Umm Al-Qura University
Collage of Computing
Computer Science and
Artificial Intelligence department

Advanced Programming
2nd Semester 2023-2024
Course Project

LearnChinese

Project Number

Budur Abdulaziz Alghamdi (Leader) – 442006027
Noran Mousa Almughamisi – 443009662
Wejdan Alshareef - 441008079

Advanced Programming Course

Instructor: Dr. Shaimaa Bajoudah

2023- 2024

1- Project Title

LearnChinese

2- Project Idea and Project Aims

The program aims to create an engaging and interactive learning environment for individuals interested in learning Chinese language. By incorporating user-friendly interfaces and a comprehensive set of features, the program aims to facilitate effective language learning and provide the necessary support to learners throughout their journey while Achieving Vision 2030.

3- Project Functionalities

- Learn Section:
  The primary function of the app is to offer an interactive and educational Learn section.

- Test by 3 Levels (Easy, Middle, Hard) Section:
  The app incorporates a testing feature with three difficulty levels: easy, middle, and hard. Each level provides a tailored challenge to accommodate users at various skill levels.

- Rating the Experience:
  A crucial feedback feature allows users to rate their overall experience with the app.

4- Project Design and Implementation

A.Graphical User Interface

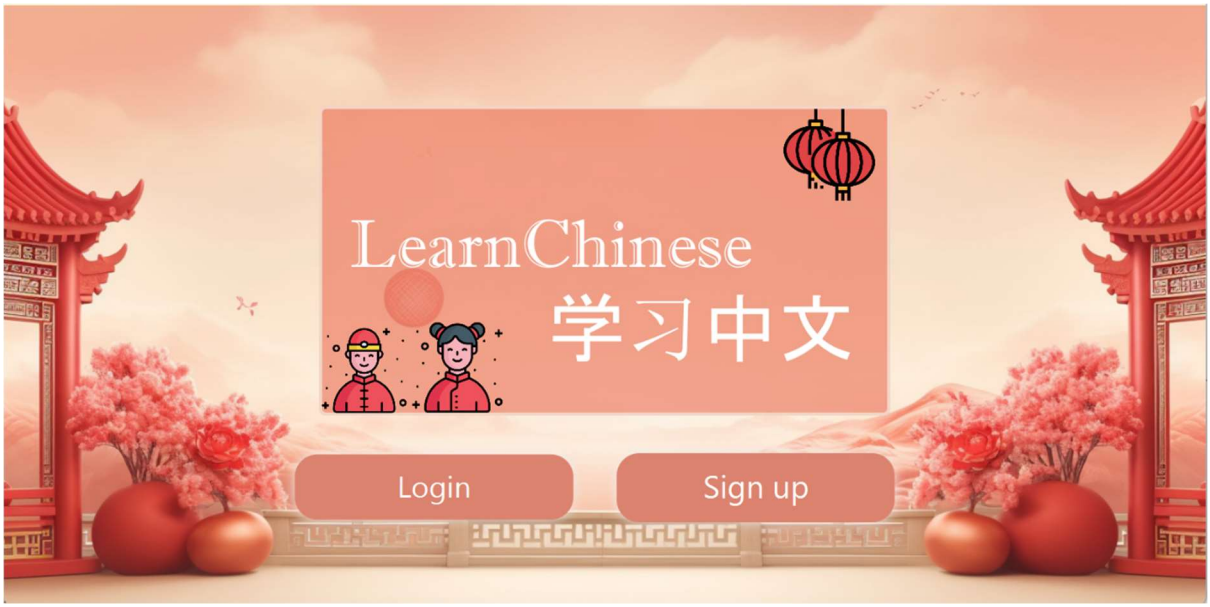
Write paragraph(s) that answers all the following questions:

What have been designed? How many interfaces? (add screen shots).

Explain in detail the usage flow of your application.

First the user chooses between login or sign up if he\she choose to sign up the application will move it to the sign-up scene and there the user can register his information then go to login to start, after the user have been successfully registered, he\she can choose from our services (learn, test, rating, log out). If the user choose to learn than e\she will go to the learn section which contains many useful words that are written in English, Chinese and have picture that explain the word and an audio of how to say the word. After the user finish learning he\she now can test his\her self by going to the Test section and choose which level he\she want (Easy, Middle, Difficult). The Easy level have 5 questions and every question have a picture of the word, The word in English and 3 chooses that the user can choose the right answer from. Then the user can go to the middle level that have 3 questions and every question have the word in English and an audio of the word, the user will decide if the word match the sound or not by choosing true of false. The difficult level has 3 Question and every question have the word in Chinese and the user should be able to write what is the word in English. Afte finishing all these questions there will be a congratulations massage and the user will see his\her score. In the end there is a rating and feedback scene that will make the user rate his\her experience and add comments.

