



SOFTWARE ENGINEERING PROJECT REPORT

# TABLE OF CONTENTS

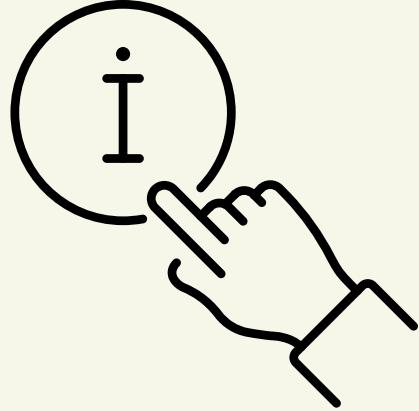
<b>ABSTRACT.....</b>	<b>5</b>
<b>1- Introduction .....</b>	<b>6</b>
1.1. Background .....	6
1.2. Problem definition .....	6
1.3. Solutions .....	7
1.4. Aims and objectives .....	7
<b>2- System analysis .....</b>	<b>8</b>
2.1. Information acquiring .....	8
2.2. Requirements specification .....	9
2.2.1 Functional requirements .....	9
2.2.2 Non-functional requirements .....	14
<b>3- System design .....</b>	<b>14</b>
3.1. Tools and methodology.....	14
3.2. Use case diagram .....	15
3.3. Scenarios .....	16
3.4. Class Diagram .....	22
3.5. Trust Prototype .....	23
<b>4- System implementation .....</b>	<b>36</b>
4.1. Turst App screenshots .....	36
4.2. Database screenshots .....	46
4.3. Technological enablers .....	47
<b>5- Future work .....</b>	<b>48</b>

# ABSTRACT

This report describes the development of our software engineering project. The report starts by introducing the application description which would give the readers some background of the application. After that it shows the problem that will be solved through our application, afterwards, we will dive into the system itself and discuss the analytical process, which begins with gathering all the information needed, followed by the system requirement specification, which would show all of the app's functional, and non-functional requirements. In addition, the methodology chosen will be included. The report also presents the challenges of implementing our application and states the main problem that led us to implement this application.

# INTRODUCTION

## 1.1. BACKGROUND



The purpose of this project titled "Trust" is exclusively to provide an application that is user-friendly, reliable, free of cost.

Parents can not be with their child/children all the time, they have jobs to make a living, and they might face any unpredictable situation where they need someone to take care of their child/children while they're absent.

Most importantly, due to the closure of kindergarten during the pandemic, families suffered a lot, and finding a suitable babysitter has become almost impossible. To fill this gap, we aim to build an application that solves the above-mentioned problems by providing assistance to mothers to save their time and effort.

## 1.2. PROBLEM DEFINITION

As we elaborated in section 1.1, there are challenges that parents face to provide a suitable babysitter for their child/children, families might face unpredictable situations where they need a person to take care of their child/children. A lot of parents are busy with their jobs. For these reasons, parents need a qualified person that can take care of their child/children. The issue here is how to find a trustable and qualified babysitter?

At the same time, sorrowfully, the policy of closing kindergartens due to the spread of the Coronavirus led to great suffering, especially for working women who depended on them during their existence.

On the other hand, based on the General Authority Of Statistics research in 2020, Saudi unemployment rate increased to 15.4% in the second quarter of 2020. These results of the Labor Force Survey are largely impacted by the effects of the COVID-19 pandemic on the Saudi economy.



### **=13. SOLUTION**

The main problem as mentioned is how to provide a reliable and trustable babysitter. Well, that is where Trust comes along.

This application will solve this issue by providing detailed information about the babysitters, conducting a personal interview, and checking the babysitter environment if the parents wish to place their child in their hands. Secondly, due to the shutting of the kindergartens, there is no longer a dedicated place to make the child safe and learn at the same time. This application will help you by providing the right babysitter for your child. Furthermore, this will help your child's social interaction, your child should get comfortable interacting with people outside of their family and your limited friend circle. Lastly, due to the lack of jobs, this application will be a job opportunity for them.

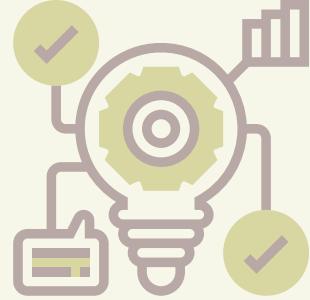
### **1.4. AIMS AND OBJECTIVES**

Extends your knowledge and understanding of the software development lifecycle and fundamental software engineering concepts.

Developing the transferable skills in logical analysis, communication and project management necessary for working within team-based environment.

You should gain the ability to select tools and methodologies that are fit for specific purposes.

# SYSTEM ANALYSIS



## 2.1. INFORMATION ACQUIRING

We made a questionnaire with a few questions for group of parents and the questions were :

Do you use an application for babysitter?

- yes
- No

What are the reasons to put your child with a babysitter?

- Long working hours
- Part-time
- Others

what qualities you look for in a babysitter ?

- her location close to the house
- Low pricee
- good reputation

What are the things you prefer to avoid when you choose a babysitter?

- Lack of flexibility in working hours
- There is no daily report of the child
- Lack of periodic medical examination
- The location of the babysitter inappropriate
- Exaggeration of prices
- Others

Would you like the subscription fee to be?

- Weekly
- Monthly
- By hours

What is the most suitable price for you?

- 80 riyals / hour
- 60 riyals / hour
- 45 riyals / hour

The number of people who answered the questionnaire: 30

## 2.2. REQUIREMENTS SPECIFICATION

### 2.2.1. FUNCTIONAL REQUIREMENTS

These functional requirements define specific facilities provided by the Trust application and describe what the system should do.

#### Registration

##### User requirements:

The user will choose their module and will be able to create a new account by providing the required information

##### System requirements:

1. Choose from the two modules (parents, Babysitters)
2. For the parent's module: the parent should be able to register to the system as a new account with a new profile after providing the parent information along with their children's information.
3. The parents should register to the system by providing the following information:
  - First and last name for both, parent and child
  - Date of birth for both, parent and child
  - Email
  - Phone number
  - Location
  - Password
  - Password confirmation
  - Solving the mathematical question for the verification
4. After that, the system should verify the email by sending a verification code to their emails.
5. The user will create a password for the account following the password restrictions:
  - Passwords must be at least eight characters in length (increased from six).
  - Passwords must contain at least one lowercase letter, one uppercase letter, and one number.

6. For the Babysitters module: the babysitter should provide the following information:

- First and last name
- Date of birth
- Email
- Phone number
- Location
- Password
- Password confirmation
- Work hours
- Taking the test
- Upload a photo (optional)
- Solving the mathematical question for the verification

7. After that, the system should verify the email by sending a verification code to their emails.

8. The user will create a password for the account following the password restrictions:

- Passwords must be at least eight characters in length (increased from six).
- Passwords must contain at least one lowercase letter, one uppercase letter, and one number.



Log in

**User requirements:**

The user should be able to log in to their profiles using their emails and passwords.

**System requirements:**

1. The users will enter their email and password they used to register in the system.
2. The system should check if the given email is stored in the database or not.
3. If the email is not used in the system, the system should notify the user to register in the system and create a new account.
4. If the email is stored in the system then the system will check the password entered and if it matches the one in the system.
5. Generate an error message if it is not correct.
6. If the given input matches the one stored in the system then allow the user to log in to their profiles.

## Profiles Viewing

### User requirements:

The parents should be able to look at all the babysitters' profiles.

### System requirements:

The system should list all the babysitters' profiles to allow the parents to choose the best one that fits their liking.

## Profiles Filtering

### User requirements:

The parents should be able to look at babysitters' profiles depending on their specifications if they want to.

### System requirements:

The system should list all the babysitters' profiles that match the parents' specifications, the parent can filter the profiles by:

- Hours
- Salary
- Location
- Rating

## Reviews & Ratings

### User requirements:

The parents should be able to look at all the babysitters' rating and see some comments from people who have previously dealt with this babysitter

### System requirements:

The system will allow users to write comments and rate each babysitter they deal with, then display their own reviews and ratings on the babysitter's profile.

