



An-Najah National University

Faculty of Engineering & Information Technology

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Bachelor degree in Computer Engineering

Graduation Project 1



Brainy Buddies

Students:

Alaa Yamak

Tasneem Abu Alrob

Supervisor:

Dr. Amjad AbuHassan

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Acknowledgment

All thanks and gratitude to An-Najah University in general, and to the Computer Engineering Department and Dr. Amjad in particular. We also thank our families, friends, and everyone who supported us to accomplish this work

Disclaimer Statement

This report was written by the two students in the Department of Computer Engineering at the College of Engineering, Alaa Yamak and Tasneem Abu Al-Rob. It may contain linguistic errors or errors in the content because it has not been modified. All opinions, suggestions, and results in it are from the students themselves, and the university is not responsible for any use of this report other than the purpose for which it was presented.

Abstract

Brainy Buddies is a mobile application and website for children, through which they learn and share their achievements and information. They are also tested using a set of questions, and they get an entertainment aspect through interactive educational games at the same time. It consists of three users: Admin, Parent and children. The admin is responsible for fully controlling and supervising the application and website. He adds educational content (videos and stories) while specifying its type (educational, cultural or religious) and specifying the age group as well. All of this will appear later for the children to watch and interact on them. He is also responsible for setting questions for assessment tests and supervising them, and also seeing all users (fathers and children) viewing their pages, and receiving their inquiries via WhatsApp and email. As for the child, he can see what the admin has posted and interact with it. He also has his own page through which he can publish the video, story, post, or photo that he wants to publish to the rest of the children who follow him, as there is a follow and unfollow feature among these children, and also the child can answer existing tests and entertain himself with the educational games provided by the application. In addition it provides chat feature between all users, children and parents, to exchange knowledge, also the notifications when any interaction or event occurs. As for the last user, he is the father who creates accounts for his children (since the child can't register an account in the application on his own) in order to control him. The ages that this application targets range between 5-12 years, which are the first learning ages. The father can also communicate with the admin to give him feedback

Contents

List of Figures	6
1 Introduction	8
1.1 Statement of the problem	8
1.2 Objectives of the work	8
1.3 Scope of the work	8
1.4 Significance of our work	9
1.5 Organization of the report	9
2 Constraints, Standards/ Codes and Earlier course work	10
2.1 Constraints and limitation	10
2.2 Standards and Codes	10
2.2.1 Flutter Front-end Application	10
2.2.2 Database Back-end	11
2.2.3 Waterfall Model	11
2.3 Earlier coursework	12
3 Literature Review	13
4 Methodology	15
4.1 Tools, Methods and Programming Languages	15
4.1.1 Tools	15
4.1.2 programming language	15
4.1.3 Database	16
5 Results and Discussion	17
5.1 Questionnaire	17
5.2 Mobile Application	19
5.2.1 Admin:	19
5.2.2 Parent	27
5.2.3 Child	35

5.3	Web Application	46
5.3.1	Admin	46
5.3.2	Parent	47
5.3.3	Child	48
6	Conclusions and Recommendations	53
6.1	Summary	53
6.2	Future Works	53
	References	54

List of Figures

5.1	Questionnaire	18
5.22	Parent permissions	30
5.25	Follow up on children	32
5.28	Ways to Contact the admin	34
5.34	Video details	37
5.36	Child Story	38
5.38	Follower/followed posts, Add likes & Comments	39
5.39	Follower/followed posts, Add likes & Comments	40
5.40	Admin Videos	40
5.41	Admin Videos	41
5.43	Admin Stories	42
5.44	Admin Quizzes	42
5.45	Admin Games	43
5.49	Notifications	45
5.50	Admin sign-in / Dashboard - web	46
5.51	Admin Create Content -web	47
5.52	Sign up /sign in -web	48
5.53	Main page / parent profile	48
5.54	Add Child, Set Interests	49
5.55	Control child posts and development	50
5.56	Control child posts and development	50
5.57	Contact Admin and Feedback	50
5.58	Main child page and profile	50
5.59	Control posts -web	51
5.60	Children Network -web	51
5.61	Games	51
5.62	Games	52

List of Tables

Chapter 1

Introduction

1.1 Statement of the problem

Raising children is one of the most important and difficult things that a person does in his life, as they are the future generation. At this time, education can't be kept away from the Internet, but there are great fears among parents about what children learn on these platforms. They must be under strict supervision, because it is the childhood stage. A very sensitive stage and what the child learns in it contributes to building a large part of his future personality

1.2 Objectives of the work

Building a mobile application and a website that enables the child to learn all the values preferred by his generation. It also enables him to interact with them and express his admiration for them. He can share what he knows, which contributes to strengthening his self-confidence. It also has corners for testing and playing. All of this is included in this Secure platform

1.3 Scope of the work

Building a complete and integrated platform for children to gain knowledge from those of the same age as them. The admin provides it with the basic content that will be shown to all participating children, which are videos and stories created by children of the same age as them. After that, the father participates in this platform and creates accounts for his children, which enables the child to interact and learn from what the admin has published, and also to share all the knowledge and skills that he would like to pass on to the children who follow him. Finally, he can test himself and have a little play time, of course, playing mixed with knowledge

1.4 Significance of our work

Developing an educational platform for children is an important initiative and an effective step in helping parents in the education process. The child will be preserved to keep him in an environment with valuable and safe ideas far from degradation, and he will only be exposed to children of the same age, all of whom possess good skills and values appropriate to our culture, at the same time. He will automatically be kept away from ideas and platforms that his parents reject. The child also loves to receive information from those of the same age and finds it a challenge to compete

1.5 Organization of the report

The arrangement of this report comprises multiple segments. The introductory part offers an outline of the project and its goals. The subsequent section delineates the extent and limitations of the undertaking. Following that, the third part highlights the approach and steps undertaken to finalize the project. In the fourth division, outcomes and discoveries are showcased, encompassing any difficulties confronted and their subsequent solutions. The fifth section delves into the importance and potential influence of the project. Ultimately, the concluding remarks encapsulate the essential elements of the report and offer suggestions for future endeavors. Supplementary materials, containing pertinent data and information concerning the project, are enclosed in the appendices.

Chapter 2

Constraints, Standards/ Codes and Earlier course work

2.1 Constraints and limitation

1- Limited resources: The documentation for Flutter and Node Js only covers the basics, necessitating additional research to achieve our goals. Furthermore, to work with these technologies, you must be familiar with Android Studio and other libraries. Using Mongo database involves tremendous work and research for optimal outcomes.

2- Knowing good content suitable for every age: Since we have never dealt with children of this age, we needed to ask the parents about this matter.

2.2 Standards and Codes

The documentation for Flutter and Node Js only covers the basics, necessitating additional research to achieve our goals. Furthermore, to work with these technologies, you must be familiar with Android Studio and other libraries. Using Mongo database involves tremendous work and research for optimal outcomes.

2.2.1 Flutter Front-end Application

For the front-end development of our graduation project, we opted to leverage the Flutter framework, a versatile UI toolkit developed by Google. Flutter excels in building natively compiled applications for mobile, web, and desktop from a single codebase. Its key strength lies in the creation of visually appealing and responsive user interfaces through the use of widgets. Flutter employs a declarative approach, allowing for expressive and flexible UI designs. The hot reload feature significantly streamlined our development process, enabling us to iterate quickly

and efficiently. Dart, the programming language utilized by Flutter, proved to be a robust and concise language, facilitating the implementation of our project's logic seamlessly. The comprehensive documentation provided by Flutter played a pivotal role in our development journey, offering clear guidance and ensuring a smooth learning curve for our team. Ultimately, Flutter's ability to deliver a consistent and high-quality user experience across multiple platforms made it an optimal choice for our application's front-end development.

2.2.2 Database Back-end

To ensure a modern and efficient architecture for our project, we selected Node.js as our server-side platform. Node.js, an open-source platform built on Google Chrome's V8 engine, offered exceptional scalability and parallel code execution. Its lightweight nature and rapid performance made it the optimal choice for our application.

Node.js has gained widespread adoption in the industry, with prominent companies such as LinkedIn relying on its capabilities. For managing our database, we opted for MongoDB, a leading NoSQL database. MongoDB excels in handling unstructured and semi-structured data, providing flexibility and scalability. Its document-oriented model and dynamic schema perfectly aligned with our project's requirements. The active and supportive MongoDB community ensured that we had access to valuable resources and assistance throughout our development process. Additionally, to implement real-time chat functionality, we integrated Firebase Realtime Database into our backend. Developed by Google, Firebase Realtime Database offers real-time data synchronization, making it an ideal choice for building features like real-time chat in our application. It's important to note that while Firebase Realtime Database was utilized for our real-time features, MongoDB served as the primary database for managing other aspects of our data. This combination of Node.js and MongoDB, complemented by Firebase Realtime Database, provided a robust and versatile backend infrastructure for our project.

2.2.3 Waterfall Model

-Firstly, the Waterfall model served as the chosen project management approach throughout the application development, involving a sequential progression of key tasks and steps. The initial stage focused on gaining a profound understanding of the problem, capturing essential requirements, constraints, and pertinent data for development, followed by a detailed analysis.

-Secondly, the project advanced to the examination of requirements specifications established in the first phase. This led to the meticulous preparation of the system design, which included defining algorithms and selecting programming languages to implement the conceptual-

ized ideas.

-Thirdly, the development phase commenced with the creation and testing of small programs, denoted as units. These units encompassed various functionalities, including chat, notifications, child profile, parent profile, and the admin page. Rigorous testing ensured the individual functionality of each unit.

-Fourthly, the integration phase brought together all the developed units into a unified system. This integrated system underwent thorough testing to identify and rectify any faults or failures. Finally, the application was deployed in the customer environment using the Android Package (APK) format. This systematic adherence to the Waterfall Model facilitated a well-organized and comprehensive development process for the application.

2.3 Earlier coursework

During our studies in the Computer Engineering Department, we studied a variety of basics and concepts that were useful in the construction of this software. These included web programming, algorithmic complexity, critical thinking, and research abilities. We took online classes on flutter, Node.Js, Mongo database, and GitHub, which helped us implement and develop our project and create a complete report.

Chapter 3

Literature Review

Peer learning, also known as peer instruction or peer education, is a collaborative learning method that involves students learning from and with each other. This approach is based on the idea that students can benefit from teaching and learning from their peers. Peer learning can take various forms, including peer tutoring, group discussions, collaborative projects, and peer assessment. Research has shown that peer learning can have several benefits for students. For example, it can promote active learning, as students are actively engaged in teaching and learning from each other. This can lead to deeper understanding of the material and improved retention of knowledge. Additionally, peer learning can help students develop important communication and teamwork skills, as they learn to effectively explain concepts to their peers and work together to solve problems.

(2013) In the study "Effect of Peer Influence and Self-Reflection on Scaffolded Out-of-Class Activity Administered Using a Mobile Application" by Fuad and Akbar, the authors highlighted the crucial role of peer influence, self-reflection, and scaffolding in a mobile platform to maintain students' engagement with out-of-class activities. They emphasized the positive impacts of peer instructions on student performance and retention, as well as the connections between peer influence and improved student engagement and academic performance. This research sheds light on the significance of integrating peer influence effectively within digital platforms to support student learning and increase engagement. It provides valuable insights for educators and researchers seeking to leverage peer influence and self-reflection to enhance student engagement and learning outcomes in educational settings.^[1]

(2022) In the study conducted by Carvalho and Santos in "Computers and Education" the authors emphasized the significance of technology-enhanced peer learning programs in fostering the development of 21st century competencies, particularly collaborative and metacognitive skills among peer mentors. The findings underscored the positive impact of participation in challenge- and project-based peer learning programs, highlighting the need for evidence-based

promotion of metacognition in collaborative learning scenarios. Additionally, the study shed light on the valuable role of digital technologies in enhancing peer learning interventions, emphasizing the potential of ICT tools in innovative language education. This research provides compelling insights into the practical implications of integrating technology-enhanced peer learning programs to cultivate essential skills in students, offering a valuable resource for educators and educational institutions seeking to enrich collaborative and metacognitive abilities within traditional educational settings.[2]

(2021) In the study "Redefining peer learning: Role of student entrepreneurs in teaching entrepreneurship in the UK higher education context" by Xu et al., the authors explored the use of student entrepreneurs as guest speakers in entrepreneurship education. The study found that this approach effectively enhanced student engagement and motivation, as evidenced by both informal and formal feedback from students. The authors also noted the importance of careful planning and support from the lecturer in ensuring a successful implementation of this approach. Overall, this study highlights the potential of peer learning and the value of incorporating real-life experiences and perspectives into the classroom.