1- The start scene makes the user to login or sign up

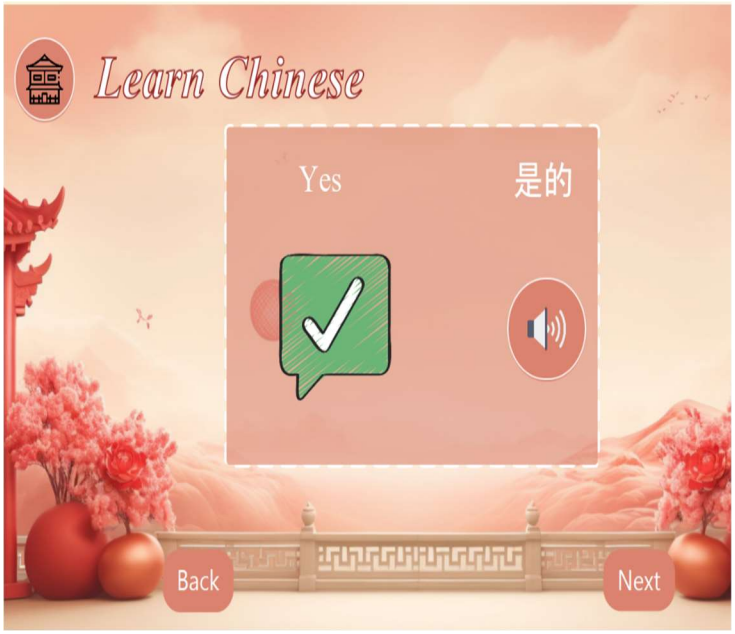


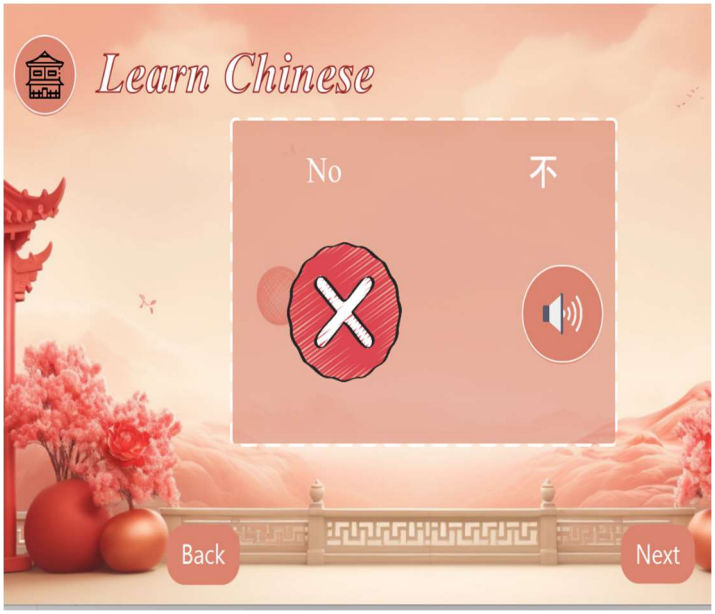
2- The sign-up page

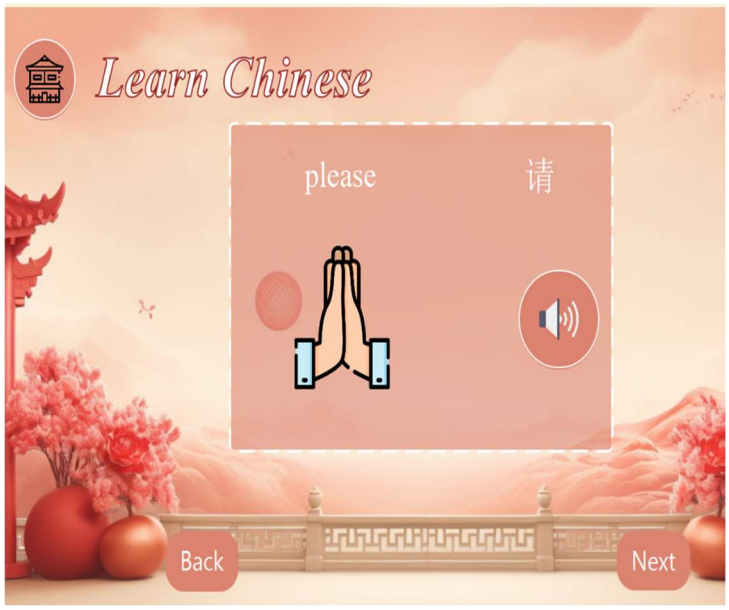
3- The login page

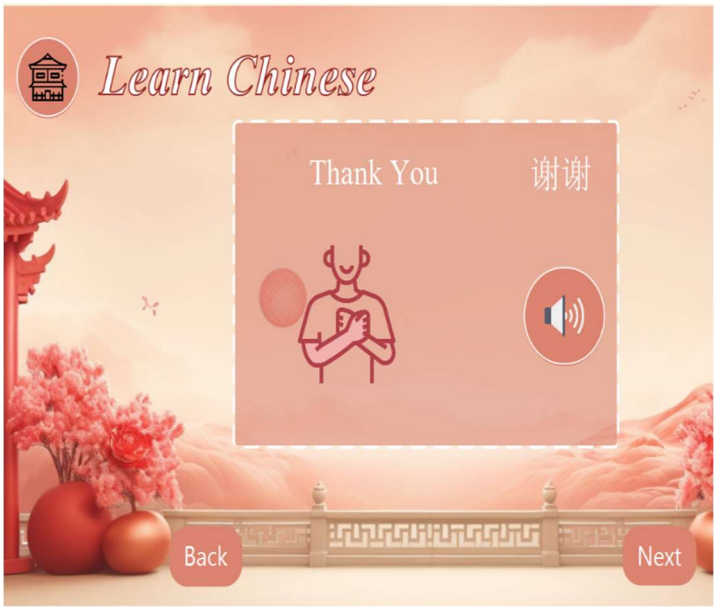
4-The home page the user choose what service he\she want