## Babysitters certification test

### User requirements:

To ensure the efficiency of the babysitters, a test must be provided to verify the readiness and experience of the babysitters.

### System requirements:

1. Before creating the babysitters' account in the registration step, the system should provide a test for them.
2. After they take the test, the system will decide if they can create an account or not depending on their grades in the test.
3. The babysitters will pass the test if their grades are above 70.
4. If not, the babysitters will be notified that they did not pass the test and they need to retake the test.
5. If they pass the test, they will be notified and will be able to create the account and register to the system.

## Classifying babysitters

### User requirements:

The parents should be able to look at the babysitter according to their qualification and their level.

### System requirements:

The system classifies babysitters according to their qualifications and their grades on the test into one of the following classes:

- 80 SR. per hour 400 SR per day for those who pass the test with grades between (90-100)
- 60 SR. per hour 200 SR per day for those who pass the test with grades between (80-90)
- 45 SR. per hour 150 SR per day for those who pass the test with grades between (70-80)

## Contact

### User requirements:

The parents should be able to communicate with the babysitter they choose.

### System requirements:

After choosing the appropriate babysitter for them, the system will allow both parties to communicate either in chat or call or to meet in person.

## Maps

### User requirements:

The parents will look for babysitters according to their locations so they can find the nearest babysitter to them.

### System requirements:

The system shall provide a map feature for the parents to find the nearest babysitters.

## Payment

### User requirements:

The parents should be able to choose one of the available payment methods and enter their card information to pay.

### System requirements:

The system will display available payment methods to complete the payment process.

## 2.2.2. NON-FUNCTIONAL REQUIREMENTS

### Product requirement

#### Usability

The system shall provide a simple, intuitive interface that facilitates the users' (babysitter and parent) navigation on the app.

#### Efficiency

The system shall be able to complete its tasks without a distinguishable lag in runtime.

#### Security

The system shall resist accidental or deliberate intrusions and verifying all users' emails.

### External requierments

#### Ethic

The system will be acceptable to its user and the general public.

#### Legislative

The system operates within the legal jurisdiction and has to be aware not to harm or put the public in jeopardy of some sort.

## SYSTEM DESIGN

### 3.1. TOOLS AND METHODOLOGY

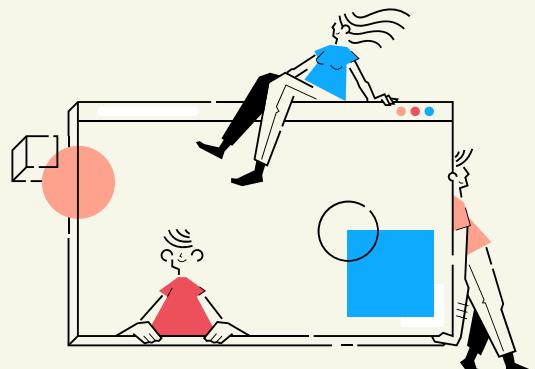
We will use Flutter Platform (Cross-Platform Development) tools to build a flexible user interface and develop our project. We need JSON “JavaScript Object Notation” to connect the application with the database.

#### Frontend Frameworks and Libraries:

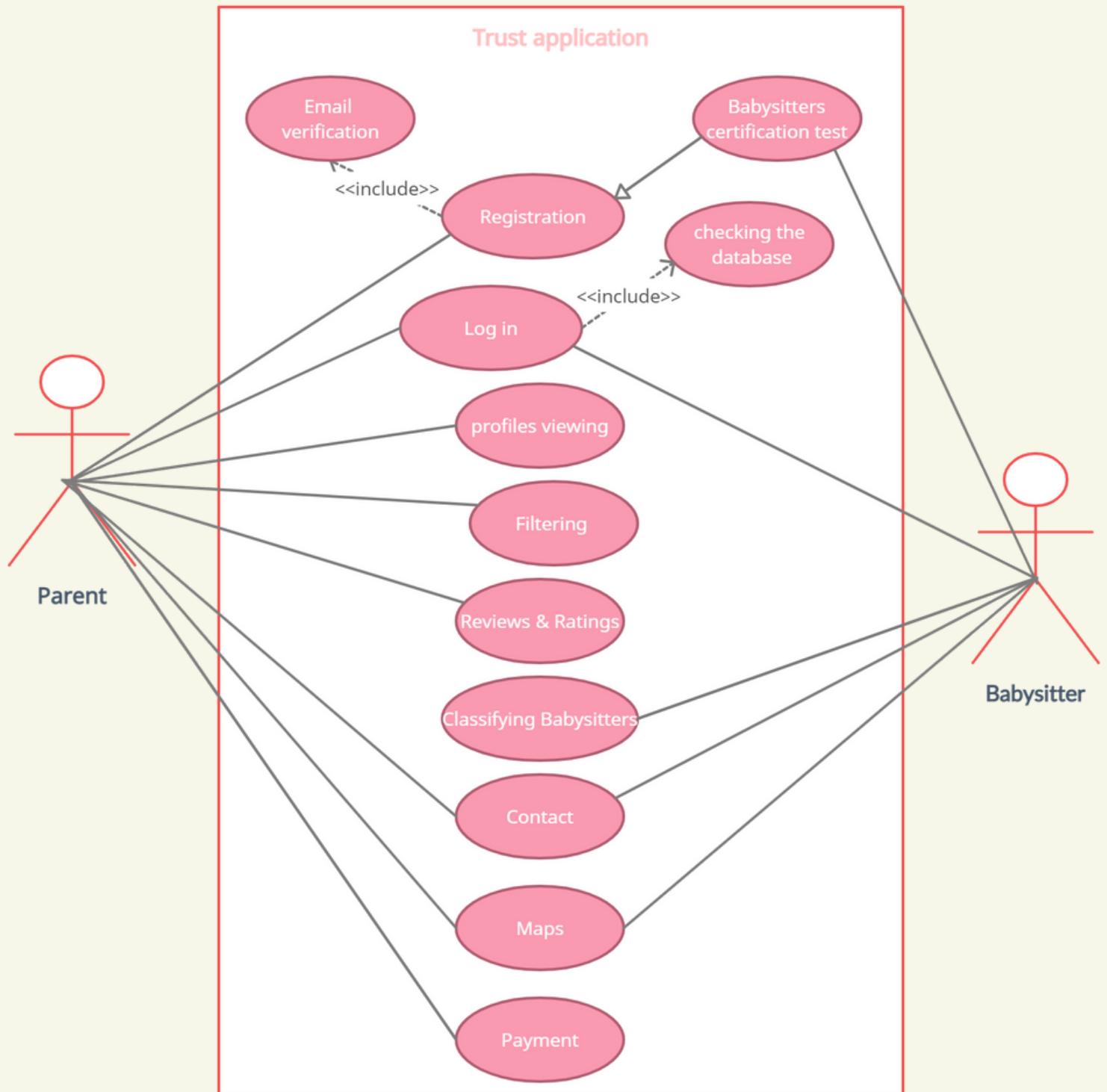
- Dart SDK
- Flutter SDK
- Android studio
- Visual studio code

