

## **Development Environment Setup**

- Download github repo
- Open using ide of choice (we used vscode)
- Navigate to the Project2 directory
- Run the command "npm install"
- If you do not have access to the firebase database, you will have to create one and get your new environment variables
- In the Project2 directory, create a ".env" file
- If you are deploying the site, you will have to deploy to a new web hosting service, the project is currently set up for netlify.

## Codebase overview and structure

Outside of the Project 2 directory is the database information and our .github files, as well as a readme.md and a running document pdf of our progress.

Inside the Project2 directory is as follows:

- A Firebase directory containing a firebase.js file that handles all of the necessary firebase functions
- A public directory that stores the sites favicon assets, a directory called “assets”, and our login page css file
  - The “assets” directory contains the assets for all of the acts of the play including the following sorted directories: acts1-5, audio, characters, effects, fonts, portraits, StartScreen, ui. These all contain assets like images and sprites relating to the game.
- The src directory contains the following directories: QuestionSets, SceneDialogue, scenes. It also contains an Audio controller, character manager, dialogue manager, question displayer, and the main phaser file loader.
  - Inside QuestionSets contains json files that contain educational questions related to the play
  - Inside SceneDialogue contains the entire text of Macbeth jsonified, sorted by act and scene number
  - Inside scenes contains a directory called “GameScenes” as well as an extendable BaseScene and BaseGameScene, a Leaderboard, main menu, pause menu, preloader, settings, and scene selector scenes that are menus in the game.
    - Inside the GameScenes directory contains all of the in game scenes sorted by act and scene number, as well as a template scene used to generate new scenes.
- Webpack is the final directory and contains our testing webpack configuration as well as our production webpack configuration.
- There are two html files that are for our login screen as well as the html file required for phaser to load

## **API documentation**

The only api's we used were firebase and phaser.js here are their documentation:

<https://firebase.google.com/docs/reference>

<https://docs.phaser.io/api-documentation/api-documentation>

## **Testing guidelines**

There is currently no written code based testing for this game, as it was all done through physical testing by playing the game. The best way for us to test was by playtesting. The more people who playtest the game, especially those who are not connected to the project in any way. When playtesting levels there are a few things to consider. There are basic functionality things like player characters not moving or missing assets. There are also more subjective things. Questions like, are the levels too long, are they fun to play. Some of the things to keep in mind for Macbeth specifically are things like dialog, are more translations from Elizabethan English needed? Is the story still holding the original points and themes from the text or has the game drifted too far from the source material? These questions are impossible to answer without play-testing, and via playtesting you can make the game better.

## **Known bugs and future enhancements**

### **Known bugs:**

- Player character movement, occasionally falling past the created ground
- Dialogue interaction quirks
- Scaling to different viewports
- Browser based errors
- Collision detection
- Translate feature reappearing if starting dialogue twice
- Score saving/retrieval

### **Future enhancements:**

- More minigames
- Dialogue choices
- Fully explorable world
- Character entrance and exit at specified times
- Fully coherent assets
- Multiplayer game functionality