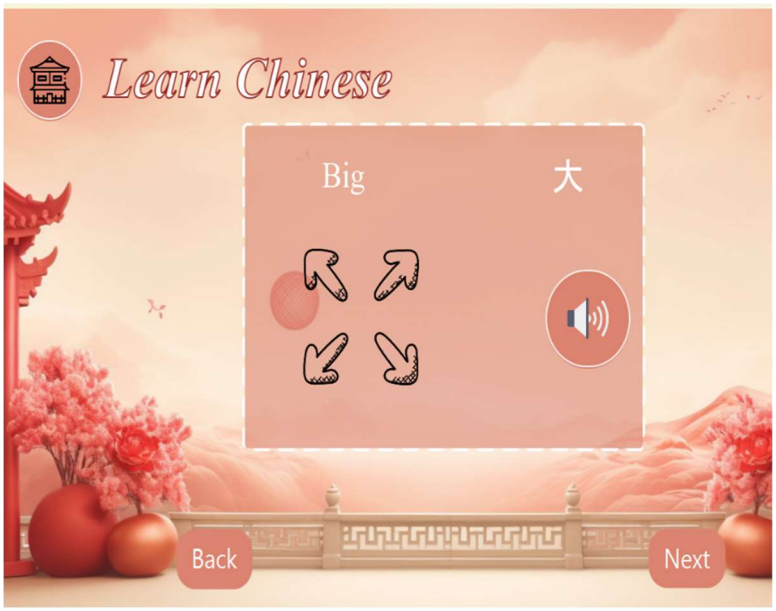
5- Words in the learn section








Learn Chinese
Thank You
谢谢
Back
Next


Learn Chinese
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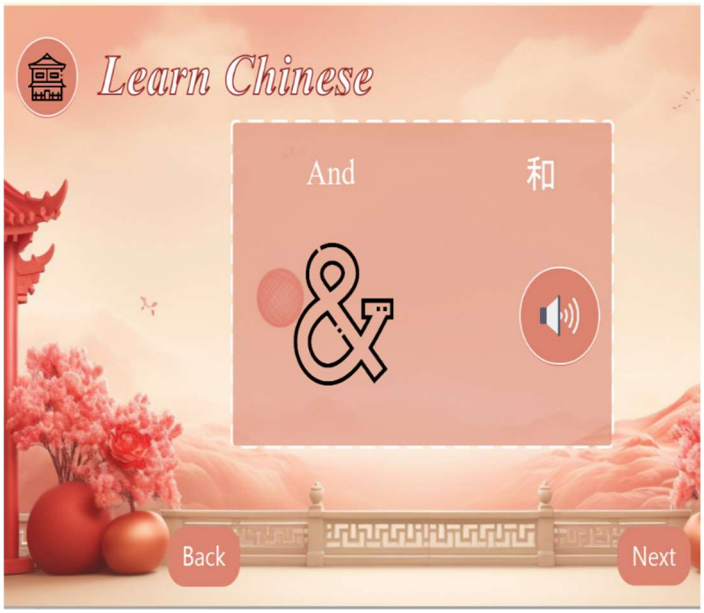