#### Backend :

- Firebase



## 3.2. USE CASE DIAGRAM





### 3.3. SCENARIOS

#### Registration

<b>Actor</b>	Parents, babysitters
<b>Description</b>	<ol style="list-style-type: none"><li>1. Choose from the two modules (parents, Babysitters)</li><li>2. For the parent's module: the parent should be able to register to the system as a new account with a new profile after providing the parent information along with their children's information.</li><li>3. The parents should register to the system by providing the following information: First and last name for both, parent and child, Date of birth for both, parent and child, Email, Phone number, Location, Password, Password confirmation, Solving the mathematical question for the verification.</li><li>4. After that, the system should verify the email by sending a verification code to their emails.</li><li>5. The user will create a password for the account following the password restrictions:<ul style="list-style-type: none"><li>o Passwords must be at least eight characters in length (increased from six).</li><li>o Passwords must contain at least one lowercase letter, one uppercase letter, and one number.</li></ul></li><li>6. For the Babysitters module: the babysitter should provide the following information: First and last name, parent and child, Date of birth for both, parent and child, Email, Phone number, Location, Works hour, Babysitters' certification test, upload a photo (optional), payment information, Password, Password confirmation, Solving the mathematical question for the verification.</li></ol>
<b>Data</b>	<ol style="list-style-type: none"><li>1. Parents information (First and last name for both, parent and child, Date of birth for both, parent and child, Email, Phone number, Location, Password, Password confirmation, Solving the mathematical question for the verification.)</li><li>2. Babysitters' information (First and last name, Date of birth, Email, Phone number, Location, Password, Password confirmation, Work hours, Taking the test, upload a photo (optional), Solving the mathematical question for the verification.)</li></ol>
<b>Pre-condition</b>	The babysitters should take the certification test and the system will create a new account for them if they pass the test with 70 grade and above.
<b>Output</b>	<ol style="list-style-type: none"><li>1. Create an account for Parents and Babysitters.</li><li>2. Take the user to the home page</li></ol>
<b>Comments</b>	Non

## Log in

Actor	Parents, babysitters
Description	<ol style="list-style-type: none"><li>1. The users will enter the email and password they used to register in the system.</li><li>2. The system should check if the given email is stored in the database or not.</li><li>3. If the email is not used in the system, the system should notify the user to register in the system and create a new account.</li><li>4. If the email is stored in the system, then the system will check the password entered and if it matches the one in the system.</li><li>5. Generate an error message if it is not correct.</li><li>6. If the given input matches the one stored in the system, then allows the user to log in to their profiles.</li></ol>
Data	Log-in information from users (username and password).
Pre-condition	non
Output	Log-in to home page
Comments	The system displays the home page depends on user type

## Profiles Viewing

Actor	Parents
Description	<ol style="list-style-type: none"><li>1. The parents will select the profiles view button from the home page.</li><li>2. The system should display all the babysitters' profiles that have already been registered in the system.</li><li>3. All the babysitters' profiles should be displayed in 4x3 table form.</li><li>4. This will include the babysitters' photos.</li><li>5. The displaying should be on more than one page if the page is full, so the parents can move to the next page to continue viewing all the profiles.</li><li>6. Afterward, the parents will be able to select one of the babysitters' profiles to see other people's comments and reviews.</li></ol>
Data	Non
Pre-condition	Non
Output	View all babysitters accounts
Comments	The parents should be able to see the information of the babysitter they choose.

## Profiles Filtering

<b>Actor</b>	Parents
<b>Description</b>	<ol style="list-style-type: none"> <li>1. The system should list all babysitters' profiles that match the parents' specifications, the parent can filter profiles by:</li> <li>2. Parents set the time in terms of the day and the appropriate hour for them. The profile of the babysitter available at that time will appear.</li> <li>3. The Parents choose the appropriate salary, the profile of the babysitter available at that salary will appear.</li> <li>4. The Parents choose the appropriate location, the profile of the babysitter available at that location will appear.</li> <li>5. Parents Choose a high-rated babysitter the babysitter profile will appear.</li> </ol>
<b>Data</b>	<ol style="list-style-type: none"> <li>1. Information about babysitter (name, time, Salary, Location, Rating).</li> <li>2. Time (day, Hours).</li> </ol>
<b>Pre-condition</b>	Non
<b>Output</b>	Babysitters' profiles depending on their specifications.
<b>Comments</b>	The parents will have the choice to use the filter feature or not.

## Reviews & Ratings

<b>Actor</b>	Parents
<b>Description</b>	<ol style="list-style-type: none"> <li>1. The system will allow users to write comments and rate each babysitter they deal with, then display their own reviews and ratings on the babysitter's profile.</li> <li>2. If the babysitter has done well with serving and setting the child, the system should notify the parent that they are now allowed to write a review and rate this babysitter depend on their experience.</li> <li>3. The review will allow the parents to write comments.</li> <li>4. The rating will be in a five-stars rating format.</li> </ol>
<b>Data</b>	<ol style="list-style-type: none"> <li>1. Writing the comments for the review.</li> <li>2. Rating stars out of five</li> </ol>
<b>Pre-condition</b>	Non
<b>Output</b>	Display these reviews and ratings on each babysitter's profile.
<b>Comments</b>	The parents' reviews and ratings will be a useful source for other parents searching for a babysitter.

## Babysitters certification test

<b>Actor</b>	Babysitters
<b>Description</b>	<ol style="list-style-type: none"><li>1. Before creating the babysitters' account in the registration step, the system should provide a test for them.</li><li>2. After they take the test, the system will decide if they can create an account or not depending on their grades on the test.</li><li>3. The babysitters will pass the test if their grades are above 70.</li><li>4. If not, the babysitters will be notified that they did not pass the test and they need to retake the test.</li><li>5. If they pass the test, they will be notified and will be able to create an account and register to the system.</li></ol>
<b>Data</b>	Taking the test.
<b>Pre-condition</b>	Non
<b>Output</b>	<ol style="list-style-type: none"><li>1. Grade.</li><li>2. Notify the babysitters whether they passed the exam or not.</li></ol>
<b>Comments</b>	The system will only create an account for the babysitters who passed the test with a grade above 70, this will insure the babysitters' efficiency.

## Classifying babysitters

<b>Actor</b>	Babysitters
<b>Description</b>	The system classifies babysitters according to their qualifications and their grades on the test into one of the following classes: <ul style="list-style-type: none"><li>○ 80 SR per hour and 400 SR per day for those who pass the test with grades between (90-100)</li><li>○ 60 SR per hour and 200 SR per day for those who pass the test with grades between (80-90)</li><li>○ 45 SR per hour and 150 SR per day for those who pass the test with grades between (70-80)</li></ul>
<b>Data</b>	Information about babysitters (qualifications, grades)
<b>Pre-condition</b>	The babysitter's grade in the test.
<b>Output</b>	<ol style="list-style-type: none"><li>1. Classification of each babysitter based on the classifying system</li><li>2. The salary of each babysitter.</li></ol>
<b>Comments</b>	Non

## Contact

<b>Actor</b>	Parents, babysitters
<b>Description</b>	After choosing the appropriate babysitter for them, the system will allow both parties to communicate either in chat or call or to meet in person.
<b>Data</b>	Non
<b>Pre-condition</b>	Before enabling them to communicate with each other, the parent should complete the reservation request including the payment process.
<b>Output</b>	Displaying a chat window that allows both parents and babysitters to chat with each other, and a phone call feature as an optional choice
<b>Comments</b>	This feature helps to build the correct communication between the two parties by chatting with each other and gives parents the opportunity to specify some points that must be clarified, such as the appropriate food for the child, when the child sleep, etc.