In order for peer learning to be effective, it is important for students to receive proper training and support. This can include training in effective communication and teaching strategies, as well as guidance on how to provide constructive feedback to their peers. It is also important for instructors to create a supportive and inclusive learning environment that encourages students to actively participate in peer learning activities.

In conclusion, peer learning is a valuable educational approach that can enhance student learning and promote important skills such as communication and teamwork. By providing students with the opportunity to teach and learn from their peers, educators can create a more dynamic and engaging learning environment that benefits all students involved.[3]

Chapter 4

Methodology

4.1 Tools, Methods and Programming Languages

4.1.1 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 functionalit
- **GitHub:** We utilized GitHub for collaborative development, code management, and tracking changes.
- **Firebase:** Firebase was integrated into our project to leverage its real-time database and cloud storage capabilities. This allowed us to securely and efficiently store messages and images. We also utilized Firebase's messaging service to enable notification functionality, enabling communication from the web to mobile and between mobile devices
- **Postman:** is a widely used API testing tool that simplifies the testing and development of APIs. It offers a user-friendly interface for creating and sending various HTTP requests, supports automation, organizes requests into collections, facilitates collaboration, and provides tools for documentation and monitoring. Its versatility makes it an essential tool for efficient API testing and development.

4.1.2 programming language

- The mobile application and web pages were developed using a combination of programming languages. Dart and the Flutter framework were employed for the frontend. Dart is a language specifically crafted for building user interfaces, and Flutter offers a rich set of tools and widgets for creating visually appealing and interactive mobile applications.
- As for the backend, Node.js was chosen as the programming language. It stands out as a

popular runtime environment facilitating server-side development, and it efficiently handles asynchronous operations, making it well-suited for constructing robust and scalable web applications.

4.1.3 Database

In our project, we opted for MongoDB Atlas as the designated database solution. MongoDB Atlas is a fully managed cloud database service known for its scalability, reliability, and security features. It offered the essential infrastructure to efficiently store and manage the project's data.

Chapter 5

Results and Discussion

We will present in this section the final results of our project, showcasing the various functionalities and features through screenshots. Each section will focus on a specific aspect of the project, providing a comprehensive overview of its capabilities and benefits.

5.1 Questionnaire

In order to gain a better understanding of the topics addressed by our application and to gather feedback on its potential usefulness, we conducted a questionnaire among network of parents.

Its questionnaire is designed to extract parents' opinions and perspectives on the importance of peer Tutoring, where children learn from each other, and the ease of this approach for children to acquire information. It also aims to understand the significance of technology in facilitating this form of learning.

The insights gathered from the questionnaire were used to inform the development of the application and ensure that it meets the needs and expectations of its target users.

تعليم الأقران.

“الاستبيان مصمم لاستخراج آراء ووجهات نظر الآباء حول أهمية تعلم الأطفال من بعضهم البعض وسهولة هذا النهج لاكتساب المعلومات. كما يهدف أيضاً إلى فهم أهمية التكنولوجيا في تسهيل هذا النوع من التعلم.”

هل تواجه أي مانع فيما يتعلق بتفسيين التكنولوجيا وأدواتها كجزء من عملية تعليم طفلك؟

نعم

لا

هل تجد صعوبة في تحقيق التوازن بين منح أساليب التعليم التقليدية واستخدام التكنولوجيا في بيئة تعلم طفلك؟

نعم

لا

ربما

هل تعتقد أن تعلم الأطفال من بعضهم البعض يثبت دوراً هاماً في تطوير مهاراتهم؟ (محدد الدرجة 1-5)

1

2

3

4

5

هل تعتقد أن تجربة تعلم الأطفال من بعضهم تسهم في جعل تجربة التعلم أكثر متعة للأطفال؟

نعم

لا

ربما

هل لاحظت أي أدوات أو منصات تكنولوجية معينة يستخدمها طفلك وأقرانه للتعلم التعاوني؟

نعم

لا

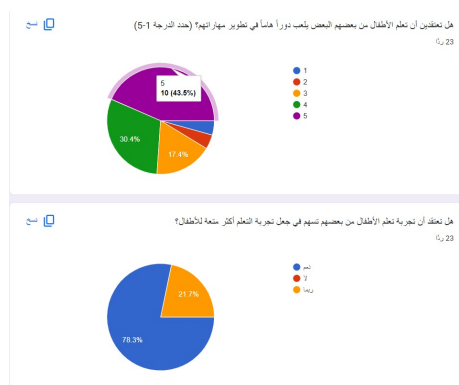
هل سبق وسمعت بمصطلح تعليم الأقران؟

نعم

لا

Figure 5.1: Questionnaire

As for what matters most and what the results have revealed, a very significant percentage of parents emphasize that children learning from each other plays a fundamental and highly important role in developing their skills to a very high degree. The results also clearly indicate that a vast majority, with no significant opposition, believe that the idea of children learning from each other makes the learning experience more enjoyable, beneficial, and easier.



(a) Result of Questionnaire

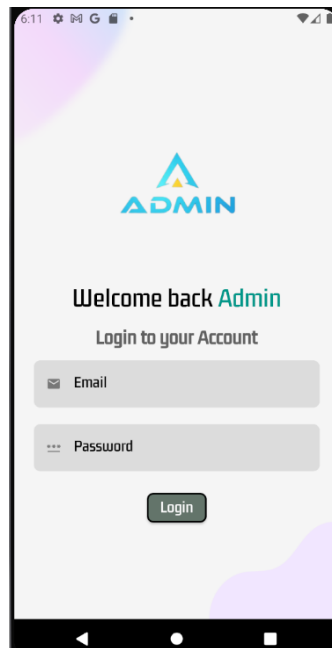
Our application caters to these preferences for parents in an easy, straightforward manner with user-friendly interfaces suitable for children. It is supervised by both parents and responsible administrators, ensuring a safe environment for children to engage in. Parents are given the opportunity to monitor their child's activities, manage the creation of their accounts, and define their interests.

The app includes diverse educational content, along with games, intelligence quizzes, and general knowledge questions. It also provides a platform for children to interact and connect with others, ensuring a safe, effective, beneficial, and enjoyable experience for the child.

5.2 Mobile Application

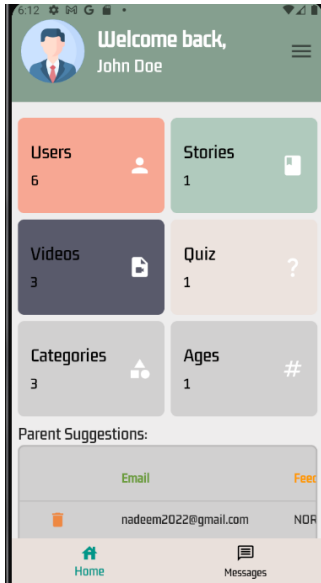
5.2.1 Admin:

1. **sign in:** An account must be created for the Admin in order to log in. If he doesn't, he can visit the registration page and open an account. By providing his email and password, a user can log in. The application contains one admin to control it.

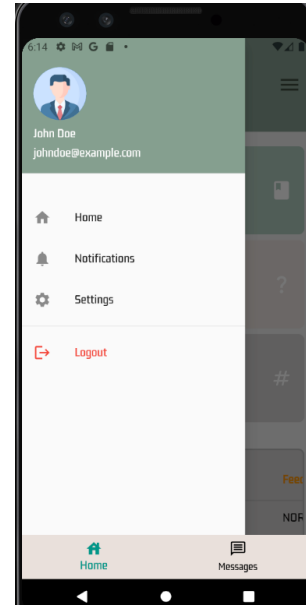


(a) sign in

2. **Dashboard and Home screen:** to choose what he wants to check.

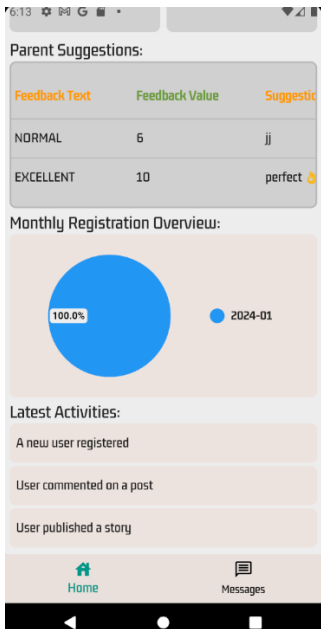


Admin sign-in

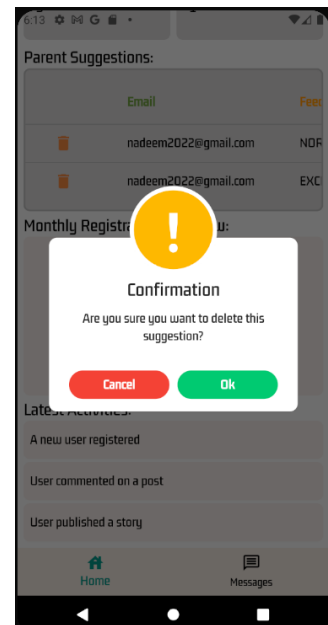


Admin Dashboard

3. **Father's Suggestions:** Reviewing parents' evaluations, suggestions, and feedback sent to the admin; the admin can also reject the suggested changes if desired, and displaying the percentage of new users registered in this application each month .

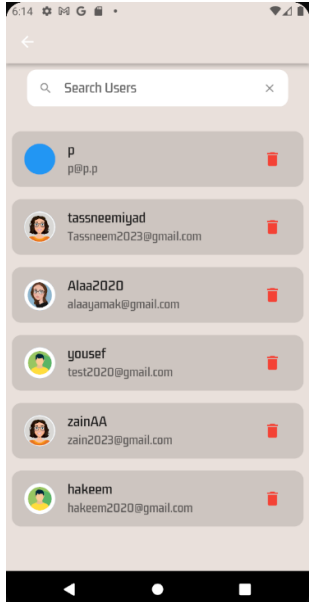


Suggestions and overview

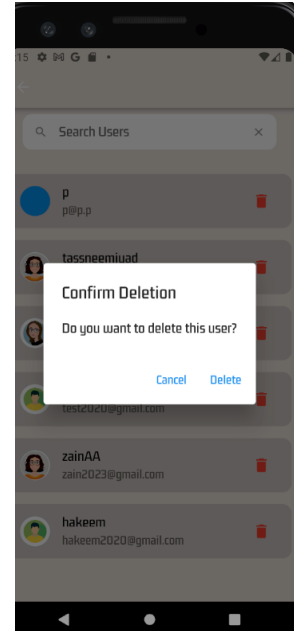


Control parent suggestions

4. **Showing Users** : Displaying all application users, including parents and children, with the option to remove any of them. Confirmation for the operation is required, or access their respective profiles.