Learn Chinese
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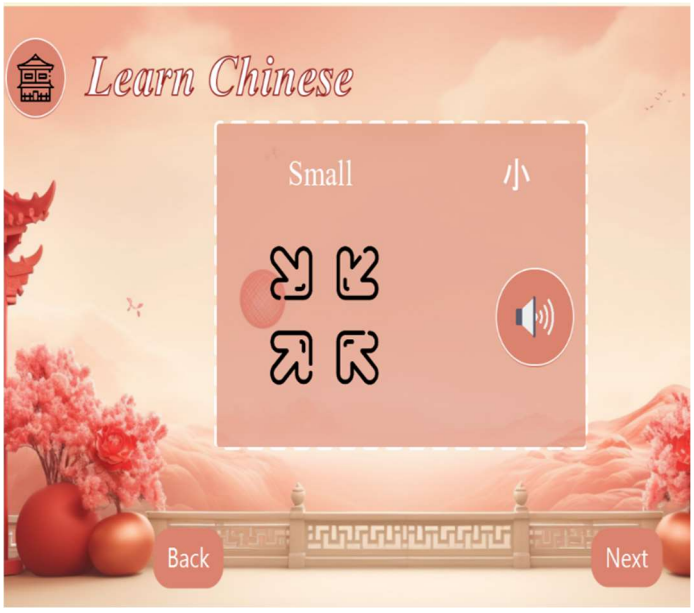
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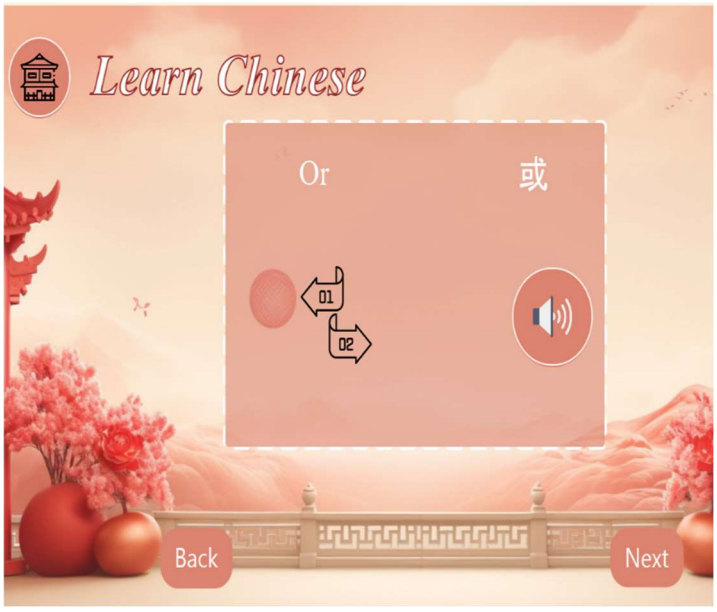