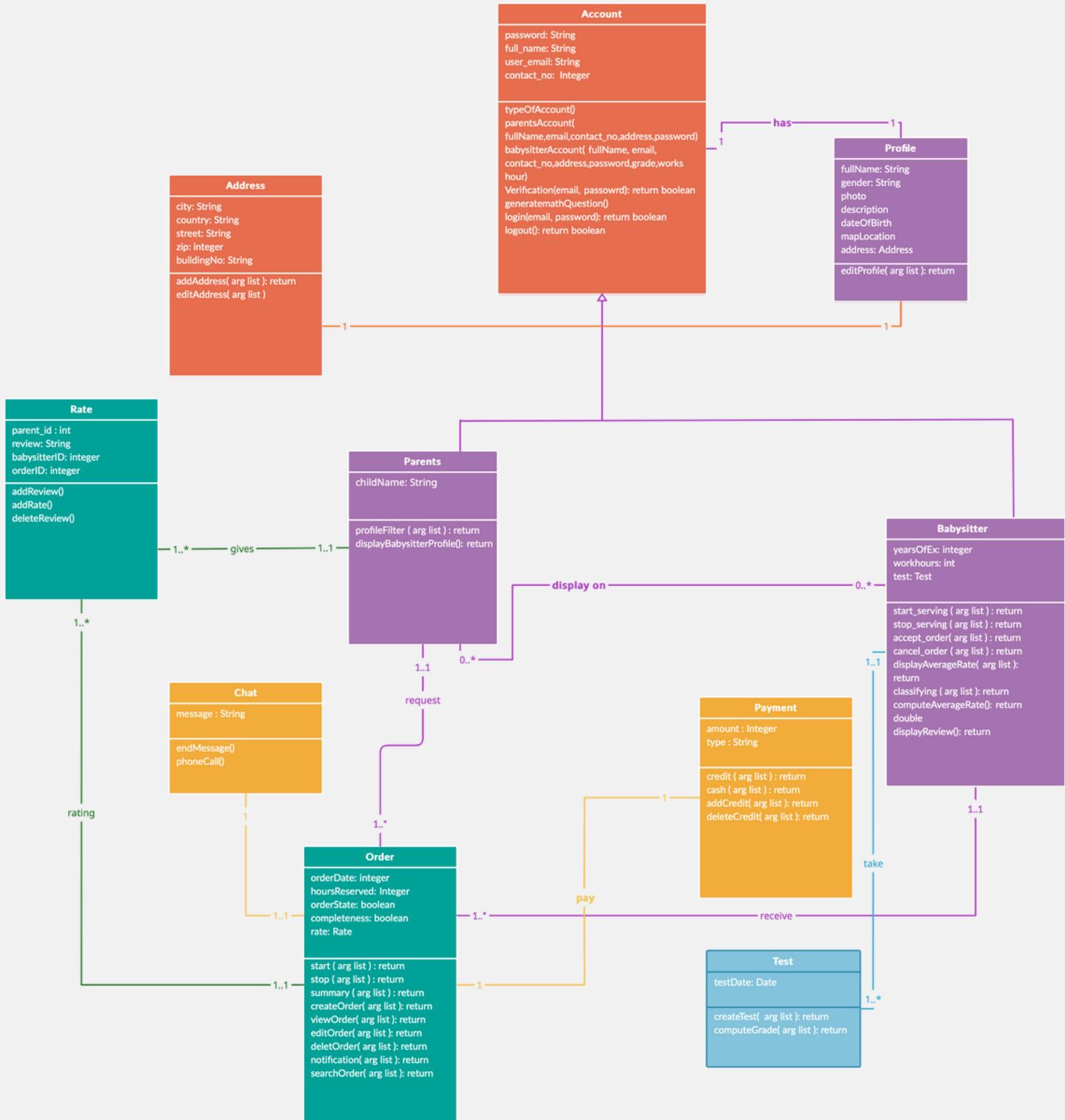
## Maps

<b>Actor</b>	Parents, babysitters
<b>Description</b>	The system shall provide a map feature for the parents to find the nearest babysitters.
<b>Data</b>	User's location
<b>Pre-condition</b>	Non
<b>Output</b>	Displaying all the users' locations in their profiles.
<b>Comments</b>	This feature helps parents to see the location of the babysitters and choose the one nearest to them, this also will be used in the filtering feature where the system will display the babysitters' profiles that meet the parents' specifications, and one of these specifications is the location.

# Payment

<b>Actor</b>	Parents, babysitters
<b>Description</b>	<ol style="list-style-type: none"><li>1. For parents: They will choose the appropriate babysitter that fits their liking.</li><li>2. Then, the parents will be allowed to choose one of the available payment methods.</li><li>3. The system should provide several methods of payment:<ul style="list-style-type: none"><li>o Credit card</li><li>o Pay with cash</li></ul></li><li>4. If the chosen method is “Credit card”, the system will check if the parents have entered any card in the system previously.</li><li>5. If not, then the parents should enter the card information.</li><li>6. The system should verify the payment.</li><li>7. If the verification is done successfully, then the reservation will be completed, and the two parties will be notified, and the contact feature will be enabled.</li><li>8. The system should ask the parents whether they want to save this card in the system for future payment or not.</li><li>9. For the babysitters: in the registration process, they need to enter their credit card information.</li><li>10. All the users should have the ability to edit their payment methods and the system should allow them to add or delete their credit cards.</li></ol>
<b>Data</b>	Payment Information
<b>Pre-condition</b>	For the parents: registration
<b>Output</b>	An Error message if the payment method is not completed. Completed reservation if the payment is done during the reservation process
<b>Comments</b>	Non

# 3.4. CLASS DIAGRAM



### 3.5. TRUST PROTOTYPE

That has been implemented the prototype by proto.io website



The first page that appears for all users enables them to register in the application



Register the required data for parents

Click the Register button to complete the registration



Login page The parents or babysitters enters the email and password, then press the login button to go to the homepage



To verify the data and verify the account, when you press Verify, the registration is completed



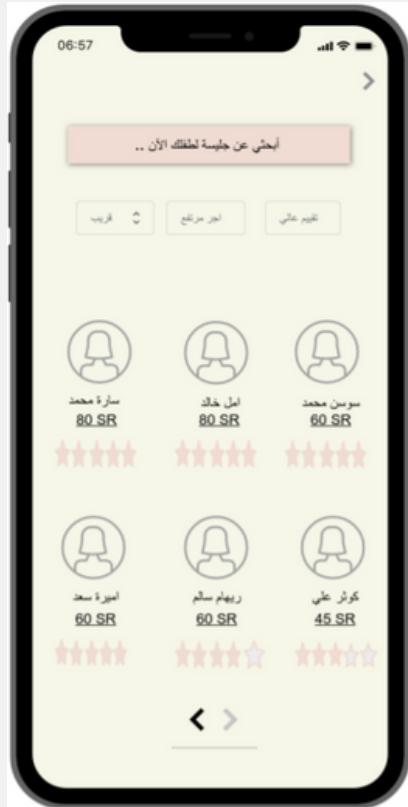
The home page of the parents with buttons

Trust incubators to go to the incubator selection page  
And my cards to go to the card page

And my requests to go to the previous orders page  
Log out to go to the application interface



On this page, the data is updated and the Parent information is fully displayed



All babysitters profile are displayed with the filter to choose the right time and place and when you click on the babysitter icon, you will be moved to her profile with her reservation data





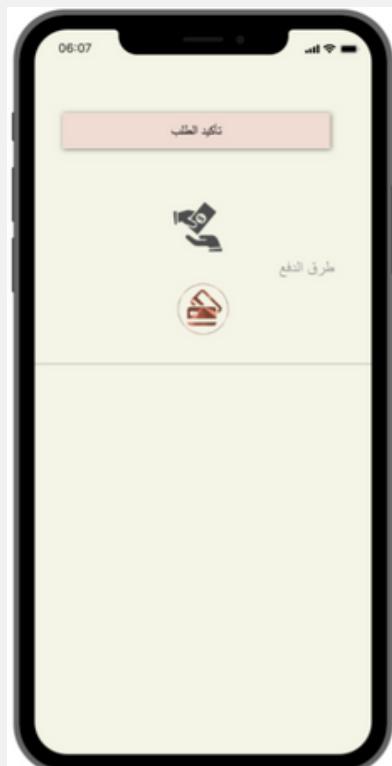
After selecting the babysitter , she will be taken to this page, which is the page that displays babysitter information with comments and ratings. When you click on a reservation, you will be taken to the order summary page to complete the reservation



On this page, the place, time, duration, date and age of the child are selected. The button is pressed to complete the order.



