Learning Korean Alphabets With Mobile Game

Jay Moon
Stony Brook University
Stony Brook, New York, USA
myungsuk.moon@stonybrook.edu

NOTE: This is a two-persons group project but was ENTIRELY done by Jay Moon because Minhee Lee is very sick. Minhee will submit this project again after she completes the second-half of the project later. Please grade this version of the project as an INDIVIDUAL project for Jay Moon.

ABSTRACT

There are many ways to learn the alphabets of a new language, but they are always challenging and not fun. Playing a mobile game to learn the alphabets is always fun, but the games should be effective as a learning tool and still be enjoyable at the same time. This project tries to achieve this by writing a new mobile application that will help the users to learn Korean alphabets and pronunciation. The conclusion of this project will be added later when the second-half of this project is completed later by Minhee.

GROUP WORK DISTRIBUTION

Jay Moon
- Implemented the learning mode.
  - Created the fragment layout.
  - Implemented a button click that changes its color and displays an alphabet's pronunciation.
  - Implemented loading dataset into the buttons that will display Korean alphabets and their pronunciations.
  - Implemented a set of non-overlapping random numbers generator which is used to display random and unique Korean alphabets and pronunciations.
  - Implemented a reset button that refreshes the page with a new set of Korean alphabets.
- Partially implemented the game mode.
  - Created the fragment layout.
  - Implemented a button click that changes its color and increments the score counter.
  - Implemented loading dataset into the buttons that will display Korean alphabets and their pronunciations.
  - Implemented a set of non-overlapping random numbers generator which is used to display random and unique Korean alphabets and pronunciations.
- Implemented the tutorial page.
  - Created the fragment layout.
  - Added descriptions and functioning buttons.

- Created the application and program layout.

Minhee Lesley Lee
- Planned this project.
- Will implement more game features later.
- Will work more on this report later.

PROJECT REPOSITORY

This project is available at the GitHub repository https://github.com/msukmoon/learn-korean

TUTORIAL PAGE

Users need to know how to use the application when they first install and open it. The main page of the application has three menus to choose from, and the first one leads to this tutorial page.
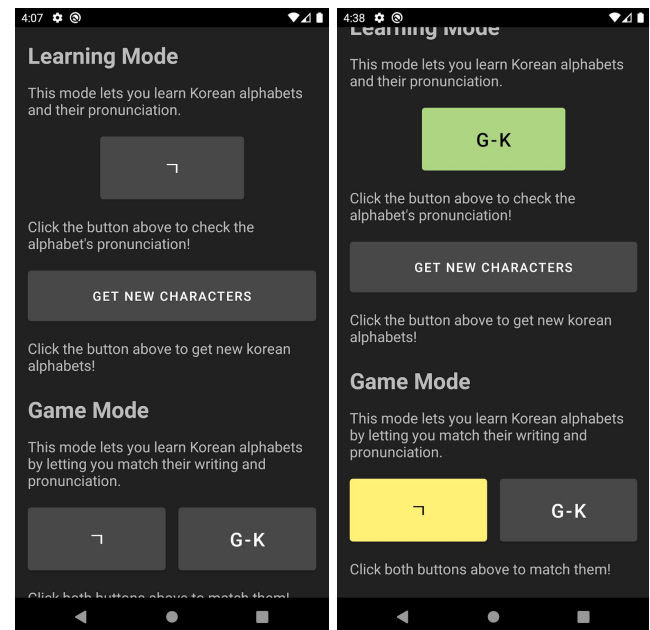

Figure 1. Application tutorial page. The right screenshot is after clicking some buttons.

The tutorial page of this application has a brief description for both learning and game modes. It also has buttons that are used in these two modes to help users to get an idea of how they will look like and how they will operate.