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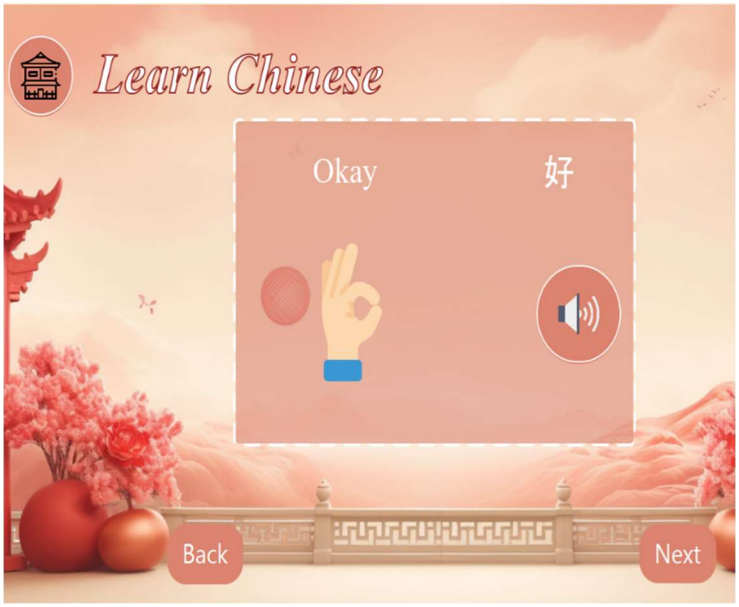
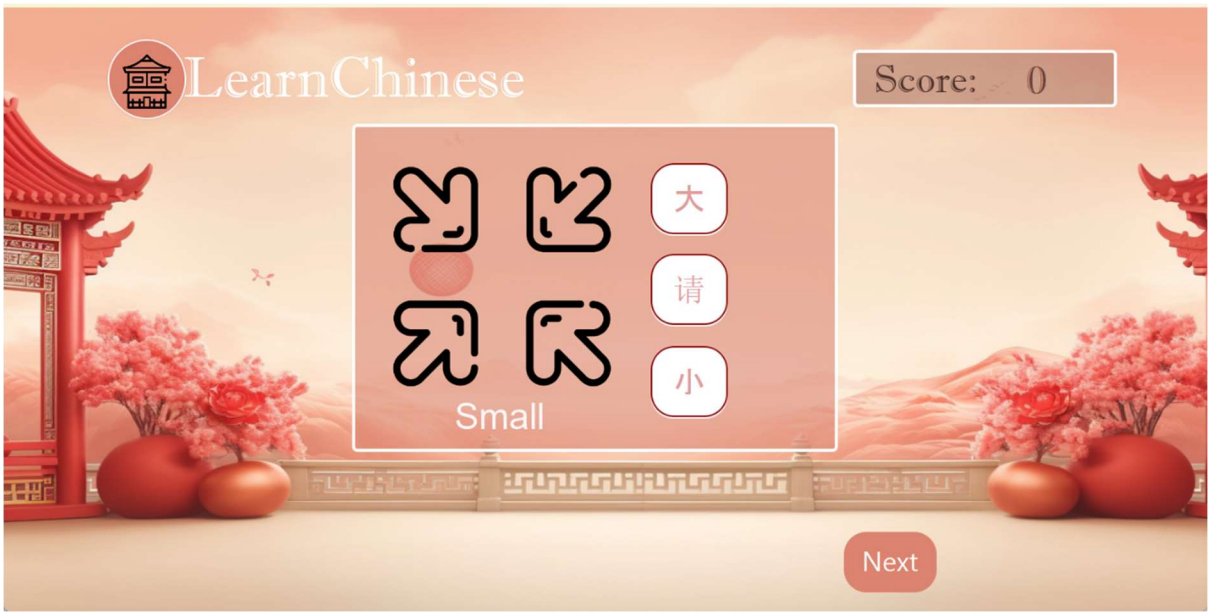
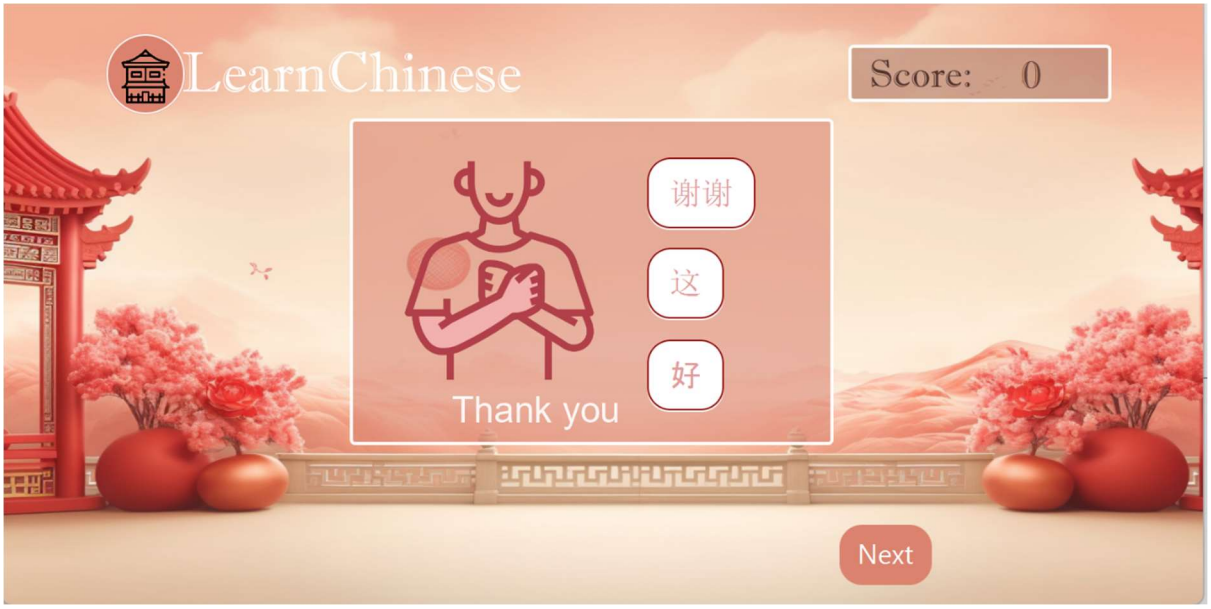