A page that displays the list  
of previous requests for  
parents



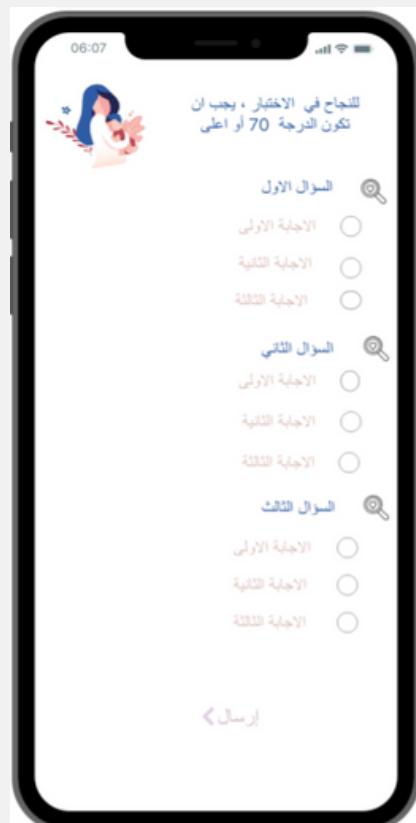
To confirm the order by paying by  
card or cash



A page displaying order information and ways to contact the babysitter



babysitter sign up  
Register the required data for the babysitter  
and click the test button  
to complete the registration



## Test page

test questions are answered and click sent button answers .  
If the grade is greater than 70, registration is completed, but if it is less, return to the application interface page.



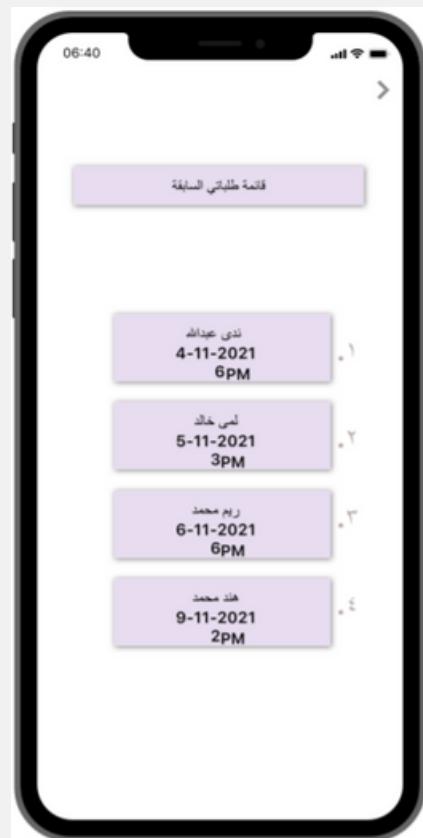
## Profile Babysitter

On this page, the data is updated and the user(babysitter) information is fully displayed

# Home babysitter page



On the home page, when you click on the user icon, it will go to the profile page , click on the current orders button to view them, click on the existing offers button to see them, Click the logout button, to go to the application interface



A page that displays the list of previous requests for babysitter



A page that displays the summary of the application with the possibility of acceptance or rejection



