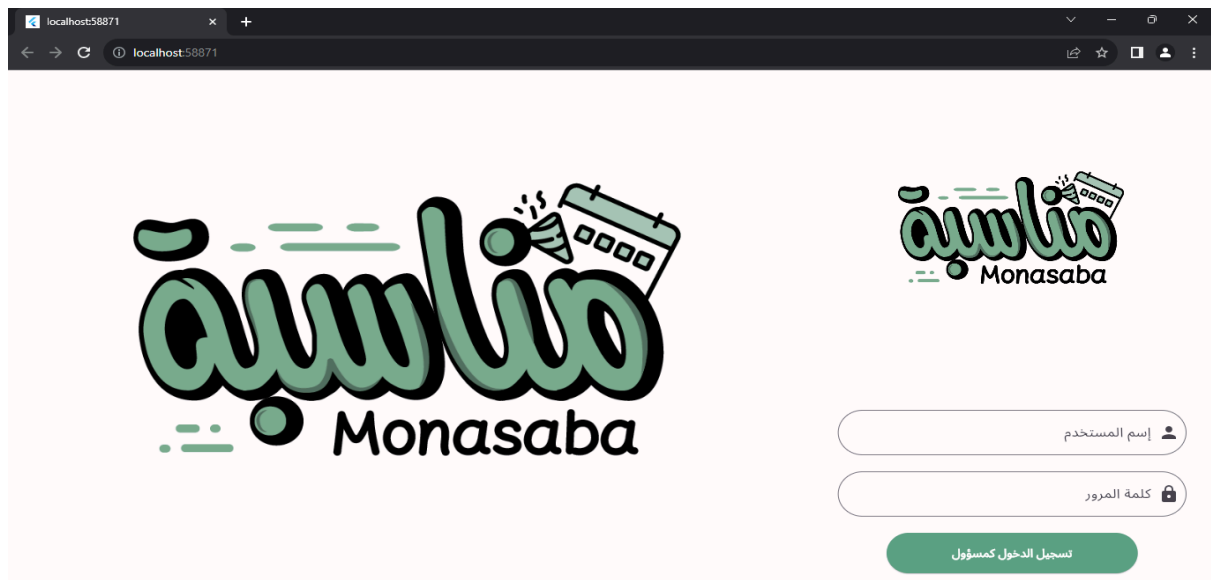


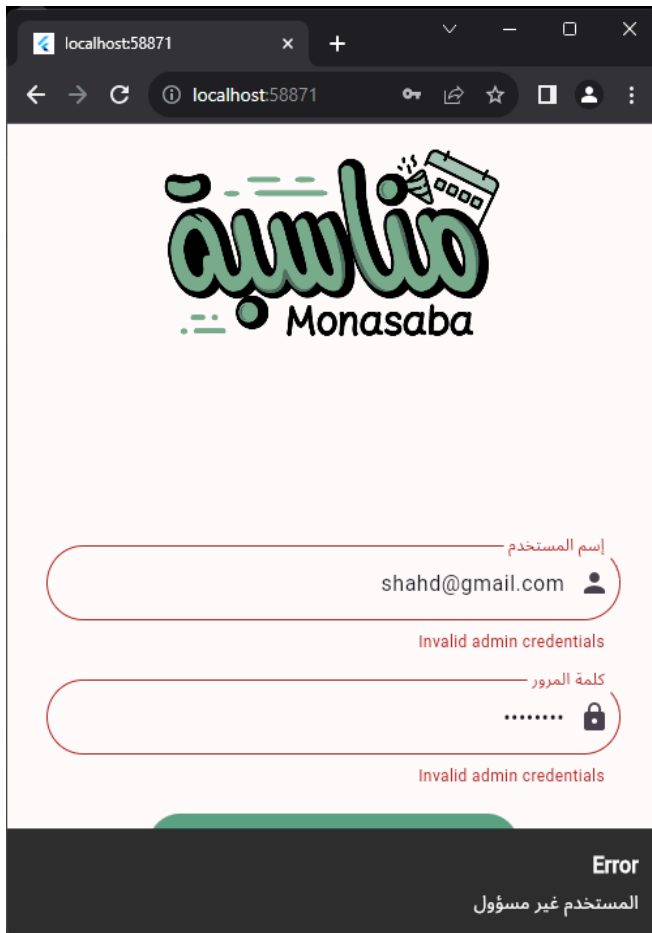
## 2.2.2. web pages

Following the development of our Monasaba application, we recognized the need for a manager role responsible for supervising services, conducting analysis, and managing planners. To address this, we decided to create dedicated web pages for the manager. This enables the manager to efficiently oversee services, and analyze data. By utilizing web pages, we can effectively meet these specific requirements and enhance the overall functionality of our application.