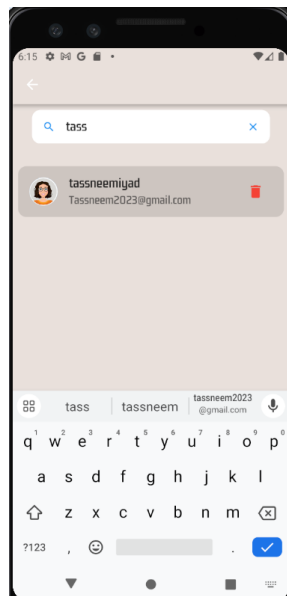


Discover and Search



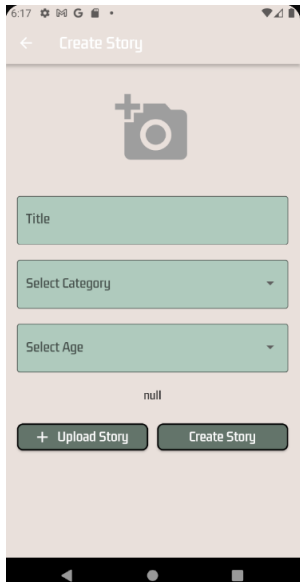
Show and delete user

5. **search Users** : Granting the admin the ability to search for any user within the application and providing search results.

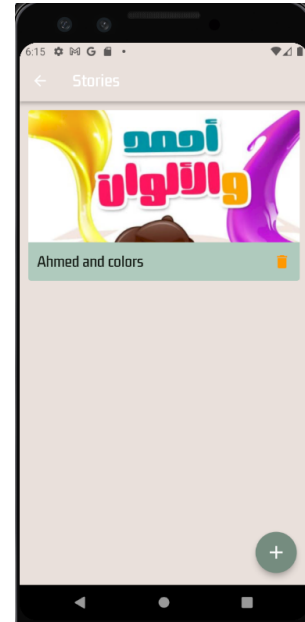


search Users

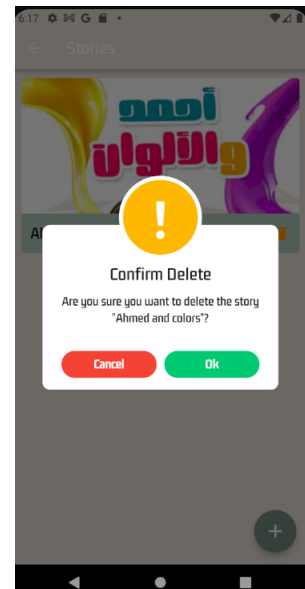
6. **creating a story:**First, it is added, after that the process of joining it to the stories section is completed. It is easiest to find the plus sign with which we can add more. It can also be displayed to ensure that it has been uploaded correctly, and finally the possibility of deleting it. Note that these stories will appear to all children using the application.



Create story

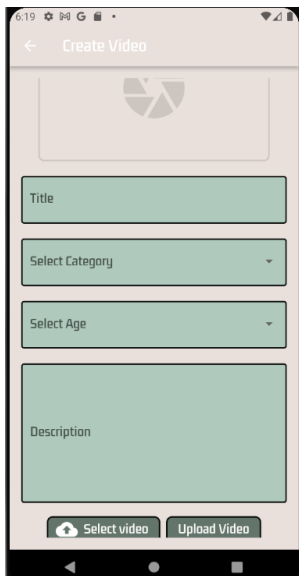


Show story-PDF file

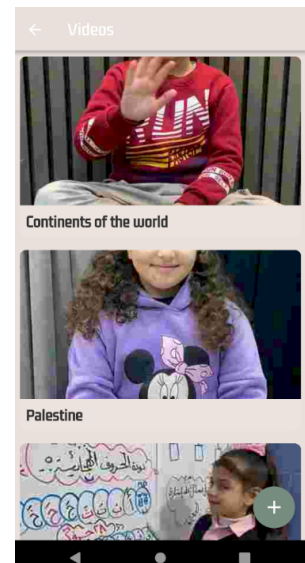


Delete Story

7. **Downloading Video:** As well as downloading the video, displaying it with the rest of the videos, and the ability to always add, view its details, or delete it.



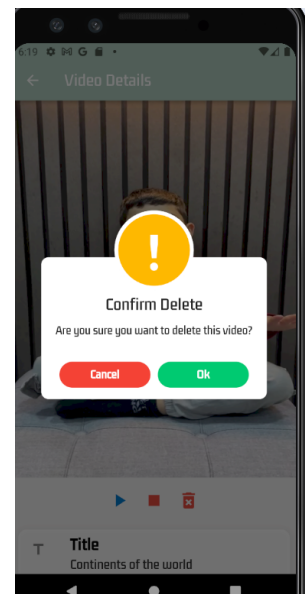
Create video



Show videos



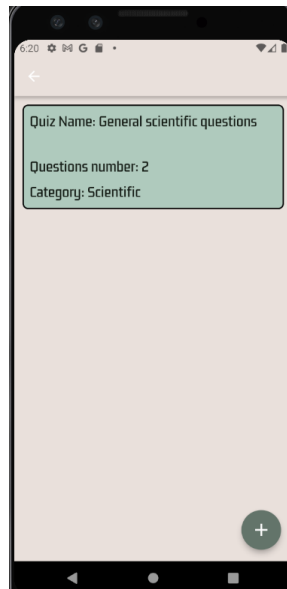
Video Details



Delete Video

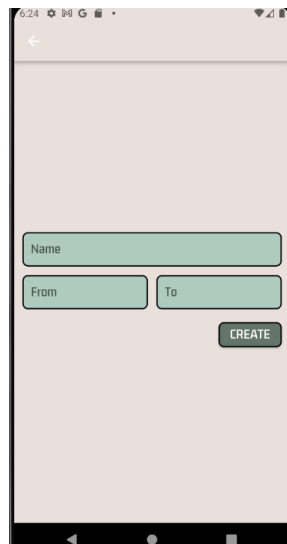
8. **Quizes:** Here we will show how the admin can add a quize, which is a good feature in our application through which the child is evaluated with questions and topics appropriate to what he has learned and his age as well.

Click on the plus icon to complete the process of adding a new quize.



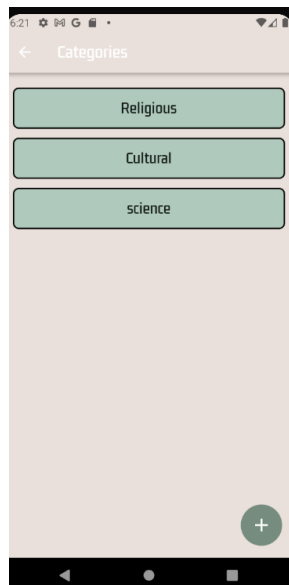
Create Quiz

9. **Choose name and age group:**He can choose his name and the age group to which he belongs.



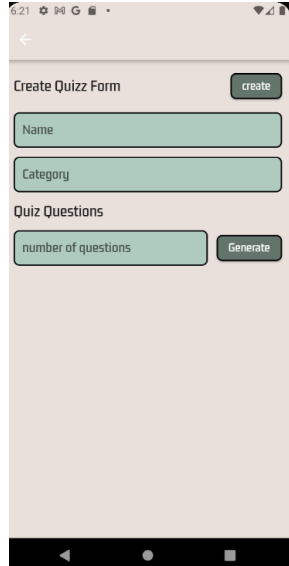
Create an age group

10. **Choose test belongs, religious, cultural or scientific:**He can choose the type to which this test belongs, religious, cultural or scientific.



Create category

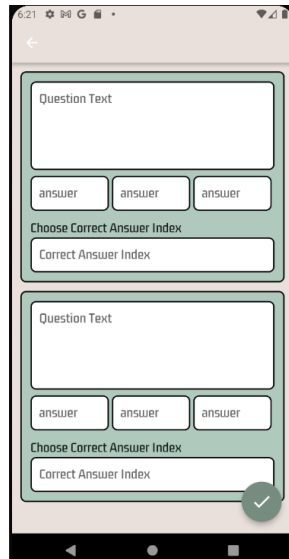
11. **Choose number of questions, test contains:**He can choose the number of questions the test contains.



Questions

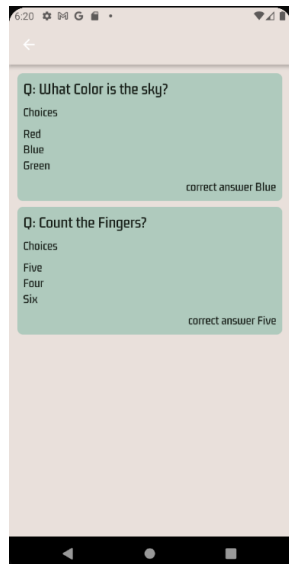
12. **The most important step:**fields with the same number that were entered before will

appear for the number of questions for this test, in which the texts of the questions and the options that will appear to the child will be entered.



Most Important Step

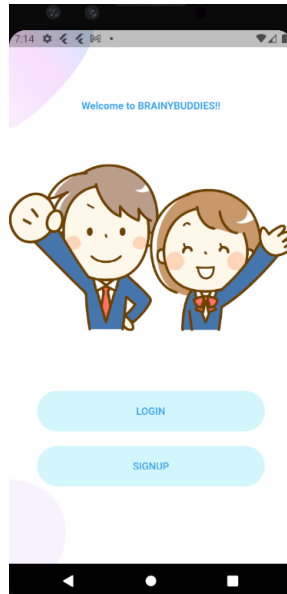
A final screen shows what was entered in the previous screen, so that the admin can take a look at all the questions and their options for this test.



Show Quizzes

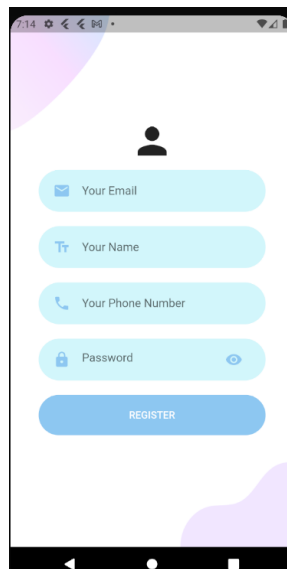
5.2.2 Parent

1. **Log in:** for the father and child from this same screen, according to what is stored in the data base, after which the interfaces for the child or for the father are shown.



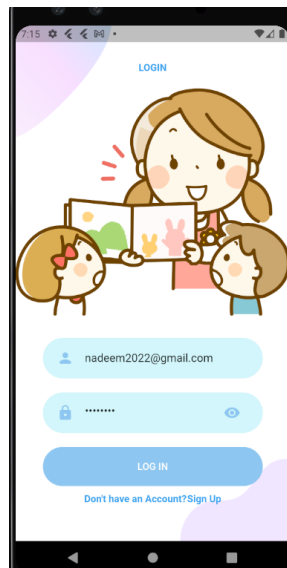
Welcome page

2. **Sign up:** The process of entering data to create a new account for the father if this is his first time in our application



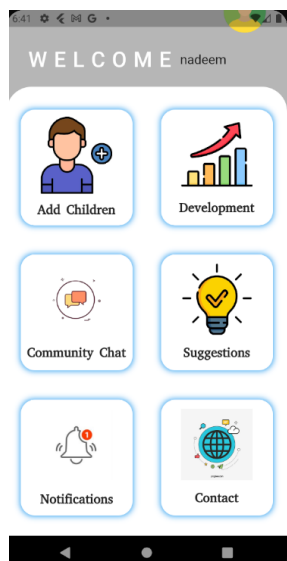
Parent Sign-up

3. **log in:**Now we will log in through this account to browse the options available to the father. This has already been stored in our database as a parent.