Learn Chinese
Okay
好
Back
Next

Learn Chinese
Goodbye
再见
Back

6-The test section have 3 levels

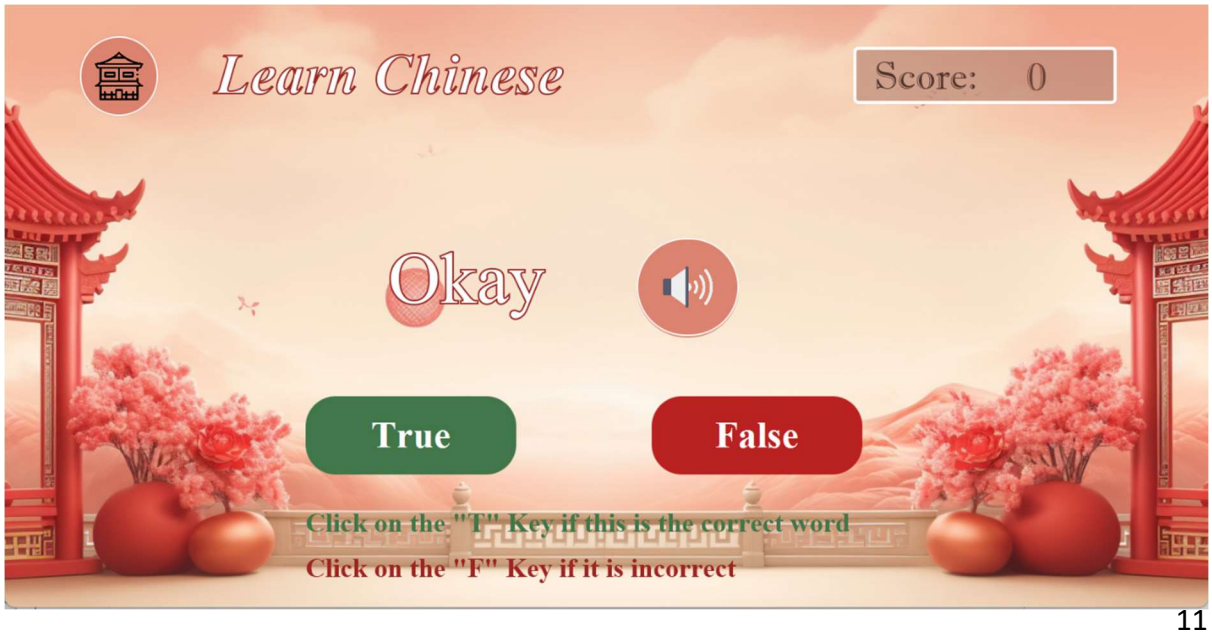
7- Easy level


LearnChinese
Score: 0
大
请
小