A page displaying order information and ways to contact the parent



Chat with babysitter



Chat with parent



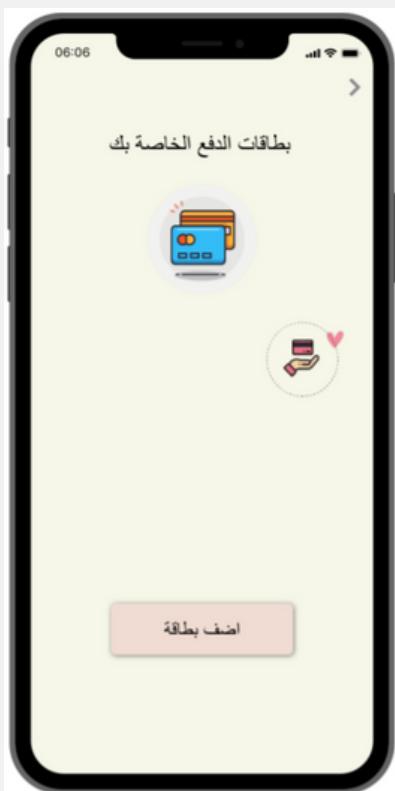
Your payment cards or add a new card



Add new card information



Add Verification code

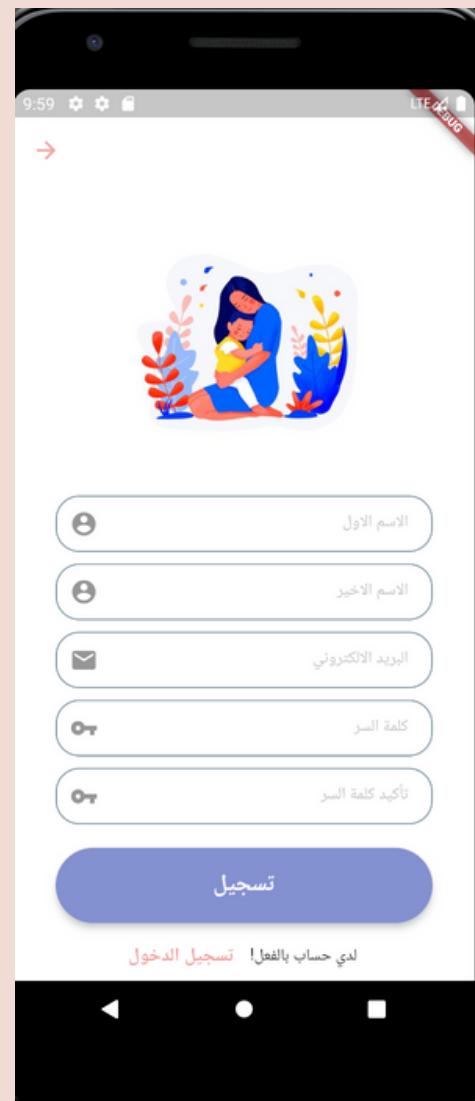


My Cards page or add a new card

# SYSTEM IMPLEMENTATION

## 4.1. TRUST APP SCREENSHOTS

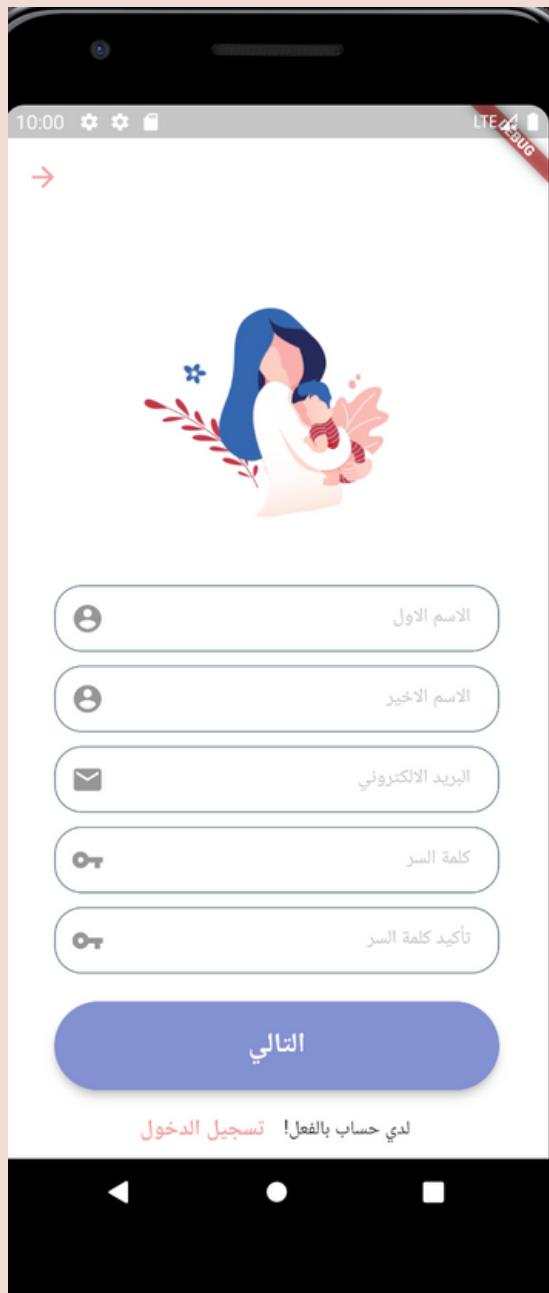
A Welcome screen for all users



Parent's registration screen



Babysitter's registration screen



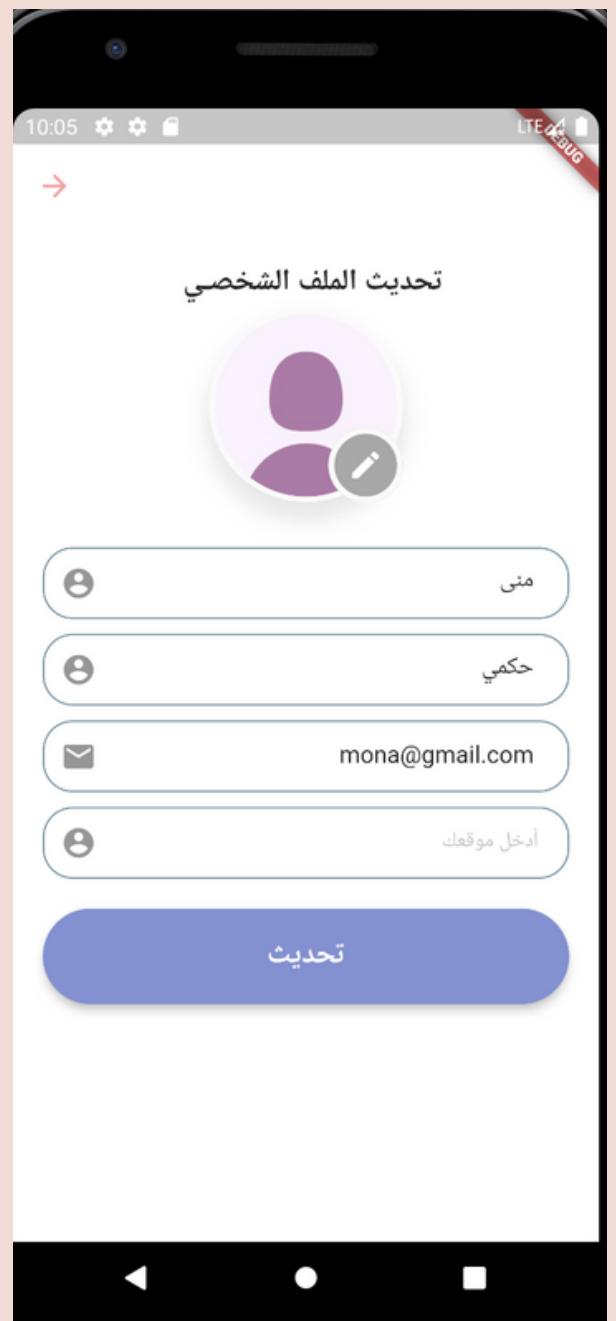
Log-in screen



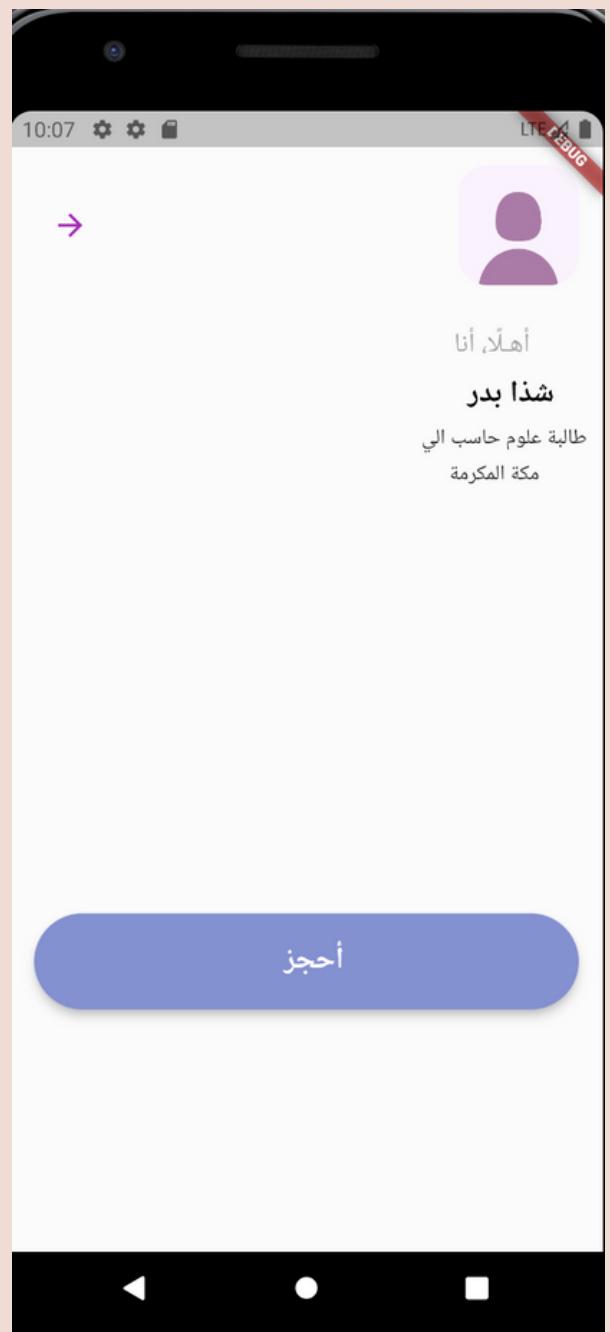
Parent's home screen



Parent's profile editing screen

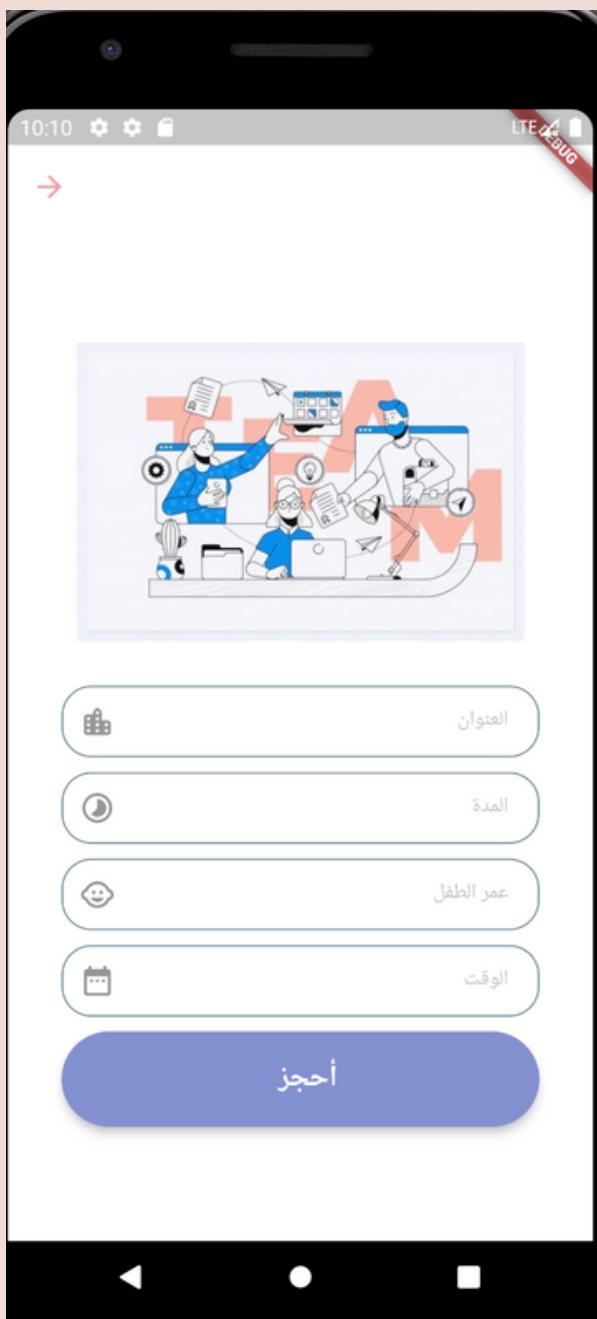


Listing all the babysitters for the parent

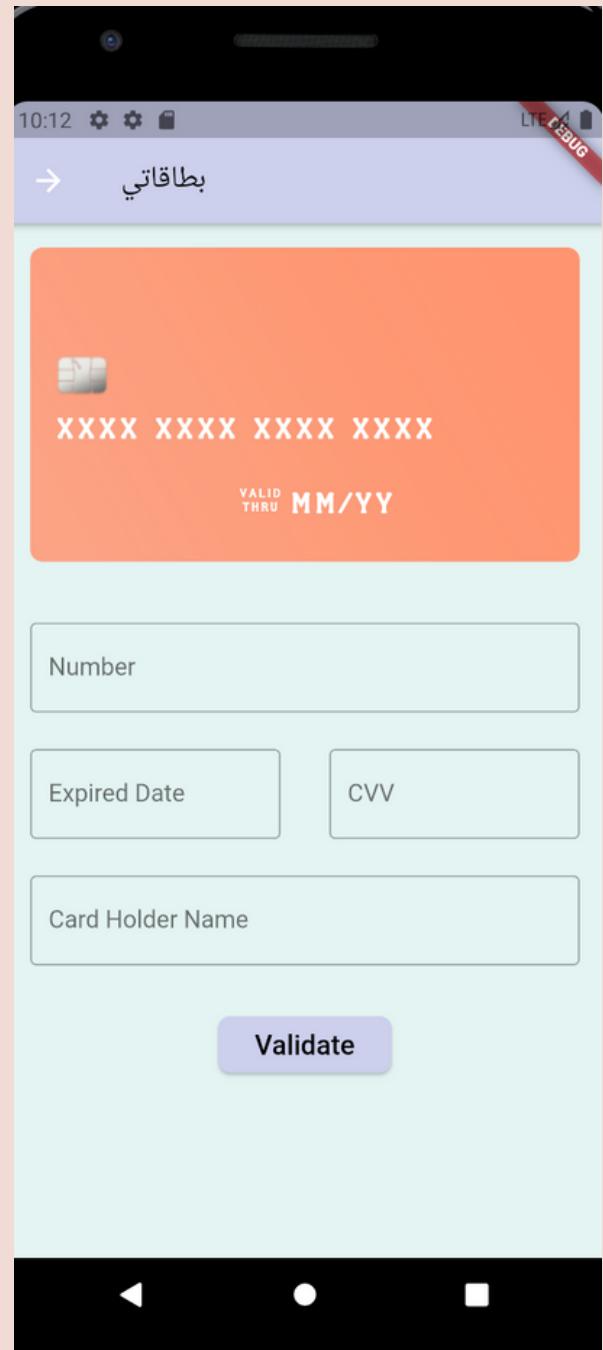


Viewing the selected babysitter's profile

order screen

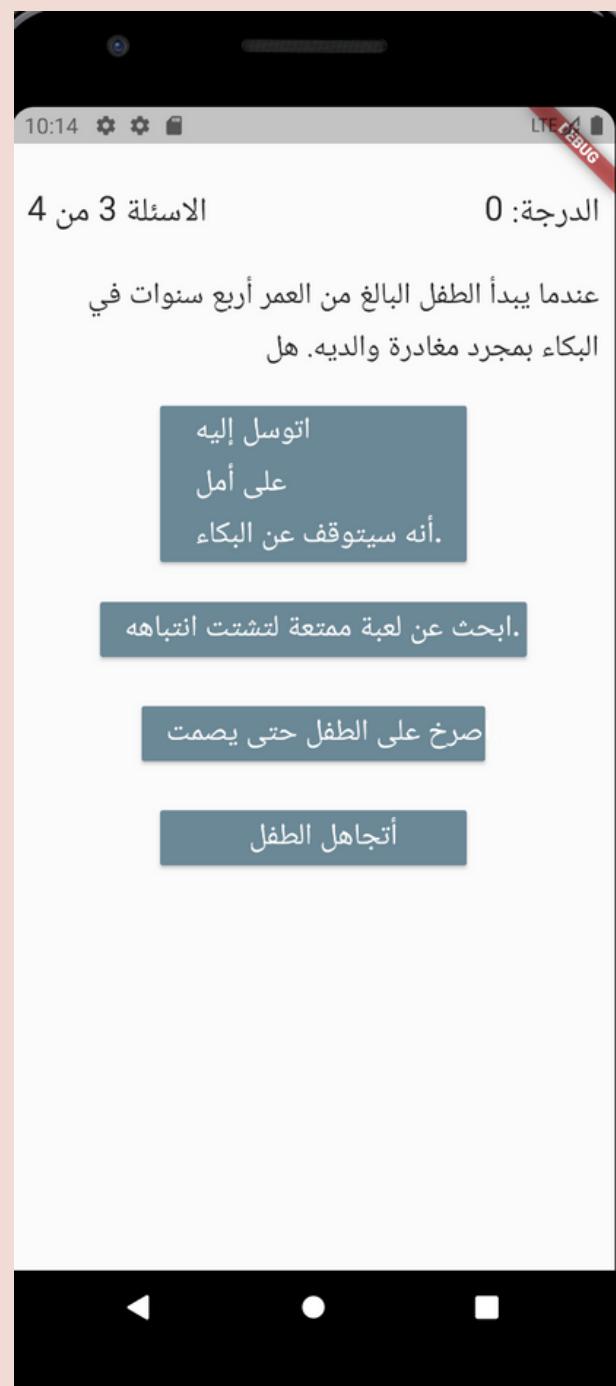


Parent's payment screen



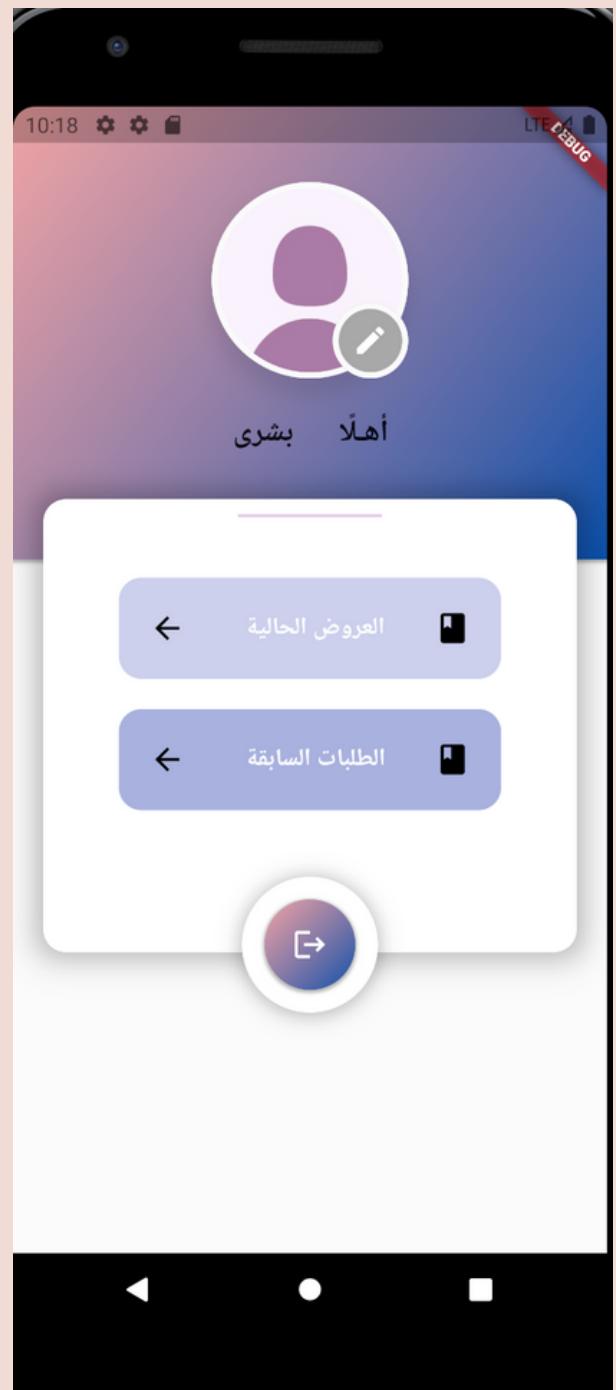
# Babysitter's test



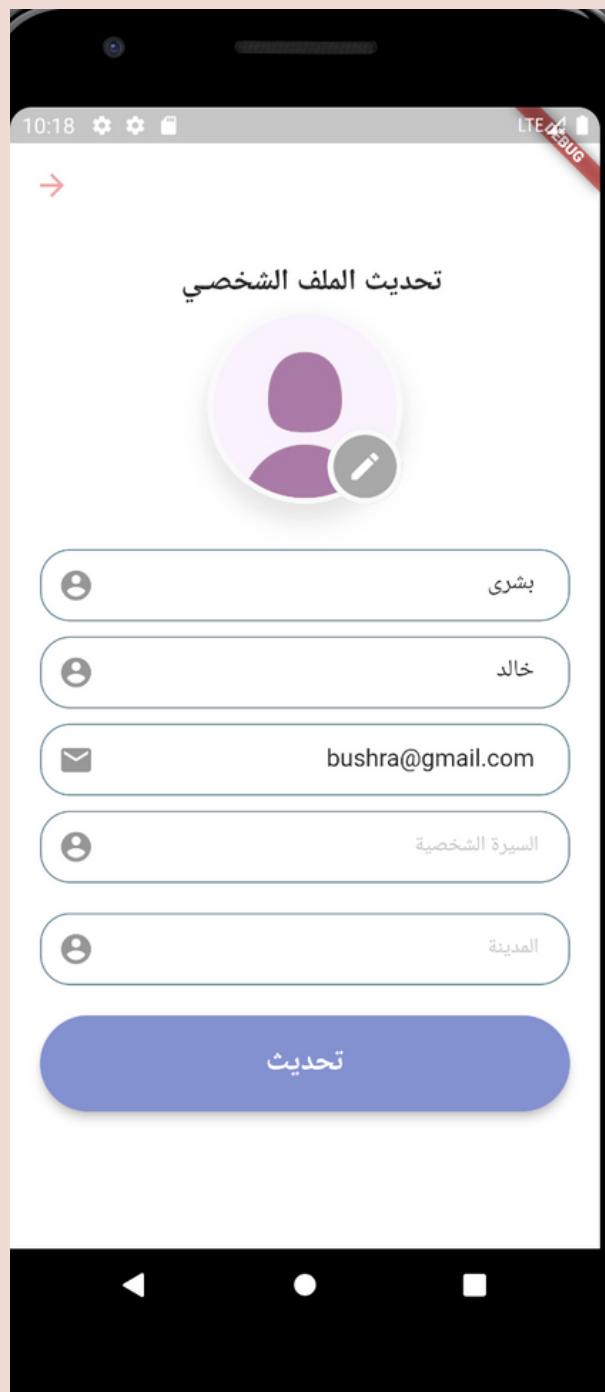




An alert window if the score is not acceptable



Babysitter's Home screen



Babysitter's editing profile screen

## 4.2. DATABASE SCREENSHOTS

The screenshot shows the Firebase Cloud Firestore interface. On the left, the navigation bar includes 'Project Overview', 'Build' (with 'Authentication', 'Firestore Database', 'Realtime Database', 'Storage', 'Hosting', 'Functions', and 'Machine Learning' options), 'Release & Monitor' (Crashlytics, Performance, Test Lab, ...), 'Analytics' (Dashboard, Realtime, Events, Conve...), 'Engage' (Predictions, A/B Testing, Cloud Mes...), and 'Extensions'. The main area is titled 'Cloud Firestore' and has tabs for 'Data', 'Rules', 'Indexes', and 'Usage'. A banner at the top says 'Protect your Cloud