LEARNING MODE

Users must learn the alphabets of their new language before they move on to further learn it by playing games. The

learning mode of this application makes sure that the users know all alphabets of their new language by going through them randomly until they decide to move on to the game mode.
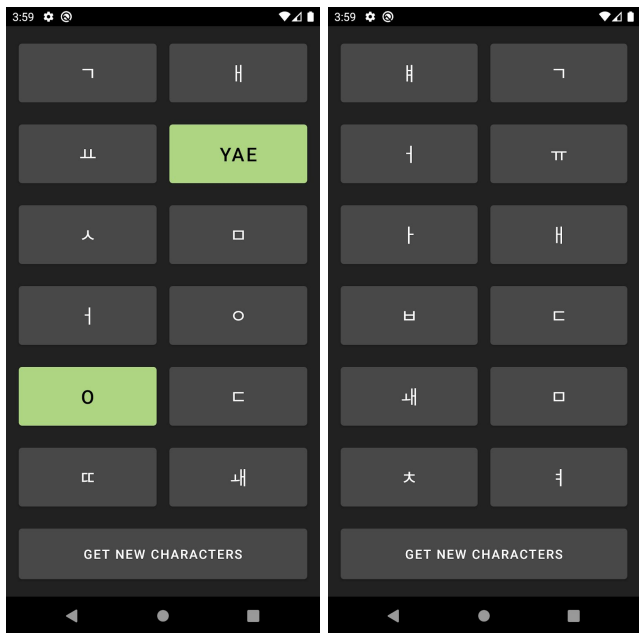

Figure 2. Application learning mode. The left screenshot is before getting new characters, and the right screenshot is after getting new characters.

The learning mode will always generate a unique set of random Korean alphabets. Buttons with an alphabet could be clicked to view a pronunciation of an alphabet. Clicking the "Get New Characters" button on the bottom of the page will get a new set of alphabets by clearing all alphabets and pronunciations and then generating a unique set of random Korean alphabets again.

Going through 12 random alphabets at once is better than displaying a single alphabet at a time when the users have some knowledge on their new language -- they do not know what alphabets they are missing, so going through the list of alphabets randomly and then finding few of them that they do not know yet will help.

GAME MODE
When the users feel confident that they know most of the alphabets of their new language, they could then test their knowledge by playing this game mode. This will not only verify their knowledge but also make them learn more about their new language by checking what they are missing and what they know. The most important aspect about this mode is that the users get to enjoy this part of the learning process because it is a game. When they have fun, they will learn more and faster.
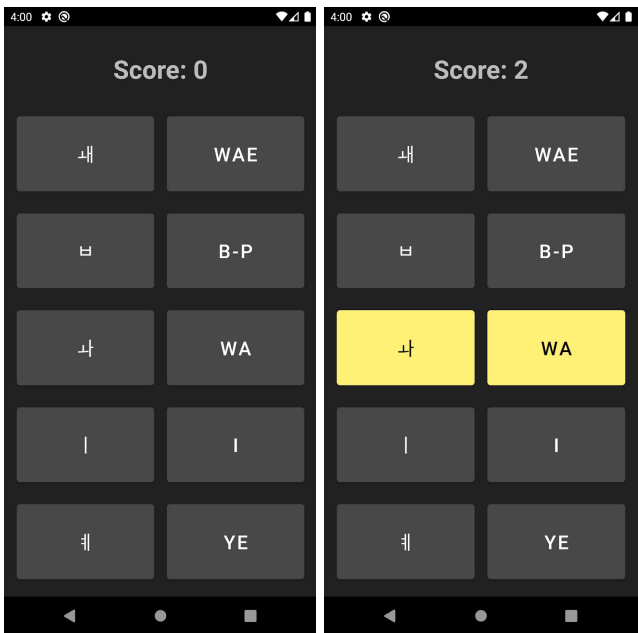

Figure 3. Application game mode. The left screenshot is before matching a pair of an alphabet and its pronunciation. The right screenshot is after matching a pair of an alphabet and its pronunciation.

The game mode will always have 5 unique alphabets and their 5 matching pronunciations. (From this part are functionalities to be implemented later) The user should pair an alphabet and its matching pronunciation to clear it. The user will then continue with 4 remaining alphabets and their 4 matching pronunciations to match and clear another pair. The user will repeat this until clearing all pairs on the page, which also is completing a single round. The user will move on to the next round by getting a new set of alphabets and pronunciations. The additional features will be added later by Minhee to make this mode more enjoyable and "game-like."

DISCUSSIONS
To be added later by Minhee.

EVALUATION
To be added later by Minhee.

CONCLUSION
To be added later by Minhee.