### 2.2.2.1 Admin Side

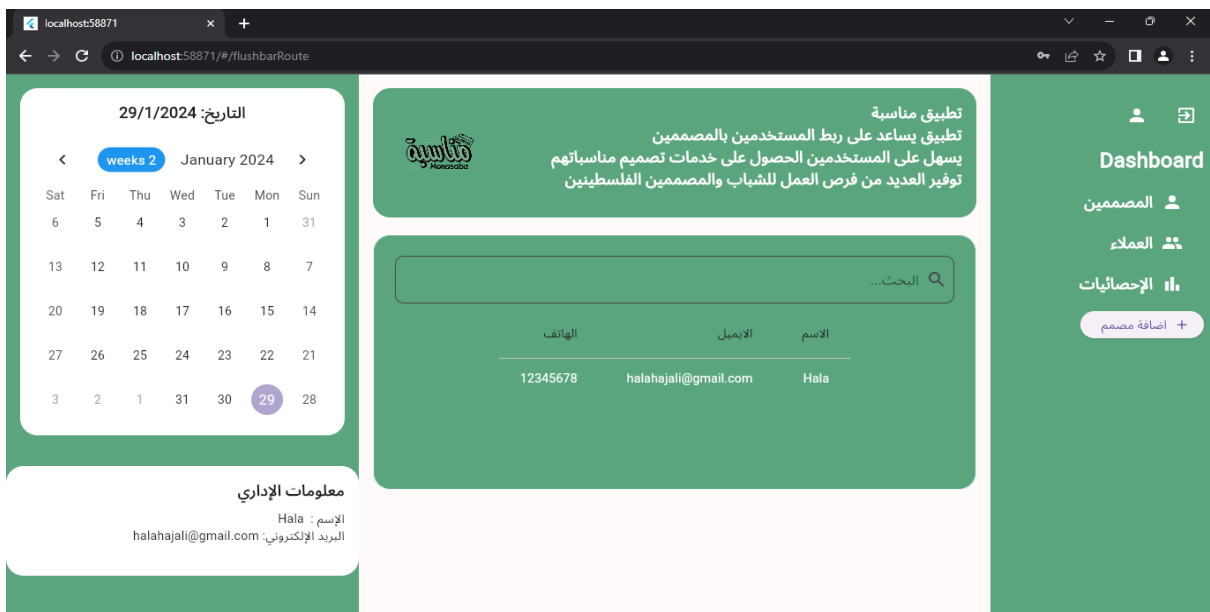
Our web login, allowing the admin to log in securely. Furthermore, we have designed the page with consideration for various screen sizes to ensure a responsive and user-friendly experience.