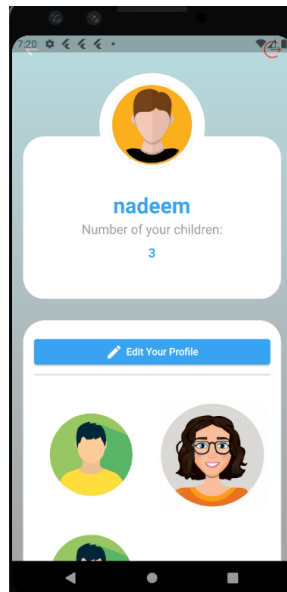
Parent Sign-in

4. **Parent Dash board:**The father's home screen is easy to understand, enabling him to choose the box he wants.



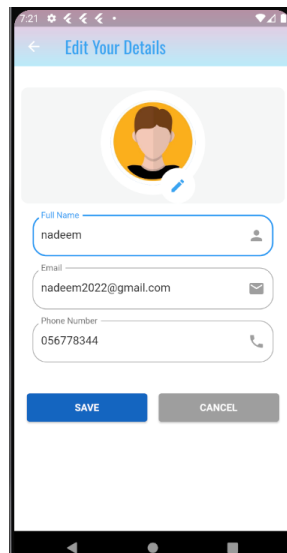
Parent Dashboard

5. **Parent Profile:** Display the number of his children and their personal pages for viewing.



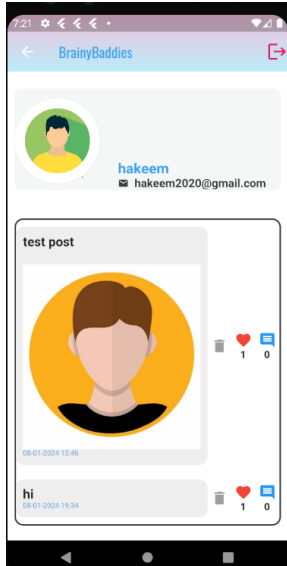
Parent Profile

6. **Parent edit profile:** Possibility of modifying the father's data.

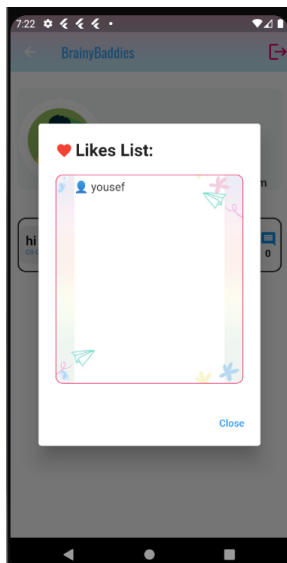
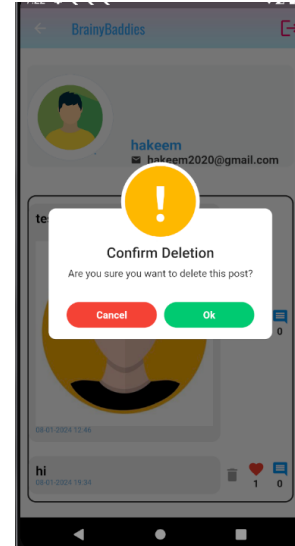


Parent edit profile

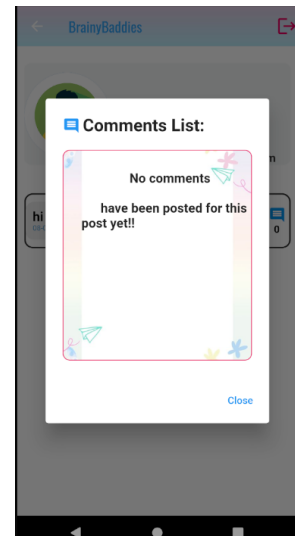
7. **Parent permissions:** The ability to view his children's pages and see what has been published along with a list of interactions and comments from other children, and also delete any of them.



Control child post



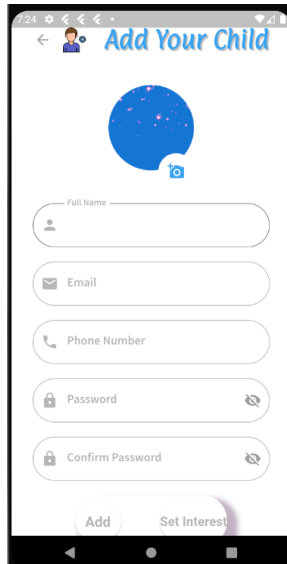
Likes List



Comments List

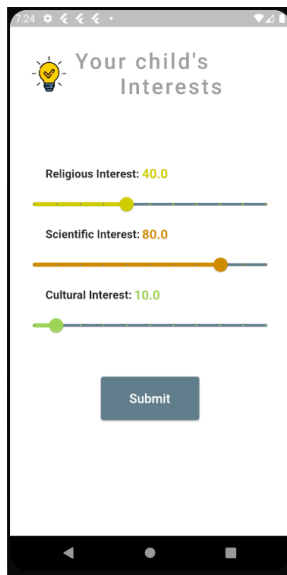
Figure 5.22: Parent permissions

8. **Add child Profile:**The process of registering a new account for the children does not take place individually. Rather, the father is responsible for entering their information from his account, meaning that there cannot be an account for the child without his children's accounts.



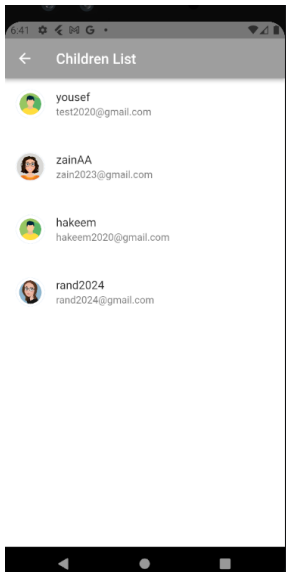
Add child Profile

9. **Set child interests:** Enter the percentage of the child's interests.

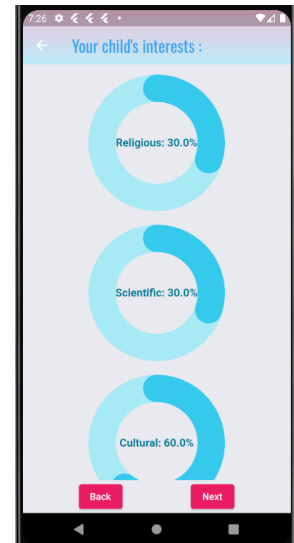


Set child interests

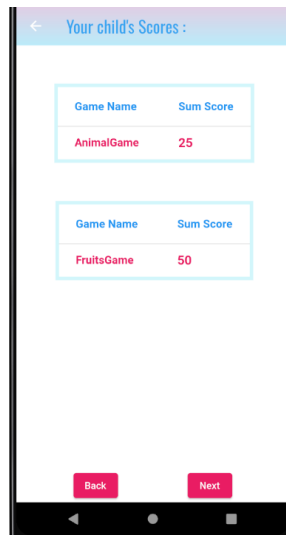
10. **Follow up on children:** The father can enter one of his children’s emails, see the percentage he entered before, and also see the tests he solved with the result for each one.



Child development



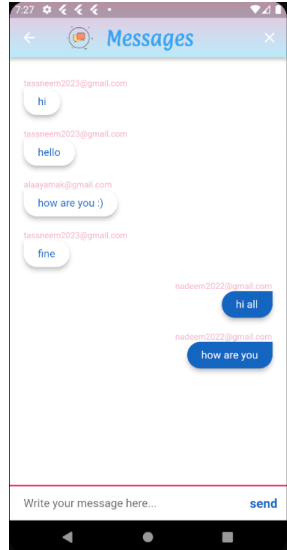
Child interests



Games Scores

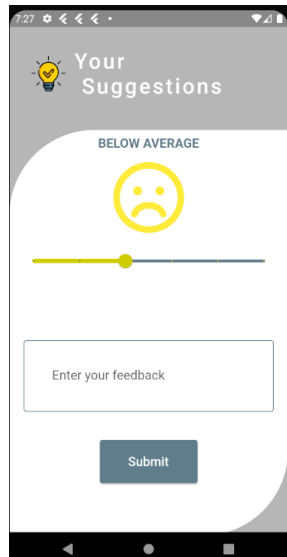
Figure 5.25: Follow up on children

11. **parent messages group (community chat)**: Due to the necessity of having a communication mechanism between users (parents and children) to exchange educational ideas and successful experiences, there must be Real Time Chat.



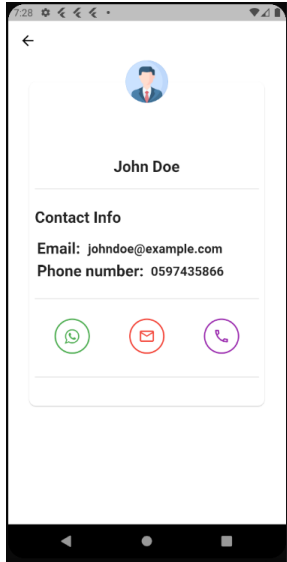
parent messages group

12. **parent feedback**: Feedback from parents to admins is very necessary, so our application has a suggestions box.

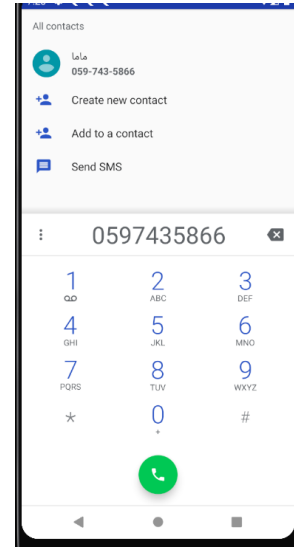


parent feedback

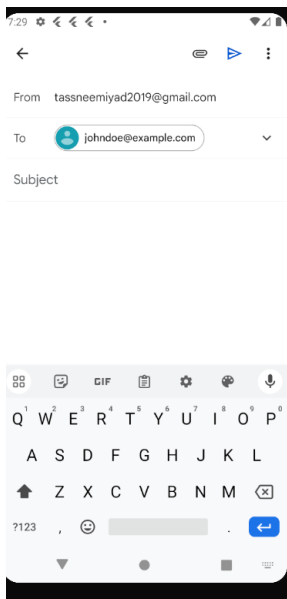
13. **Ways to Contact the admin:** To ensure the availability of many ways of communication between parents and administrators, the application also contains several options for exchanging suggestions, such as calling, sending an email, or even via WhatsApp.



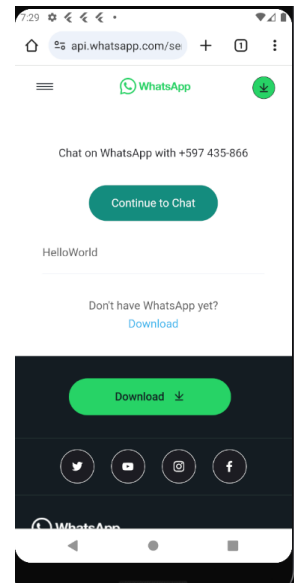
Contact with Admin



Phone and SMS



Gmail

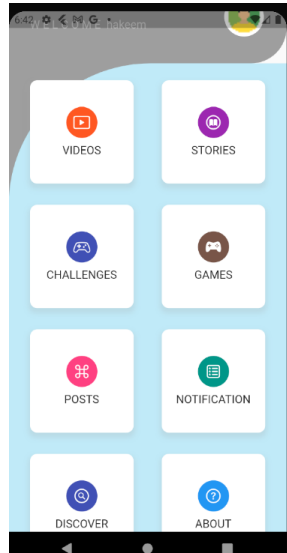


WhatsApp

Figure 5.28: Ways to Contact the admin

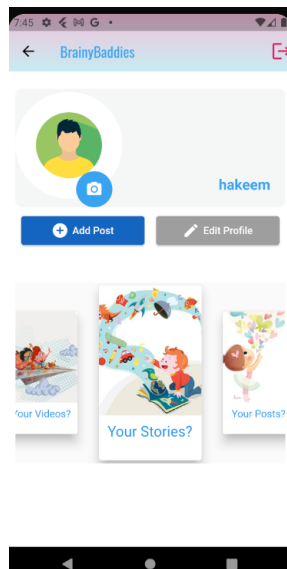
5.2.3 Child

1. **Child dashboard:** Home screen for the child, it is displayed after logging in and checking the email and password as belonging to the child from Data Piece. It is very easy to use, especially because it is for children. It contains boxes and each box is responsible for something different.