Firestore resources from abuse, such as billing fraud or phishing' with a 'Configure App Check' button. The 'Data' tab is selected, showing a tree view under 'my-trust-app-6be14': 'users' (selected), 'babysitters', and 'orders'. Under 'users', a document named '9em9zfsIlfQ0SPp2574fNfvxI943' is expanded, showing its fields: email (ghiadaa@gmail.com), firstName (محمد), lastName (الشريف), and uid (9em9zfsIlfQ0SPp2574fNfvxI943). There is also a placeholder for a new document.

Parent's Collection

The screenshot shows the same Firebase Cloud Firestore interface as the previous one, but with a different collection selected. The tree view under 'my-trust-app-6be14' now shows 'babysitters' (selected), 'orders', and 'users'. Under 'babysitters', a document named 'ZtEPVNrrdaRFDsDuEnkePkjgYJ82' is expanded, showing its fields: address (مکان المکرمة), bio (طالبة علم حاسب الي), email (shatha@gmail.com), firstName (شatha), lastName (بدر), and uid (ZtEPVNrrdaRFDsDuEnkePkjgYJ82). There is also a placeholder for a new document.

Babysitter's Collection

The screenshot shows the Firebase Cloud Firestore interface for a project named 'My Trust App'. The left sidebar contains various services like Authentication, Firestore Database, and Machine Learning. The main area shows the 'Data' tab for the 'orders' collection. It displays a hierarchical tree structure under the 'my-trust-app-6be14' database. The 'orders' collection has documents with IDs such as 'Fh87TxX1KKZOsaddpC1', '01dMHYnoGOFmtxIBTrUi', 'XCeRhyI1BDQb1C6qSNI8', 'ZpCWkNS1HBfxzmGR7u8i', and 'eQXPXwx0r8tucgvLo4sb'. A detailed view of one document is shown on the right, containing fields like 'address', 'babysitterName', 'date', 'duration', 'kidAge', 'uid', and 'uid\_'. A note at the top says 'Protect your Cloud Firestore resources from abuse, such as billing fraud or phishing' with a 'Configure App Check' button.