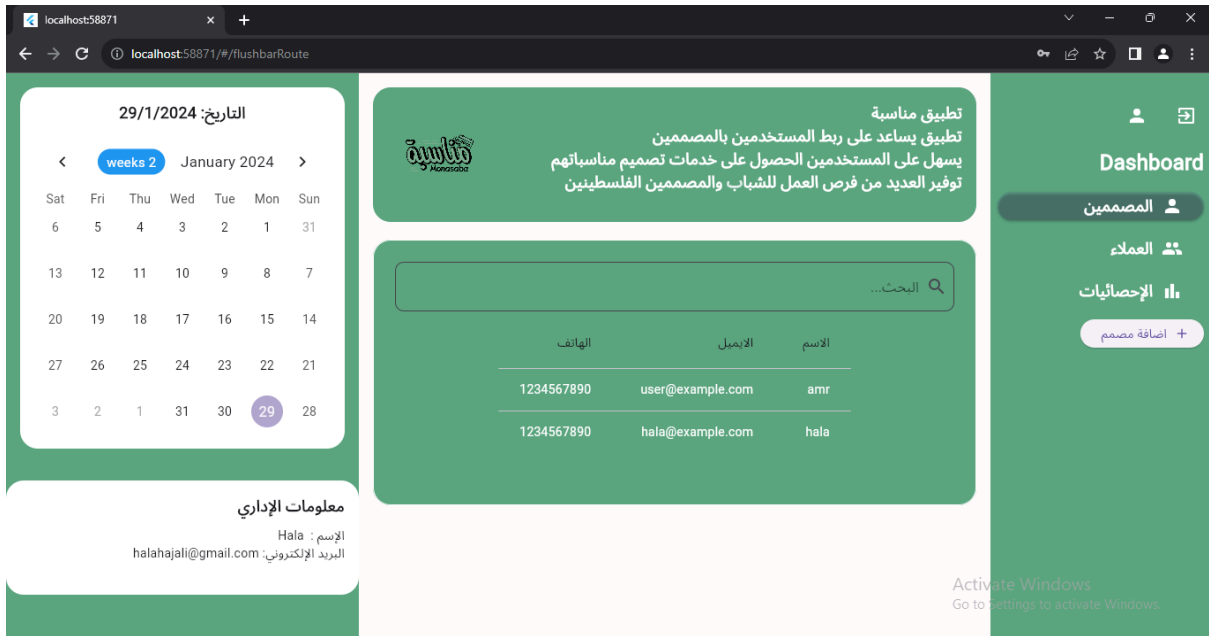


In case of entering an incorrect name or password as an admin, a descriptive message will be displayed

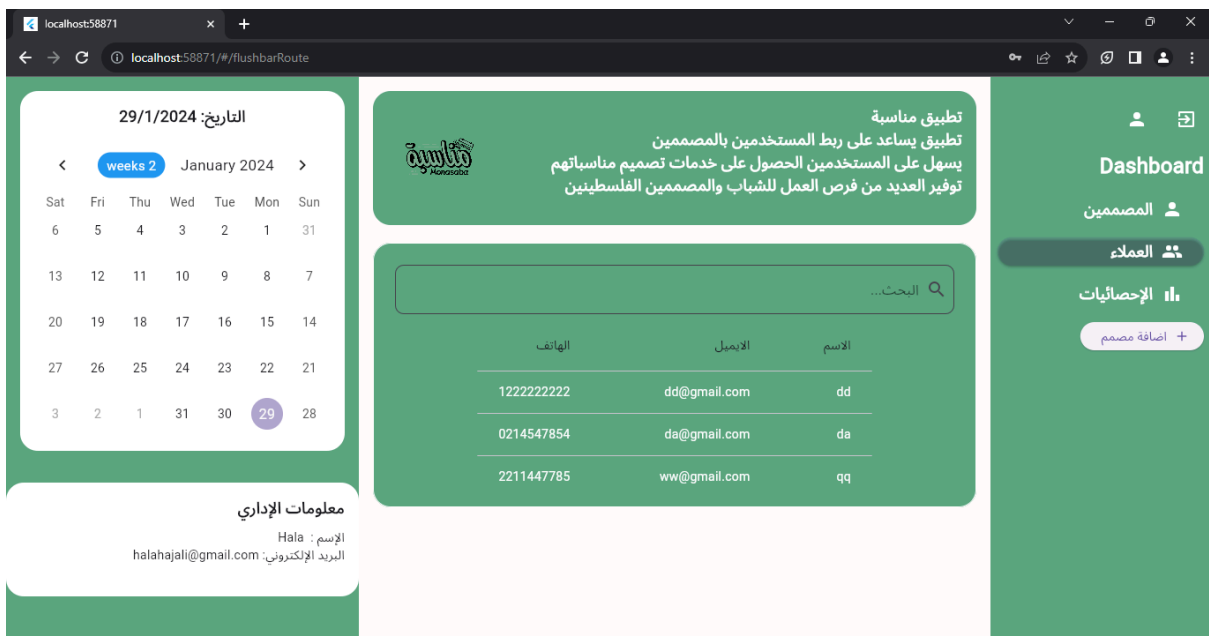
## Dashboard for the admin



When this page run the table that contain the admins in the application will display