Small
Next

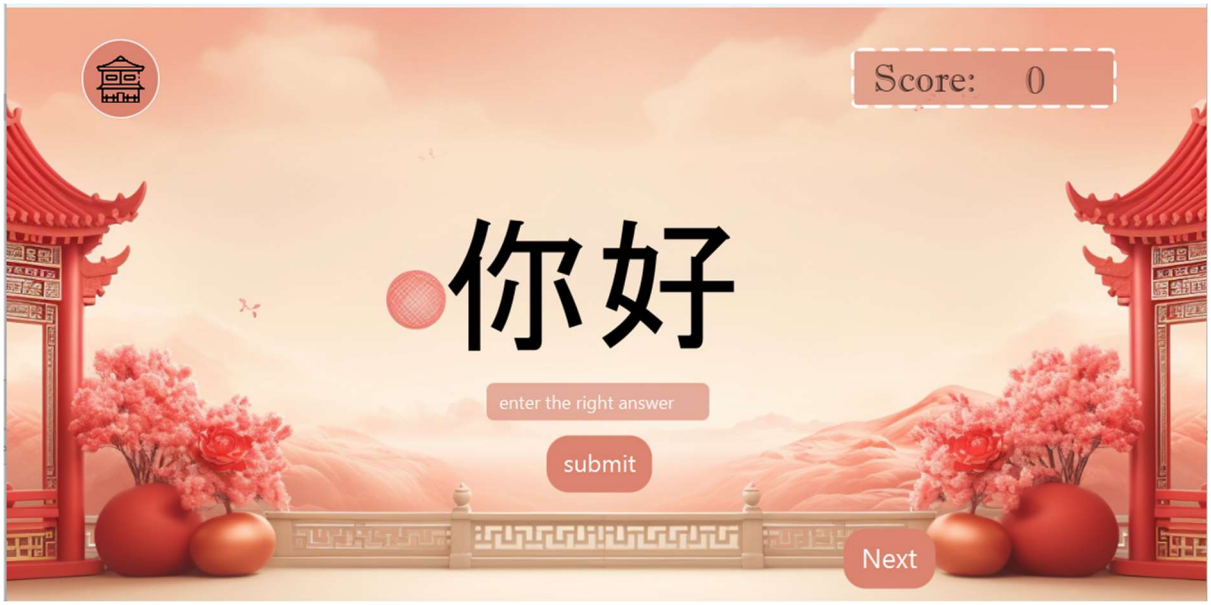

LearnChinese
Score: 0
谢谢
这
好
Thank you
Next

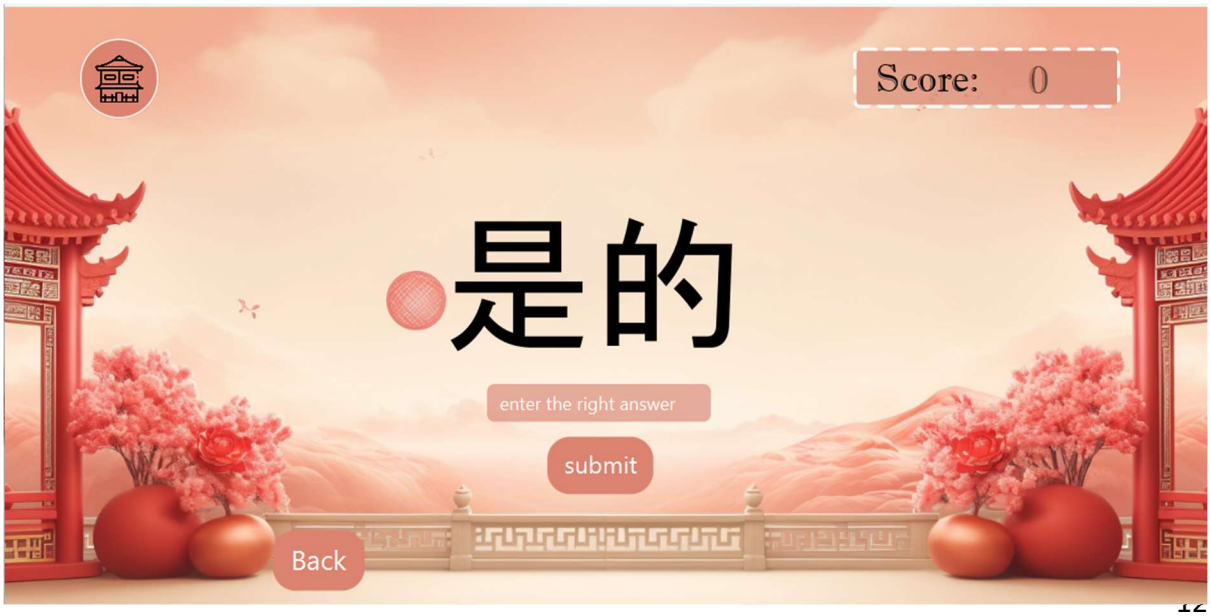
LearnChinese
Score: 0
再见
请
好
Please
Next