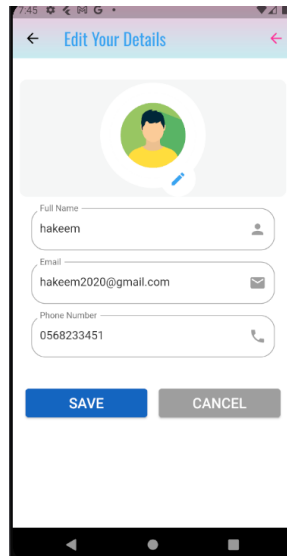
Child dashboard

2. **Child profile:** Every child certainly has his own personal page, and this is the beginning, through which he chooses what he will publish, or if he wants to modify his information.



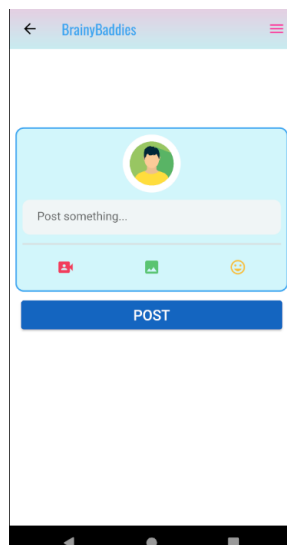
Child profile

3. **Edit child profile:** Modify his personal data.



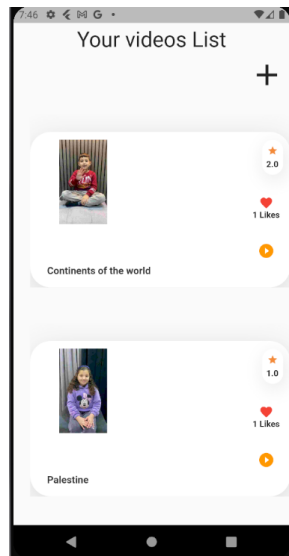
Edit child profile

4. **Child add Post:** Share a text post or image on the page.



Child add Post

- 5. **Child Video list:** A list of the child's videos that he has previously posted, on the right, the likes and rating are shown.



Child Video list

- 6. **Video details:** See the video details, and its description.

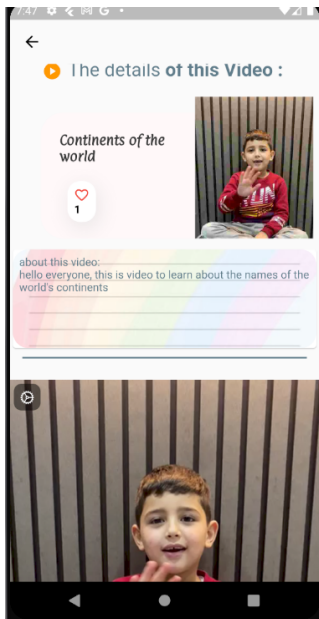
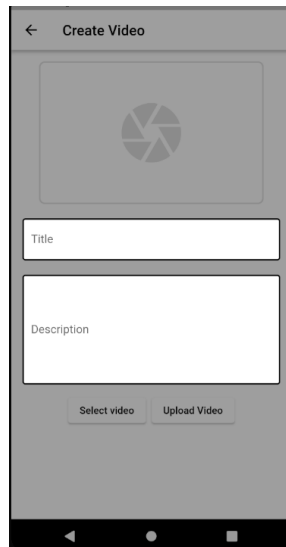


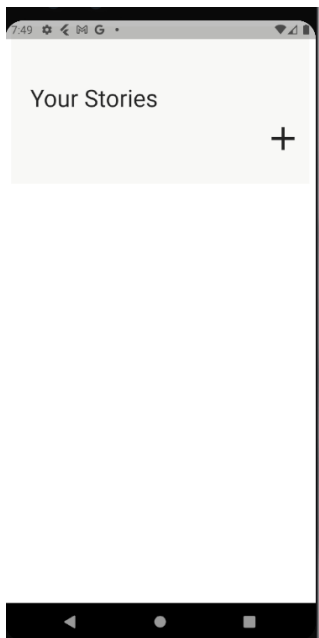
Figure 5.34: Video details

7. **Child create video:** It can create and add new videos by uploading them easily.

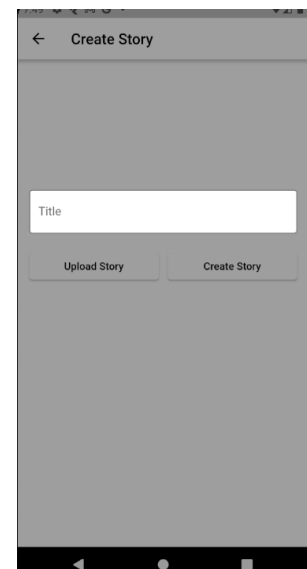


Child create video

8. **Child Story:** In the same way, download PDF files Note that it is written by hand, then converted to a PDF file and uploaded so that the rest of the children can read and interact with it.



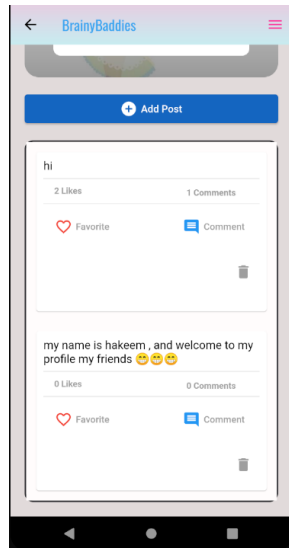
Child Story list



Child create story

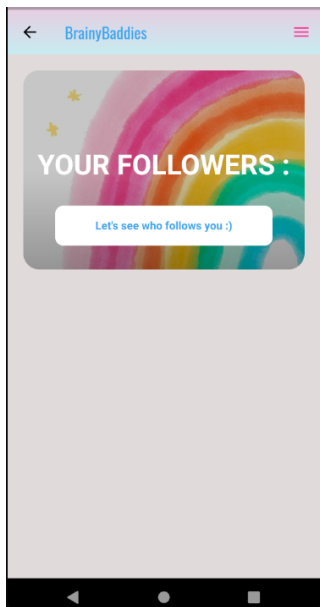
Figure 5.36: Child Story

9. **Child Posts list:** The ability to see his posts and interactions, delete them or publish a new post.

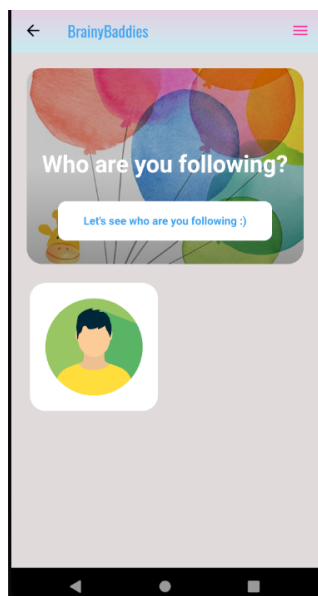


Child Posts list

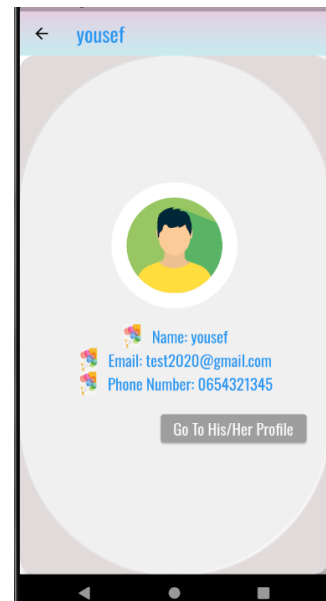
10. **log in:** See the people the child follows, and follow him, with the ability to browse their pages, see all their content, and interact with him.