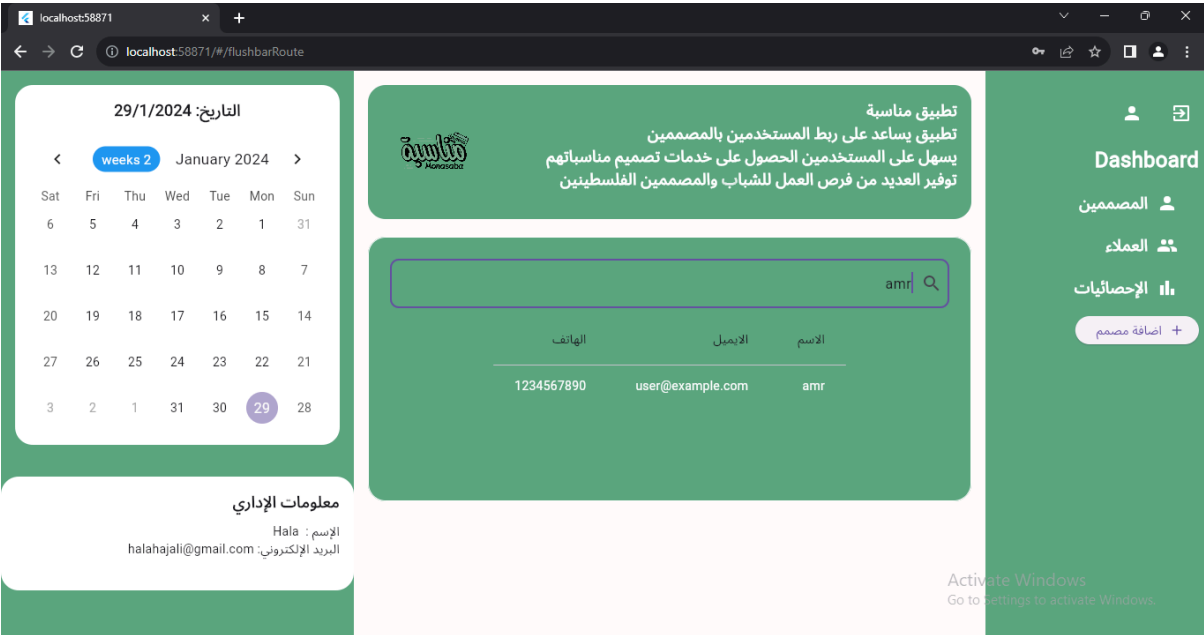
then when select المصممين its will display the planners that register in the application



then when select العملاء its will display all the users that register in the application , and the table is scrollable to allow the admin to see all the users , the admin also can search in the table using the name of the user or planner