## order's Collection

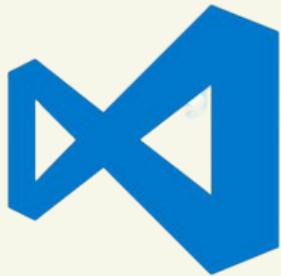
# TECHNOLOGICAL ENABLERS

Android Studio is an integrated development environment (IDE) that was chosen to write the software. As stated on Android's official website. Android Studio is the official IDE for implementing applications, specifically in Android. This IDE is known for its handy features such as its “fast and feature-rich emulator”, “code templates”, and substantial “testing tools and frameworks”





Firebase is a Google “development platform” served as a database for the capstone project. Besides it providing Realtime database, it offers many other products such as Analytics, Cloud Storage, Hosting, and many other great useful products for development.



Visual Studio Code is a source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

## 5. FUTURE WORK

Through this mobile application on its own accomplishes its main purpose, which is to bring together a parent and the right babysitter for his or her child/children, many enhancements could be added to it in order to make it more sophisticated.

First of all, adding a chat feature. When a babysitter accepts the order they would unleash the chat feature, where they will be able to chat with one another. This is a more convenient way for the two parties to contact each other rather than doing it outside the app.

Finally, we could add a rating feature. When a parent has experienced a certain babysitter’s services, he or she will be able to rate them afterward by giving them a number of stars. This feature will give the users the credibility they each deserve, and will help others know which profile they should avoid, and which to approach.