Followers List

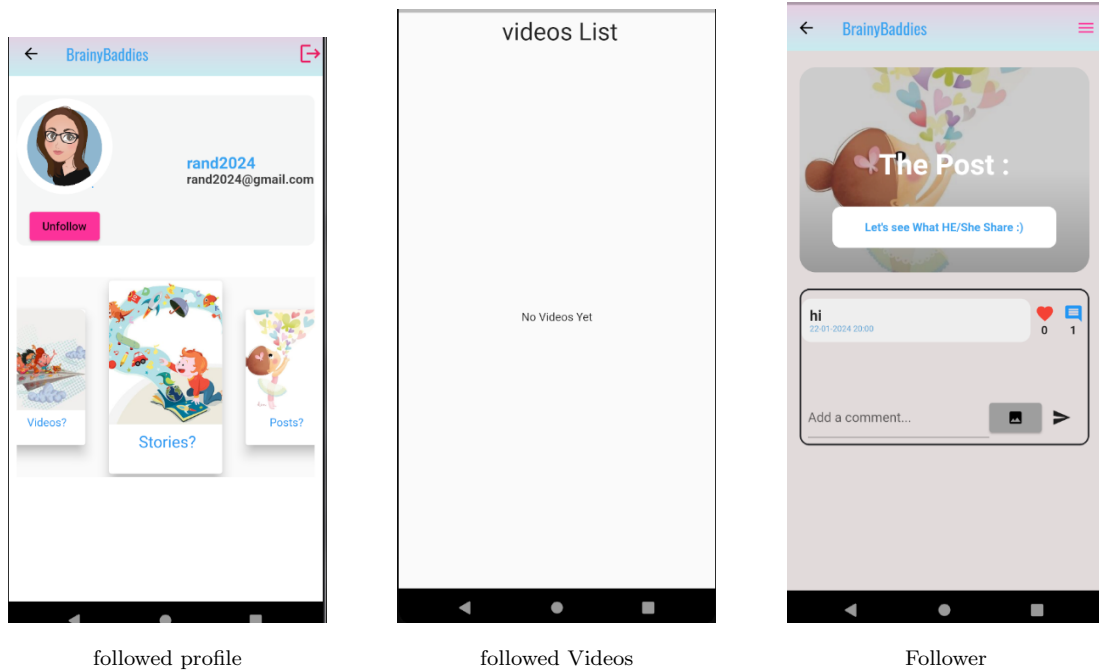


Following List



followed details

Figure 5.38: Follower/followed posts, Add likes & Comments



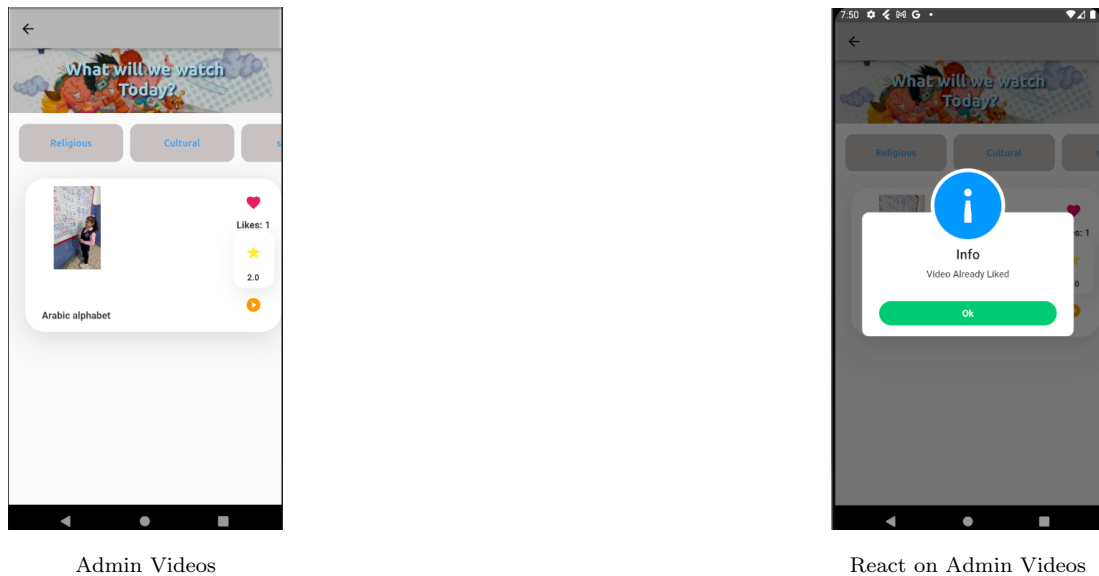
followed profile

followed Videos

Follower

Figure 5.39: Follower/followed posts, Add likes & Comments

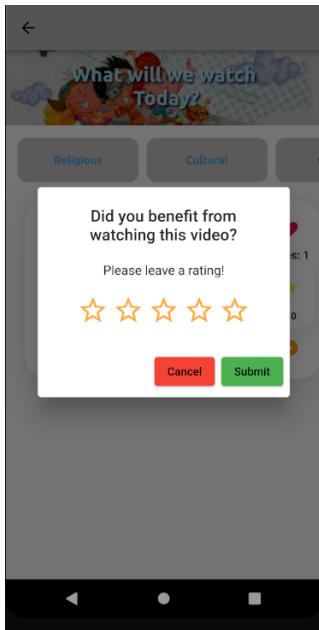
11. **Admin Videos:** All children in the application watch the videos that the admin has published according to the category he desires and read his details or the topic he is talking about. As well as giving a like and a rating.



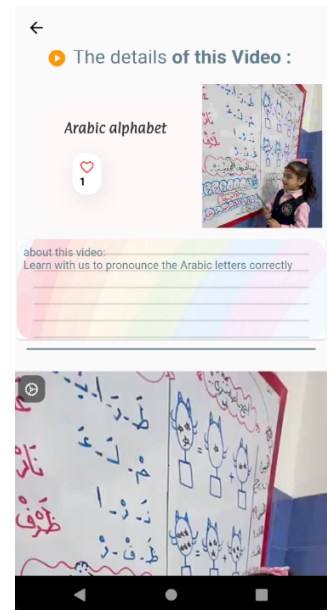
Admin Videos

React on Admin Videos

Figure 5.40: Admin Videos



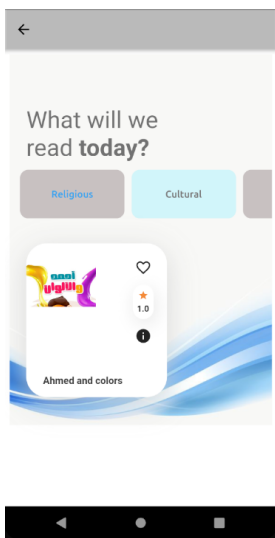
Rate Admin Videos



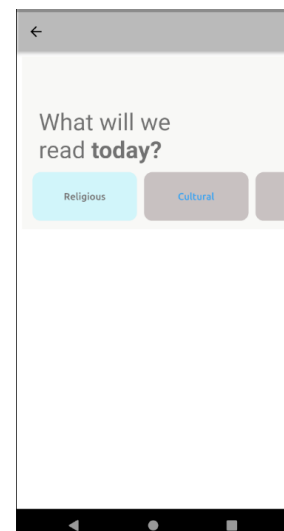
Admin Videos Details

Figure 5.41: Admin Videos

12. **Admin Stories:** In addition to choosing the genre he wants to read, then choosing the story, then reading it and benefiting from it!.



Admin Stories



Stories categories



Show Admin Stories

Figure 5.43: Admin Stories

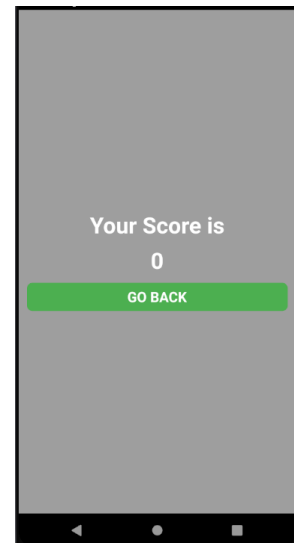
13. **Admin Quizzes:** Another feature that helps the child a lot is the presence of tests that he can answer and later evaluate himself using the score.



Admin Quizzes



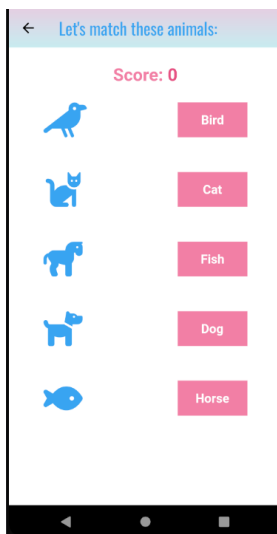
Show Admin Quizzes



Quizzes scores

Figure 5.44: Admin Quizzes

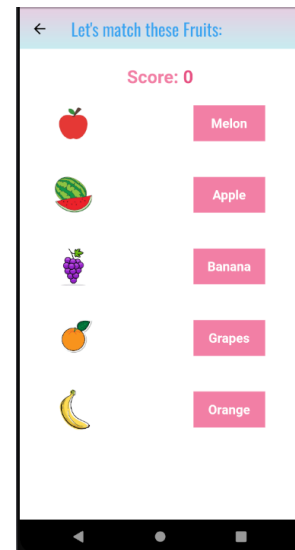
14. **Admin Games:** Finally, he can play in a simple, educational way that implants in his imagination what he has seen.



Admin Games



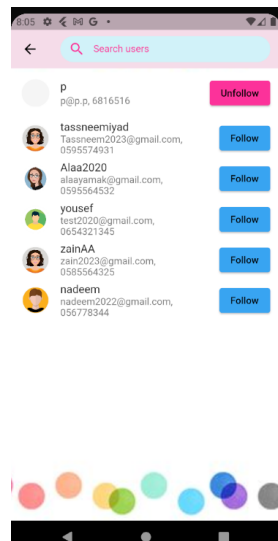
Games scores



Admin Games

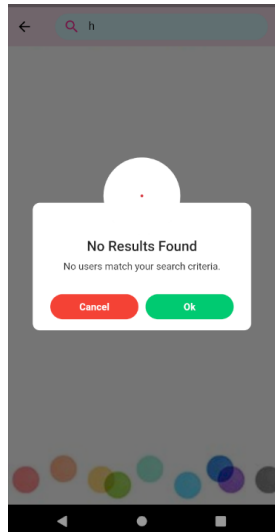
Figure 5.45: Admin Games

15. **Follow/ unfollow users:** The follow and unfollow screen. The basic idea of the application is learning through peers. Therefore, the child must follow other children so that he can see and interact with what they post.



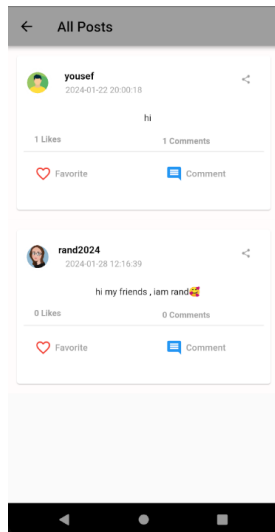
Follow/ unfollow users

16. **Discover and search:** Find anyone who uses the app.



Discover and search

17. **Display all posts:** Show all posts for all users.



Posts List

18. **Notification:** This aspect also includes the topic of notifications, which were created using Socket.IO. These notifications appear for the child in the event that the administrator adds any content or if the child themselves adds or modifies their content. These notifications are displayed on the welcome screen and continue to be visible during the program's operation.

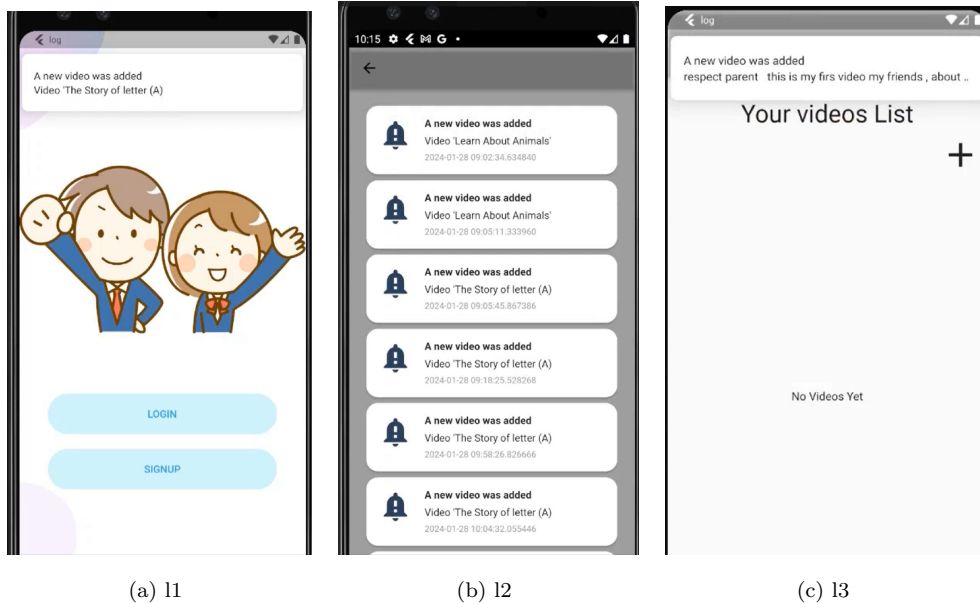
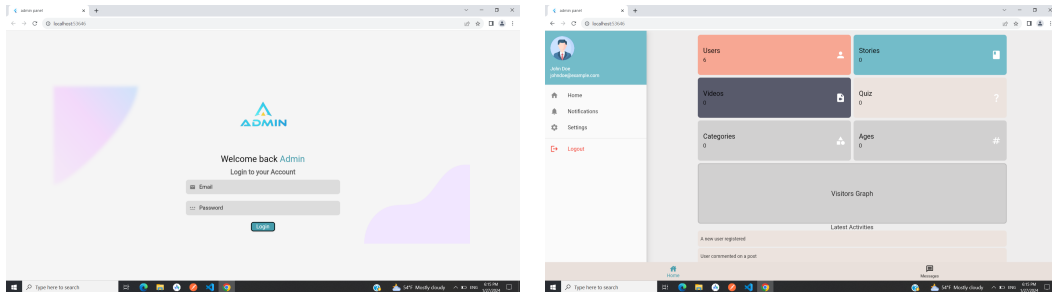