8- Middle level

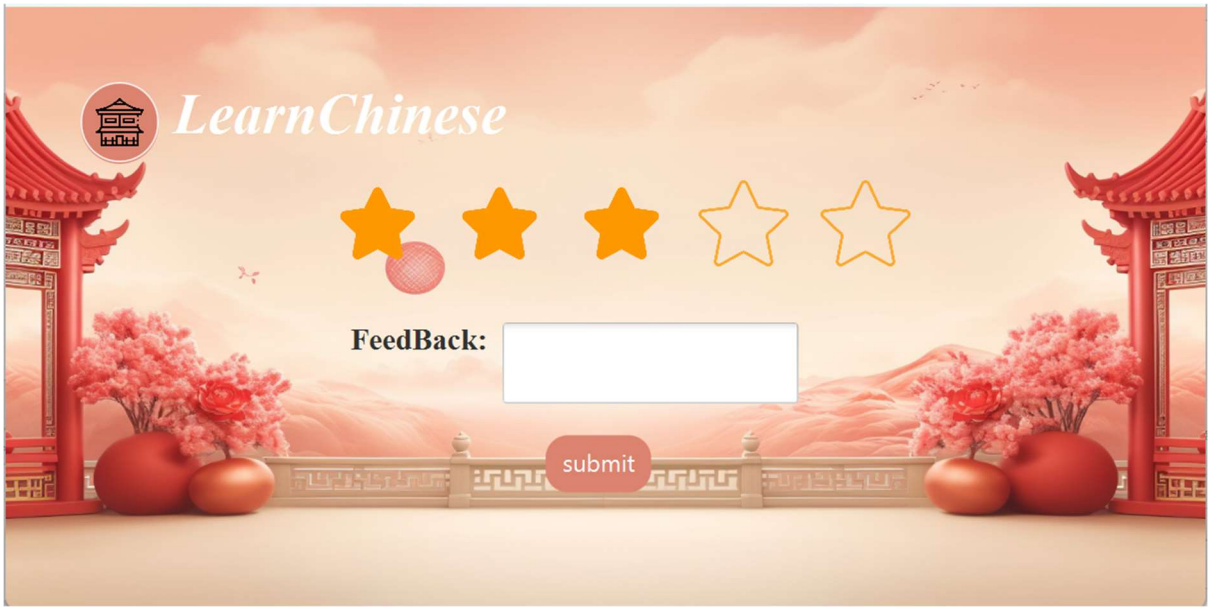


9-Difficult level





10-Rating page



11-Congratulations message Scene

B. Event-Driven Programming

Write paragraph(s) that answers all the following questions.

How many events?

102

What types of events have been implemented in your application?

Action, Keyboard, MousePressed , Binding

Mention and explain all the event sources in your application.

Buttons

C. Java Database Programming

Write paragraph(s) that answers all the following questions.

How many tables?

3, Which are User ,Test ,Feedback

What are the columns?

1. User Table: User ID(PK), Username, Password,DOB,Email,Gender
2. Test Table: userId, gameId, gameLevel, score.
3.Feedback Table: FeedbackID(PK), UserID(FK), Score,Comments.

D. Extra

Write paragraph(s) that answer all the following questions.

If you did any extra work, explain what is it? Why you did it? How is it related to your application?

Using Multimedia (Audio), to enhance the learning experience for users. To clarify the pronunciation of the Chinese language and learn it correctly

5- The distribution of the work

In this section, mention the distribution of the work between the team. Be honest and feel free to show your tasks individually.

Member	Task(s)
1- Budur Abdulaziz Alghamdi	1- Registration scene 2- Login scene 3- middle level test scenes 4- User data base 5- Modify and Assembling the program
2- Noran Mousa Almughamisi	1- The start scene 2- Home scene 3- Learn section scenes 4- Easy level Test scenes 5- Congratulations scene 6- Feedback data base
3- Wejdan Alshareef	1- Test level scene 2- Test difficult level scenes 3- rating scene 4- Test data base

6- What we learnt

Write paragraph(s) that answers the following questions.

What have you learned from the project?

Through this project, we've learned a multitude of skills encompassing graphical user interface (GUI) design, event-driven programming, and Java database programming.

What are the advantages you gained from designing this project?

Designing this project has provided us with several advantages. we've improved our skills in GUI design, event-driven programming and working with Java for database programming.

Did you feel the teamwork was very useful in programming project?

Yes, Collaborating with team members allowed for the pooling of diverse skills and perspectives.

Are you satisfied with your application? Yes, we are satisfied with the application.

Did you feel you will be able to work in a large-scale project later?

Absolutely. The project has provided a solid foundation for tackling large-scale projects.

7- Project difficulties

Write paragraph(s) that answers the following questions.

Mention any difficulties you have faced in this project if any (Resources difficulties, technical difficulties, programming difficulties or teamwork difficulties)

Honestly, we didn't face a lot of problems except that one of the team members was facing problems in the media, and we also faced several problems in connecting the data also using the image from the same package didn’t work.

8- Project Declaration

We confirm that the work of this project was solely undertaken by ourselves and that no help was provided from other sources as those allowed. As well as we confirm that we are completely aware of the violation consequences of the academic integrity.

Read and check the previous declaration.

List all your IDs

Budur Abdulaziz Alghamdi– 442006027

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