search in users table



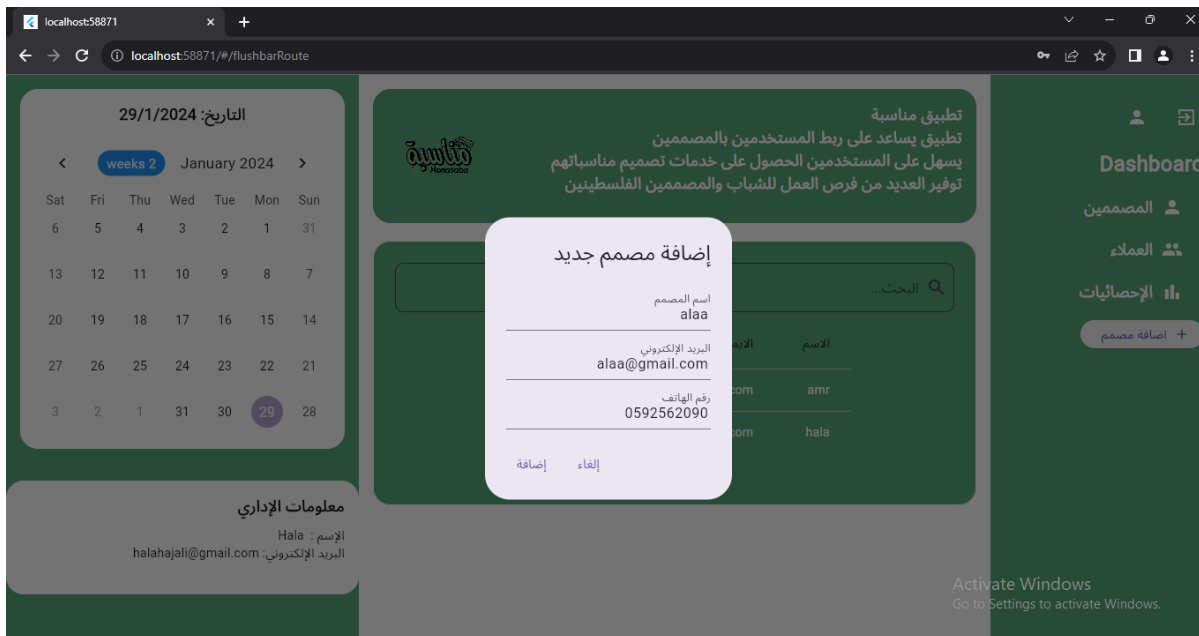
## search in المصممين table

The screenshot shows a web application dashboard with a green theme. On the left, there is a calendar for January 2024, with the 29th highlighted. Below the calendar is a section for administrative information, including the name 'Hala' and email 'halahajali@gmail.com'. The main content area features a donut chart with two segments: an orange segment representing 78.20% and a blue segment representing 30.80%. Above the chart is a text box in Arabic that reads: 'تطبيق مناسبة تطبيق يساعد على ربط المستخدمين بالمصممين يسهل على المستخدمين الحصول على خدمات تصميم مناسبة لهم توفير العديد من فرص العمل للشباب والمصممين الفلسطينيين'. The right sidebar contains a 'Dashboard' menu with options for 'المصممين', 'العملاء', and 'الإحصائيات', along with a '+ إضافة مصمم' button. An 'Activate Windows' watermark is visible at the bottom right.

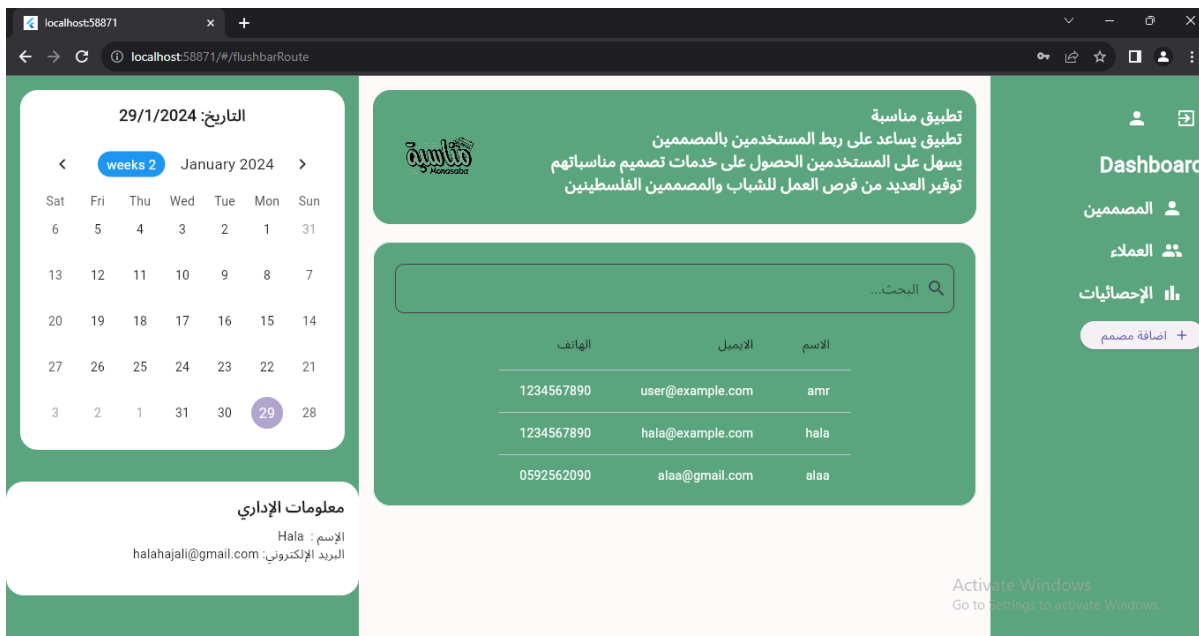
When the admin select الإحصائيات a chart that display the percentage of planners and users who register in the app