Figure 5.49: Notifications

5.3 Web Application

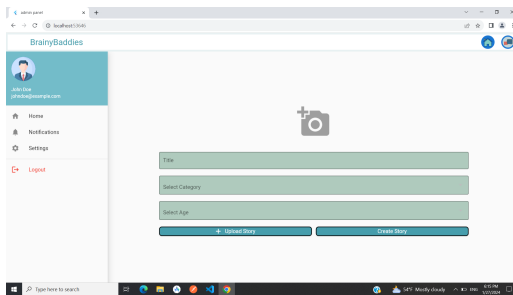
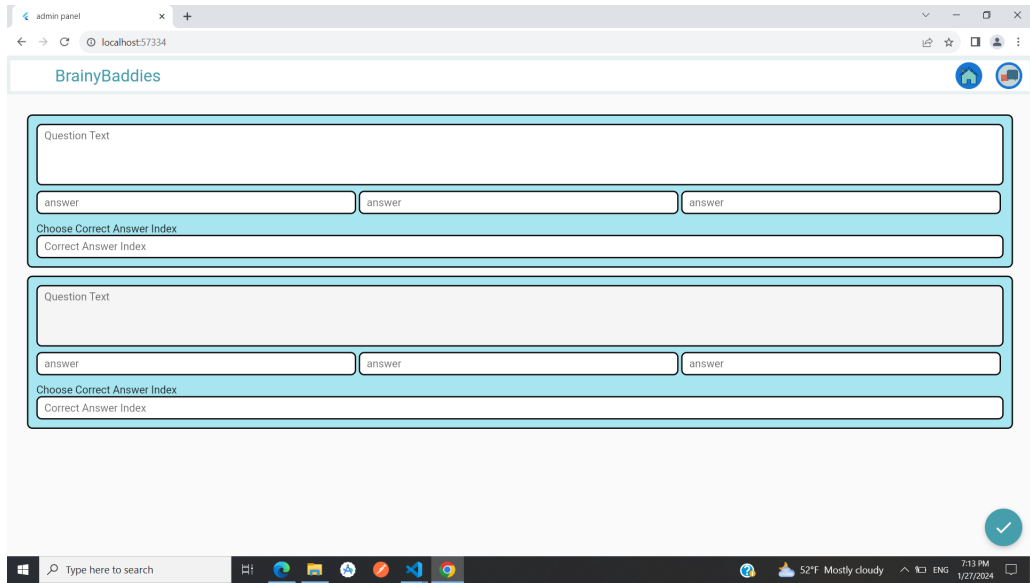
5.3.1 Admin



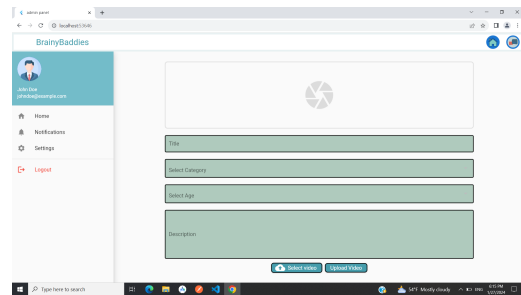
(a) 11

(b) 12

Figure 5.50: Admin sign-in / Dashboard - web



(a)



(b)

Figure 5.51: Admin Create Content -web

5.3.2 Parent

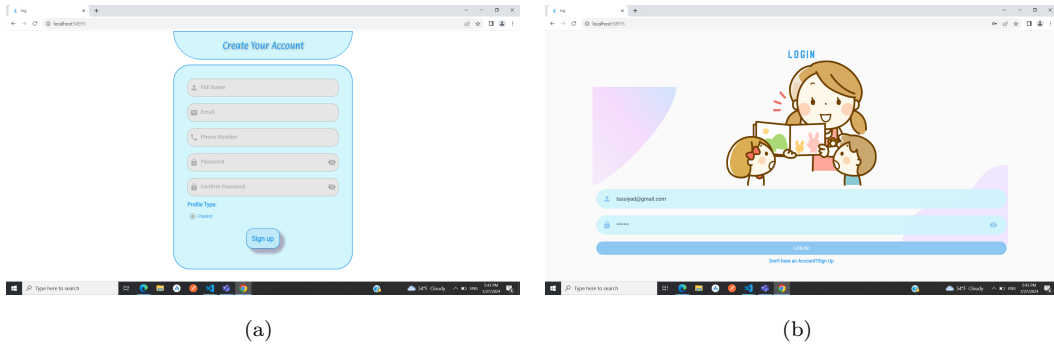


Figure 5.52: Sign up /sign in -web

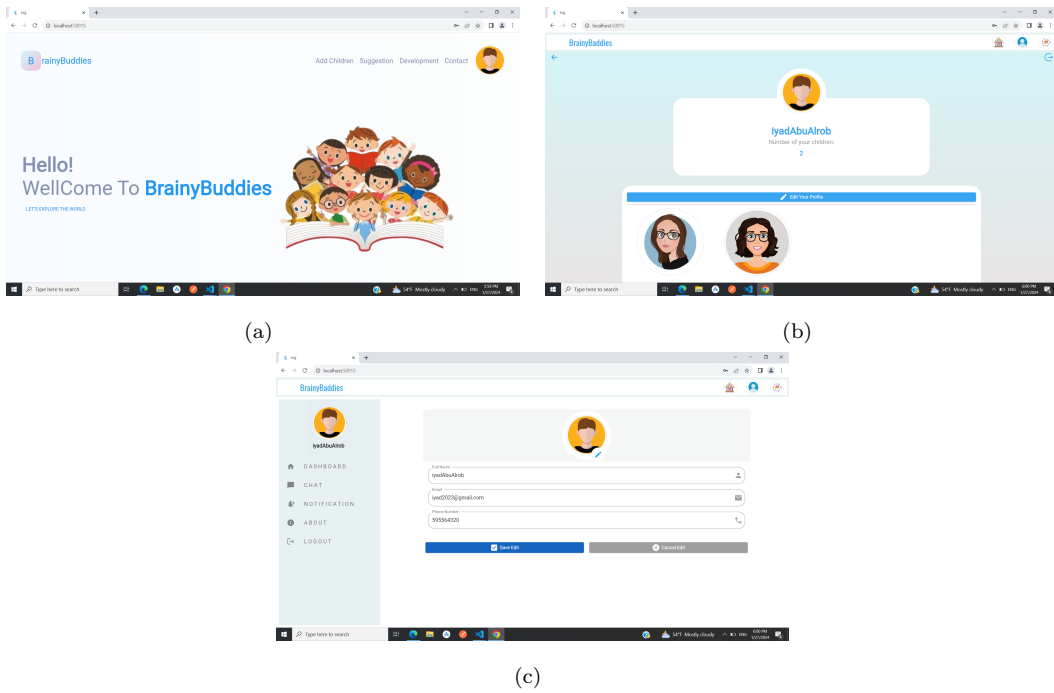
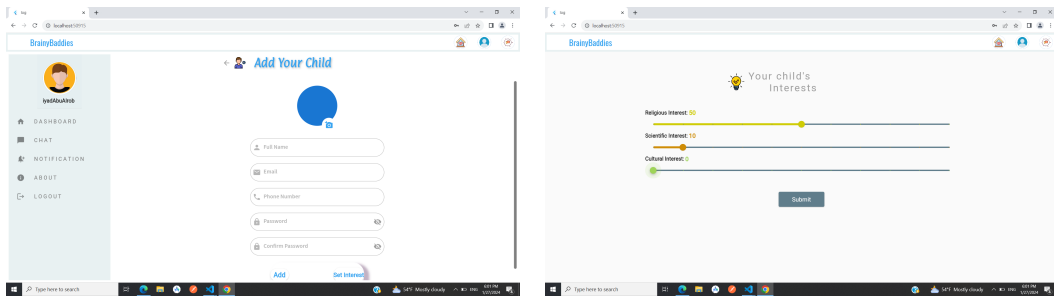


Figure 5.53: Main page / parent profile

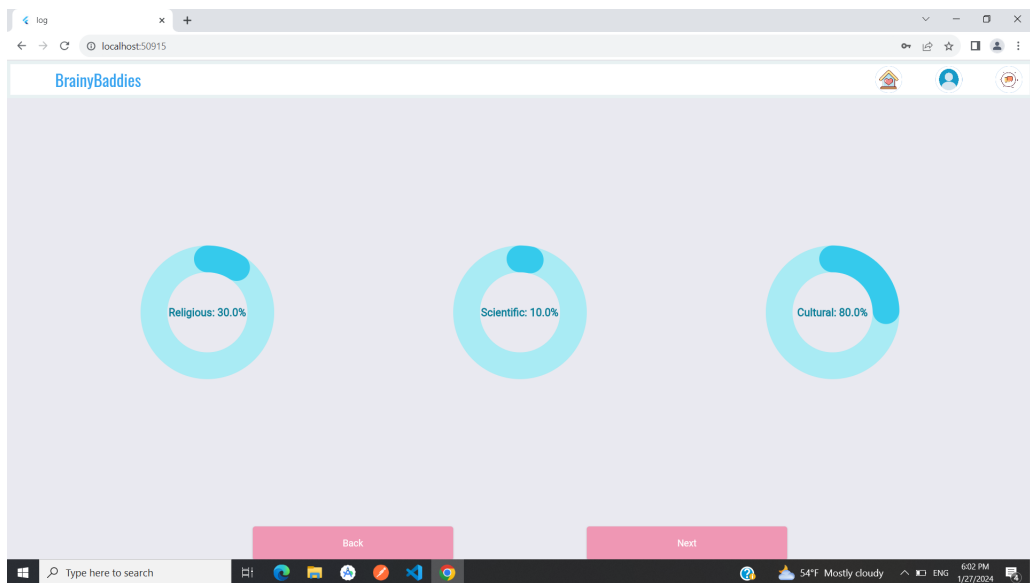
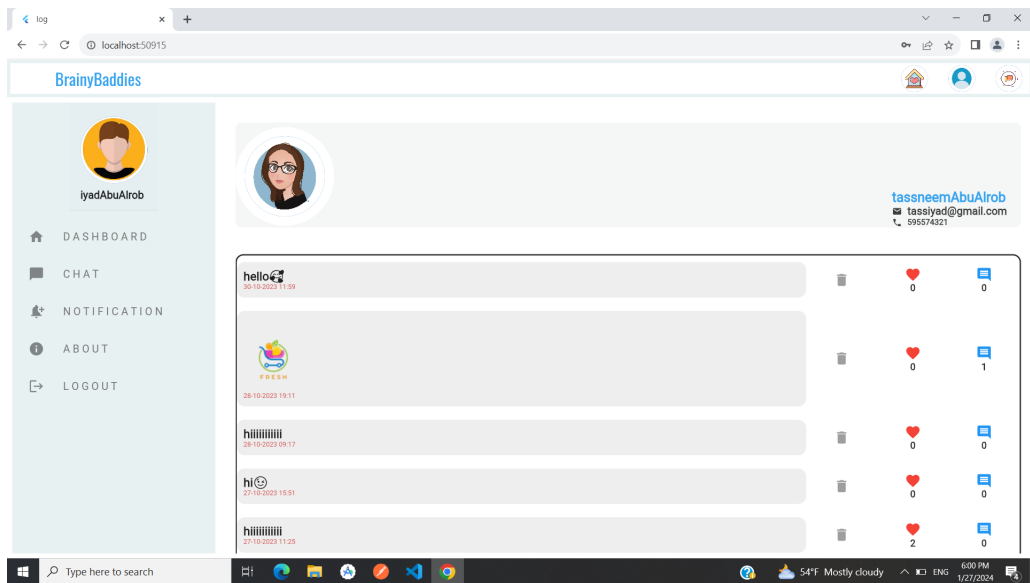
5.3.3 Child



(a)

(b)

