**Monday Lab Python Team**

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Gwen Liu, Guanyu Li

Team Meetings:

Meeting 1

Date: March 4, 2019

Location: LEEP2

Members: all

* Tested/fixed bugs remaining from project 1 requirements, started cheat mode

Meeting 2

Date: March 6

Location: LEEP2

Members: all

* Finished cheat mode before meeting, added sound effects for Win/Lose conditions, bomb, flag, recurse, cheat mode

Meeting 3

Date: March 12

Location: GroupMe messaging

Members: all

* Decided on final add-ons besides sound effects: free flag, timer, click counter, flag/bomb counter

Meeting 4

Date: March 18, 2019

Location: LEEP2

Members: all

* Finished free flag and timer before meeting, added click counter, fixed/added documentation

Tasks:

Most of our tasks were done as a group. Fixing all the bugs prior to starting new features was done as a group as we all found different things to change. Everyone pitched in ideas for new features and either implemented the feature themselves or asked if anyone had a good idea how to write the code. Most additions weren’t implemented until we could meet as a group so everyone could try and contribute. A small portion of the tasks and additions were independent efforts such as the free-flag feature implemented by Owen, the timer feature implemented by Gwen, and the click counter implemented by Zach D.. Documentation was handled by Gwen and Zach F. alongside the individual coders who commented their additions to the project. Also the features added as a group were tested extensively by the group as whole.

Challenges:

The most challenging part of this project was picking apart the other teams code and figuring out how it was structured. JavaScript is a fairly easy language to write but due to its flexibility it can sometimes yield results that are unwanted and sometimes don’t make sense. Figuring out each part of code worked with the next part was tricky due to a lack of organization. For example, creating the cheat board was difficult because there was more than one function related to generating the board, so it was hard to figure out which one should be used. Originally, there was also a bug that the old cheat board couldn’t be removed after a new game is created, and it was also difficult to figure out which function caused this due to the organization. Another challenge we faced was coming up with a big feature to add. This prompted us to add a couple smaller features along with a somewhat bigger feature (free flag).

Features Completed:

* Click counter
  + Keeps track of clicks made by the user. Only when an unrevealed square is clicked does the counter increment.
* Flag/Bomb count
  + This keeps track of the number of flags currently placed on the board as well as how many bombs are on the board.
* Timer
  + Keeps track of the time since the game has started.
* Cheat mode
  + Reveals the location of all the bombs on the current board. You can toggle it on and off.
* Free flags
  + As squares are revealed you receive free flag placements that are guaranteed to be on bomb squares. The algorithm adjusts based on board size and bomb count.
* Sound effects
  + Different sounds when Win/Lose conditions, bomb, flag, recurse, cheat mode are executed

Future Features:

* Free flag on/off option:
  + Our free flag feature is permanently on so there’s currently no way to turn it off. We would like to add the ability to store the free flags in a bank and use them as you please.

Retrospective:

Overall we were pleased with the project we inherited as well as the features we added. If there’s anything we would have done different is refactor the code we were given to make it more organized to help with our addition of features. Also it would have been nice to finish future features and possibly change the style used to display the game to something a little more aesthetic.

Managing our time better would have possibly allowed the implementation of new features and code changes to benefit us as we progressed. With everyone having multiple other classes this made us apply less time than we could have to the project.