This screenshot shows the same dashboard as the previous one, but with a modal form open in the center. The modal is titled 'إضافة مصمم جديد' and contains three input fields: 'اسم المصمم', 'البريد الإلكتروني', and 'رقم الهاتف'. Below the fields are two buttons: 'إضافة' and 'إلغاء'. The background dashboard elements are dimmed. The 'Activate Windows' watermark is also present at the bottom right.

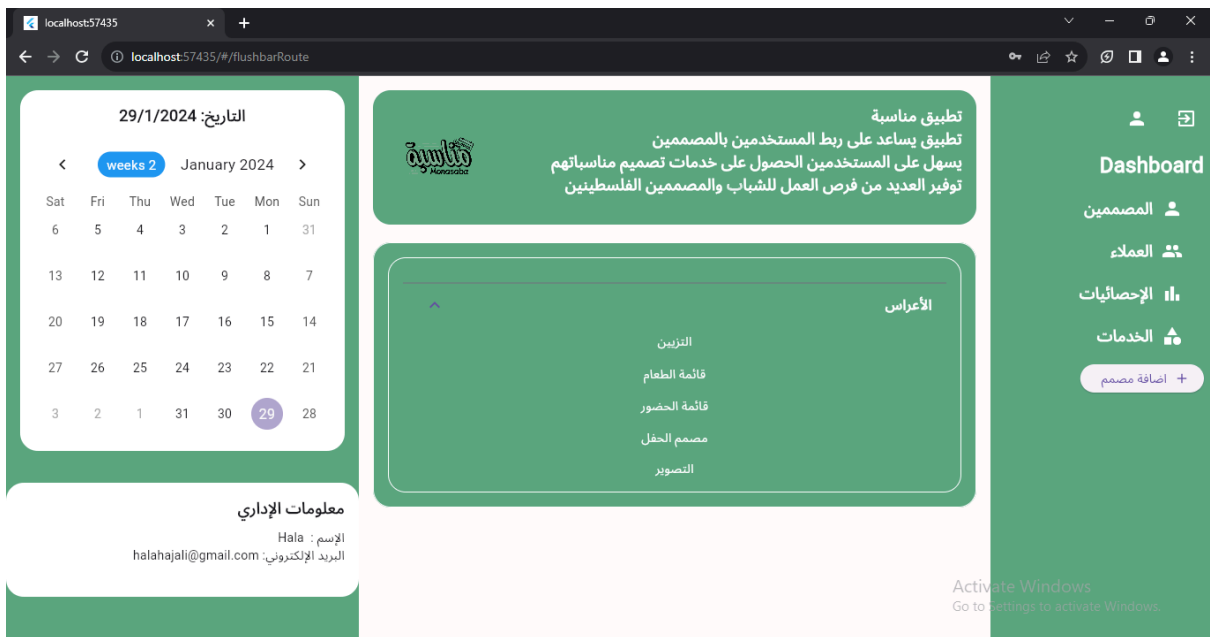
The user will be able to add a planner to the application