Figure 5.54: Add Child, Set Interests



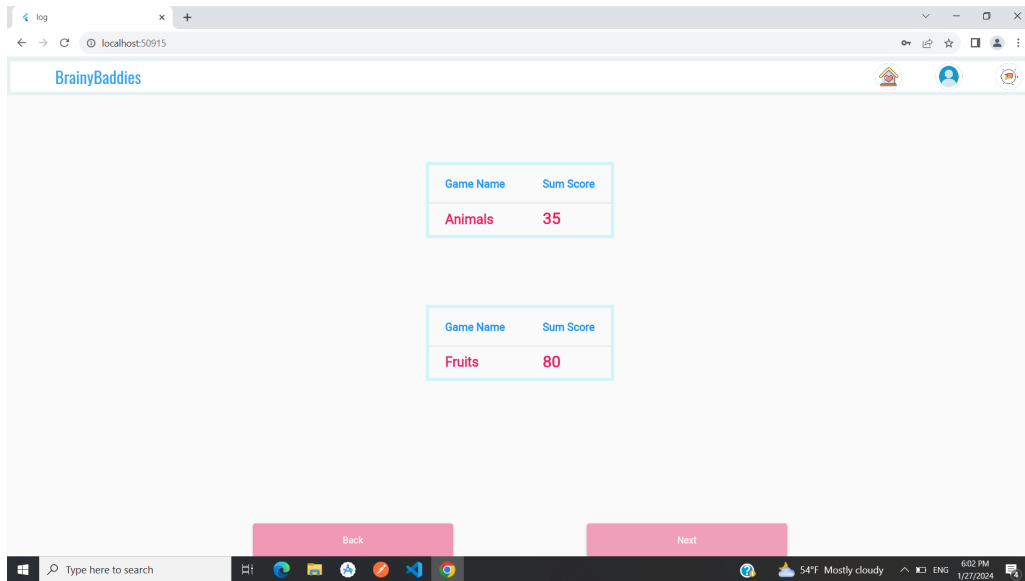


Figure 5.55: Control child posts and development

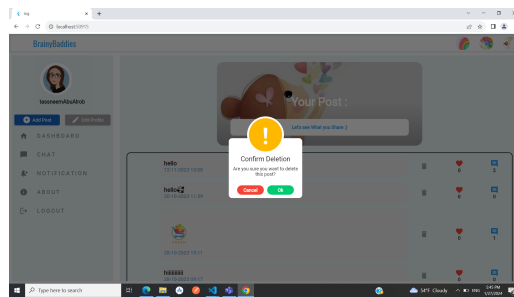
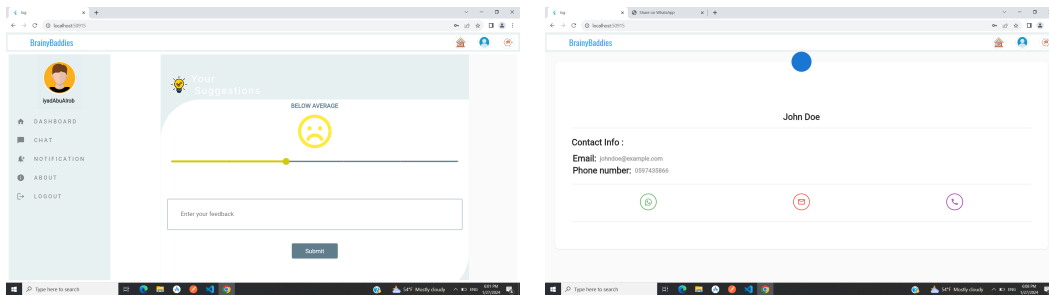


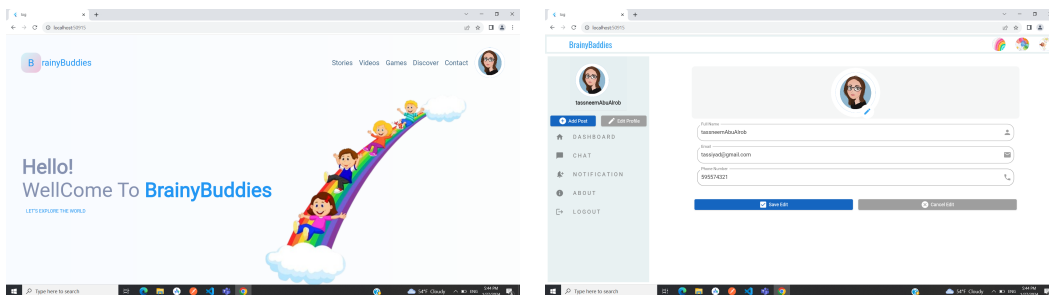
Figure 5.56: Control child posts and development



(a)

(b)

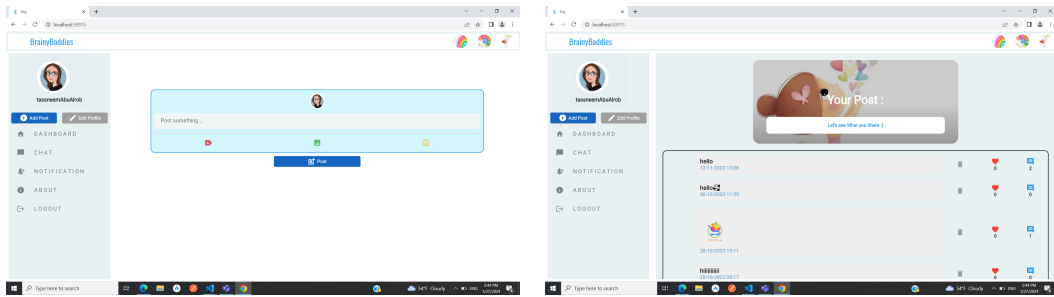
Figure 5.57: Contact Admin and Feedback



(a)

(b)

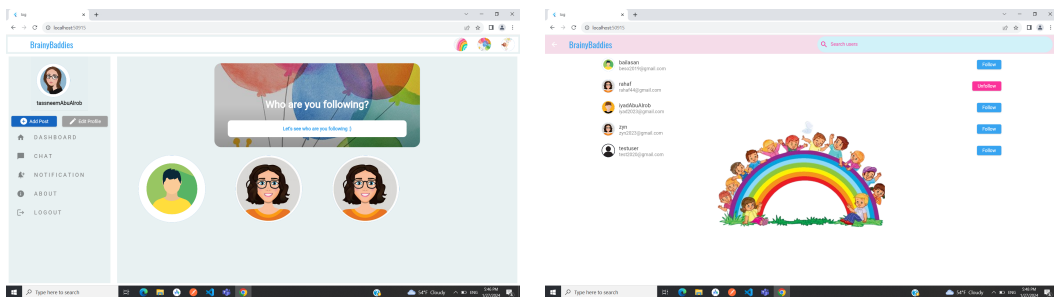
Figure 5.58: Main child page and profile



(a)

(b)

Figure 5.59: Control posts -web



(a)

(b)

Figure 5.60: Children Network -web

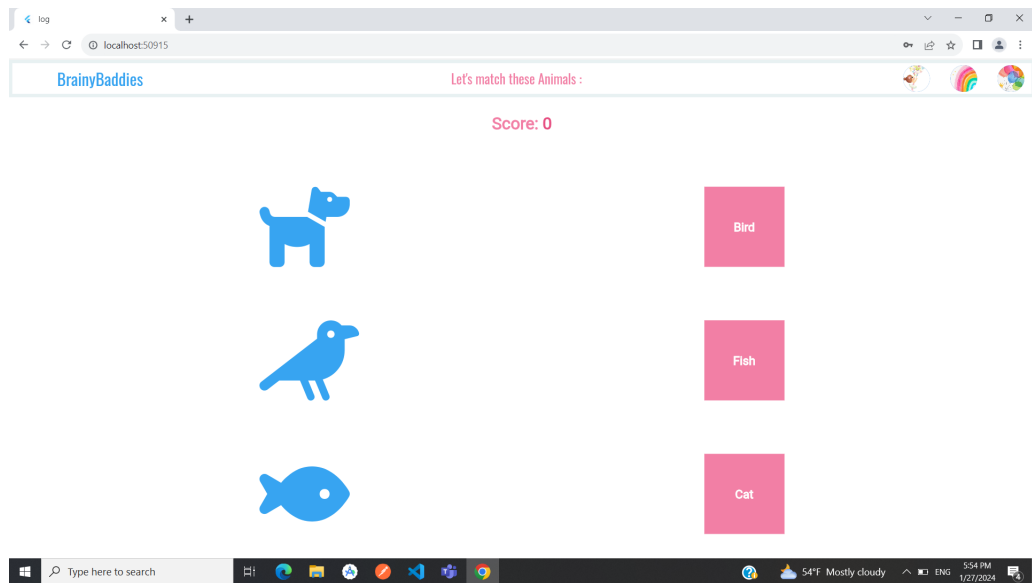


Figure 5.61: Games

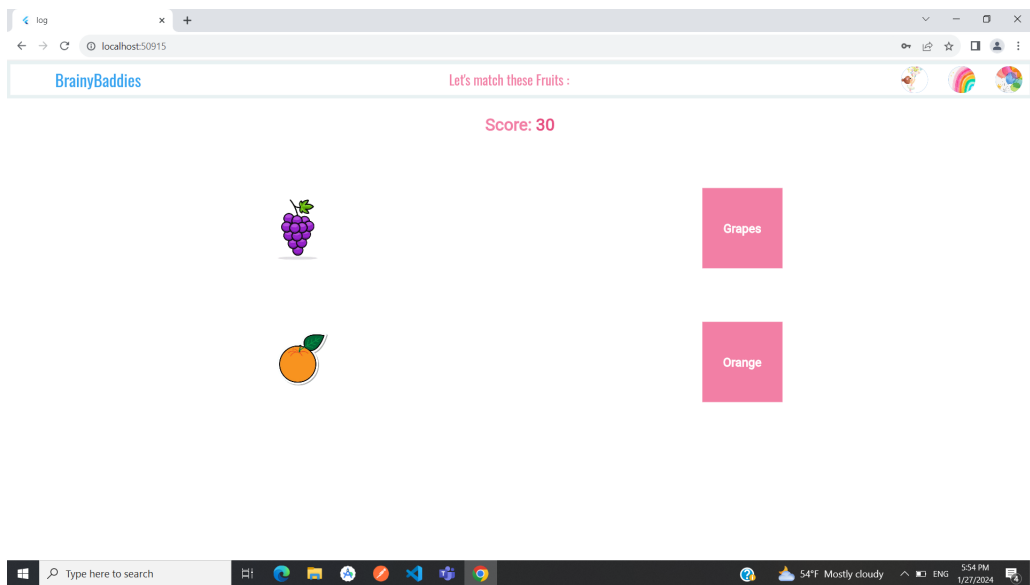


Figure 5.62: Games

Chapter 6

Conclusions and Recommendations

In this section we are going to show the conclusion summary and Future work in our project.

6.1 Summary

Brainy Buddies is an application for children and their families, based primarily on the idea of peer education, meaning that the child learns from his generation, and this is what was indicated by many of the studies mentioned above. The need for it came from the necessity of involving the child in social networking sites due to the era in which we live, but with controls and oversight that are appropriate to the culture, thought, and beliefs of the parents.

6.2 Future Works

- 1- Show the content to the child based on the interest rate entered by the father.
- 2- Social rooms for children to discuss some matters directly.
- 3- Show a list of suggestions for children who share the same interests, to facilitate the learning process among them.
- 4-Developing content and adding comments to include audio recording.

References

- [1] Muztaba Fuad and Monika Akbar. “Effect of Peer Influence and Self-Reflection on Scaffolded Out-of-Class Activity Administered Using a Mobile Application”. In: *education sciences* (2022). URL: <https://www.mdpi.com/2227-7102/12/12/863>.
- [2] Ana Raquel CARVALHO. “Developing peer mentors’ collaborative and metacognitive skills with a technology-enhanced peer learning program”. In: *science Direct* (December 2022). URL: <https://www.sciencedirect.com/science/article/pii/S2666557321000410>.
- [3] “Redefining peer learning: Role of student entrepreneurs in teaching entrepreneurship in the UK higher education context ”. In: *Sage Journals Home* (April 26, 2021). URL: <https://journals.sagepub.com/doi/full/10.1177/09504222211012634>.