

Project Report

Project Name: KeyBoard Warriors

Member Names: Sneh Patel (Scrum Master, Lead Developer), Kevin Karafili (Developer), Logan Howard (Developer), Trayvon King (Developer), Keiji Roemmich (Product Owner).

Project Goal: To provide a user friendly game that improves phone texting speed and accuracy.

Product Backlog:

- Health/Heart System (Feb 15 - March 5th)
- Tutorial(March 5th - March 7th)
- Easy Mode (March 7th - March 10th)
- Idle Animations(March 10th - March 14th)
- Fluid Submit Button(March 14th - March 21st)
- Adding win/ Boss Transition Screen(March 21st - March 27th)
- Implement of Medium and Hard mode (March 27th - March 29th)
- Attacking/Death Animations (March 29th - April 1st)
- Add bosses to each mode (April 1st - April 8th)
- Additional Quality of life improvements(April 8th - April 14th)

Removed Features:

Endless Mode: Due to time constraint and other problems, we were unfortunately unable to implement an Endless Game Mode which would have introduced major replayability in the game.

Different Languages: The original idea was to include an ease-of-access Language button that would make our game more accessible.

Point System: Rather than getting points for defeating enemies and having replayability in trying to achieve a new High Score, it makes more sense to fight through enemies to reach a final Boss stage. This was also due to time constraints.

Modified Features:

Highscore Counter: Changed to “Enemies remaining” to fit the condition of having to fight a certain number of enemies before reaching the Boss Battle.

Team Contribution:

- **Trayvon:**
 - Implementation of the health/damage system.
 - Displaying randomized words from array in textbox
 - Clear function for submit button
 - Implementation of GIFs in the program
 - Enemies remaining counter
 - Suggested a level clear screen and game over screen
 - Suggested health system in the form of hearts
 - Suggested having a score system (later changed to enemies remaining)
 - Idea for the app logo icon

- **Logan:**
 - Implementation of the timer system and the features that use the timer - health system, submit button, attack animations.
 - Displaying of the randomized word
 - Supplied list of “Hard” Level words
 - Score and transition to Boss level
 - Suggested having a transition when the user makes it to the boss battle
 - Suggested how much time to give the user on each difficulty level

- **Sneh:**
 - Worked on animations for the enemies.
 - Created multiple functions to help display the animations for example: setInitialImage, setDeathImage, setAttackingimage.
 - Created graphics for the bosses health, and implemented the Boss.
 - Debugging throughout the development of the application.
 - Suggested implementing enemies in the form of sprites
 - Suggested giving the user less time depending on the difficulty selected
 - Decided the dates for deadlines of certain aspects of the projects

- **Keiji:**
 - Helped with UI design, creating an easier access to the user
 - Worked on Tutorial Screen Popup Script, as well as the Popup itself
 - Implemented Transition screens in between gameplay
 - Created Title Screen Text, Winning Screen Text, and the Transition Text
 - Suggested the implementation of difficulties
 - Suggested general game aesthetics

- **Kevin:**

- Created ways to pull the assets from the array list.
- Added music to the entire game with the inclusion of other sound effects such as losing health
- Added credits screen including all the assets we have found.
- Debugging various aspects of the game
- Suggested using Github so that we can all work on the same project file.
- Idea for the splash screen leading into the game
- Decided the multiple songs used in the program

Technical Perspectives:

- How to use Github, Monday, and Android Studio
- Finding free or cheap sprites to use as enemies
- Editing and Displaying moving images/sprites
- Coding music into a program
- Splash screen creation

Managing Group Software Project:

- Having an application like Github so that everyone can work on one project file feels almost essential.
- Deadlines must be clearly defined to keep all members on track and ensure meaningful progress.
- Frequent communication in the form of short scheduled meetings keeps everyone in the loop and allows members to help each other with any issues, ask questions, and offer suggestions.
- The scope of the project should be cemented so everyone knows what the project will do.
- Tracking Progress with project management software is very useful when meeting remotely.

What Would we Change:

- Database to store all our words instead of just typing them out in an array
- Individual letter check system
- Endless Mode
- More difficulties
- Variety of Bosses, Enemies, Backgrounds/Locations, and Animations
- Completion Rewards for players
- Expanding our game into different languages

References

1. “2D Sprites.” *CraftPix.net*, craftpix.net/categorys/sprites/.
2. “Build a Responsive UI with ConstraintLayout : Android Developers.” *Android Developers*, developer.android.com/training/constraint-layout.
3. “Coding with Sara.” *YouTube*, YouTube, www.youtube.com/c/Codingwithsara/videos.
4. *Fix for Android Emulator Hypervisor Driver Error - Android Studio Ryzen CPU + Gigabyte Aorus X470*. 7 June 2020, www.youtube.com/watch?v=Y1WhS2yuF8I.
5. “Keyboard Warrior.” *IB Shirts*, ibshirts.com/keyboard-warrior/.
6. mtechviral. “Android App Tutorial 11 : Adding Music / Sound.” *Youtube*, 26 Sept. 2016, www.youtube.com/watch?v=S4BQ9z7QijA.
7. “RyiSnow.” *YouTube*, YouTube, www.youtube.com/channel/UCS94AD0gxLakurK-6jmqV1w/videos.