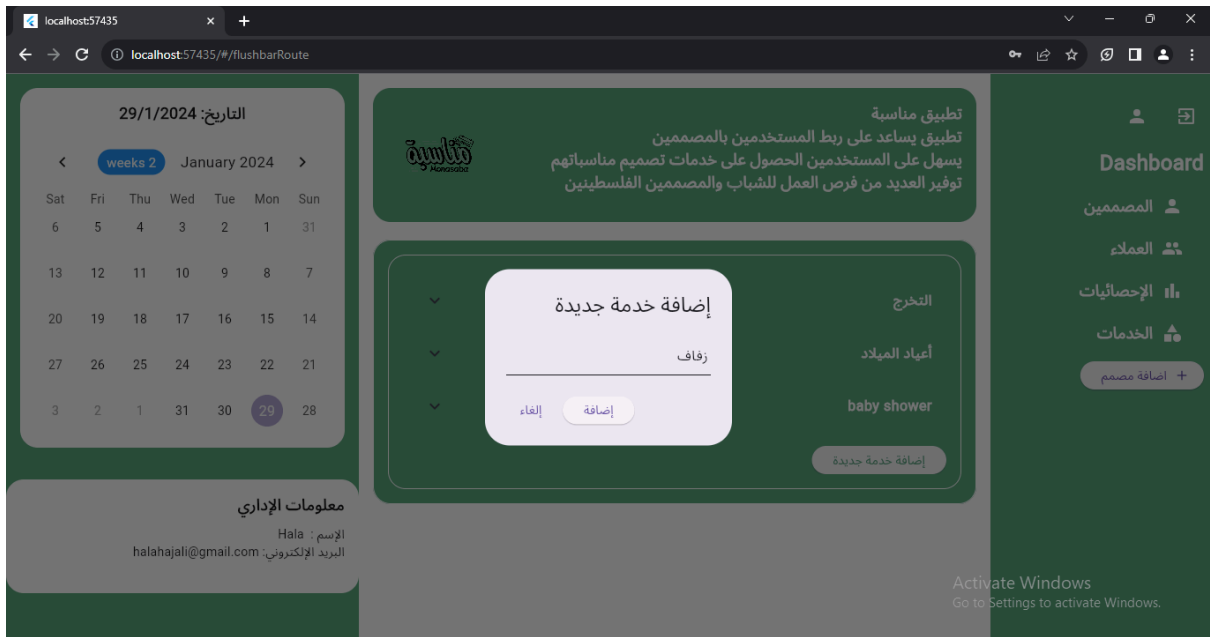
The admin can select whether to admit the add or cancel it .



Then it display the new planner at the المصممين table



The admin also can see all the main and sub services in the application .



The admin can add a service and add all his details .

The exit button will exit admin from the dashboard and go to the login page .

### **3. Results and Discussion**

The application has effectively achieved its intended goals, delivering a high level of efficiency and a user-friendly experience, as illustrated by the visuals showcased earlier. Our primary audience, the people who have an event and need a simple quick services, directed our efforts toward crafting a design that is simple, intuitive, and visually clear, ensuring accessibility for all users. However, the development process encountered several technical and practical challenges. From a technical perspective, the need for frequent updates and the evolution of software versions sometimes clashed with our existing infrastructure. The establishment of a robust and logical database system for efficient data retrieval and storage posed considerable challenges during the app development journey.

Despite facing obstacles, the application was effectively developed in alignment with our vision, delivering gratifying results. Users now have access to a broad spectrum of event services, with the flexibility to expand and tailor them to suit the needs. The platform enables users to choose their desired service and connect with planners who align with their specific criteria.

## **4. Conclusions and Recommendations**

In the course of this project, we have successfully developed an event planning application that offers users convenient access to a diverse range of professional event services. The application is meticulously designed to be user-friendly, catering to individuals of all age groups and ensuring that everyone can effortlessly benefit from its features in planning and organizing events.

### **4.1. Future work**

As technology advances continuously, it is crucial for our application to stay dynamic and adaptive to emerging discoveries and advancements. Consequently, we have pinpointed various areas for future enhancements and developments:

#### **-Secure Payment Gateway Integration:**

Implement a secure and reliable payment gateway to facilitate seamless transactions within the event planning application. Choose a reputable third-party payment provider to ensure the security of financial transactions.

#### **-AI Integration:**

Integrating AI into our event planning application opens exciting possibilities for improved user experiences. AI could offer personalized recommendations for venues and vendors, automate budgeting assistance, and enhance communication through chatbots using Natural Language Processing.

## 5. References

1. Event Planner: Birthday, Party : Event Planner: Birthday, Party app. Available on [Google Play](#).
2. Firebase: Firebase website. Available at: <https://firebase.google.com/>.
3. MongoDB: MongoDB website. <https://www.mongodb.com/>.