- Log of all meetings

Feb. 8 Friday 3:30-5:30 Lab Room 1005C

Xingjian Ding
Saharsh Gupta
Hanwen Jia

This was the first meeting where we discussed which language to use, and then we decided to try both C++ and javaScript for this project.

Feb. 11 Monday 9:00-9:50 Leep2

Xingjian Ding
Saharsh Gupta
Hanwen Jia

We discussed the problems we had and shared ideas about how to design our project. We decided to use JavaScript. The github repository was made, with an initial code.

Problem: The main problem which we have right now is about how to recursively check the map (in javascript).

Feb. 13 Wednesday 9:00-9:50 Leep2

Xingjian Ding
Hanwen Jia

Today, we discussed the problems we faced in JS and figured out the small problems in C++. We are still struggling in JS.

Feb. 13 Wednesday 2:30-3:20 Google Hangouts

Xingjian Ding
Saharsh Gupta
Hanwen Jia

In this meeting we talked about what all functionalities we needed to add, figured out the problems we are facing and decided who works on what part to

proceed. We decided to make 3 classes, class Board, class UI, and class Graphics to handle different parts of the game.

setMines() // check all mines are initiallized
flag(); //work so that it check that a right mine is flagged or not
reveal() //function stop at the edge where it finds the mine
change display Board() //Not using document.write();
checkComplete()
class Board //Initiallizes the board required
class UI // handles how the game functions
class Graphics //handles the basic graphics

Feb. 14 Thusday11:00-11:30 Google Hangouts

Xingjian Ding
Saharsh Gupta

We talked about problems we faced while implementing the UI class, we also discussed what changes are required in the current functionality.

Feb. 15 Friday 8:00-9:50 Leep2

Xingjian Ding
Hanwen Jia

We are almost done with the project, we just need to implement a few functionalities. We discussed our problems with flag checking, and we found a new way to solve it.

Feb. 15 Friday 2:00-3:00 Google Hangouts

Xingjian Ding
Saharsh Gupta

We created a new branch called the gfxUI and the project is working well. Only some details we need to figure out.

1. // Implement a checkComplete function in class UI
2. // Implement correct/incorrect mine flagged functionality
3. // Implement Number of mines remaining.
4. // Improve the graphics a bit.

Feb. 15 Friday 4:00-5:30 Google Hangouts

Xingjian Ding
Saharsh Gupta
Hanwen Jia

We discussed and finished the last of the needed functionality. We also discussed how to improve the interface to make the whole game look better.

Feb. 16 Saturday 4:00-5:00 Google Hangouts

Xingjian Ding
Saharsh Gupta
Hanwen Jia

Finalized the code for the project, have a working feature branch with all required functionality, discussed and started with the documentation.

Feb. 17 Sunday 1:00-1:30 Google Hangouts

Xingjian Ding
Saharsh Gupta
Hanwen Jia

Discussed more and finalized the code documentation. Working on finalizing for the submission

- **Description on how work was split between teammates**

  We splitted the project into 3 parts(Classes), and then worked on them separately. Saharsh Gupta worked on the Graphics and Board class. Xingjian Ding and Hanwen Jia worked on the UI class, and interface. We made different branches for different features, everyone worked on

different branches. After we had the functionality in different branches, we merged them together into master.

- **Challenges and how they were overcome or dealt with**
    1. The team was not well experienced with a javascript project, there was a lot of learning involved and helping each other out solved the problem.
    2. When we click an empty spot, revealing it recursively and stopping at an edge was a bit problematic, but was solved using a recursive function and the break condition of if any mines touched stop revealing.
    3. When the game is finished, we needed functionality to end/restart the game. We use the function call history.go(0) to restart the game.
    4. Graphical implementation in the browser was a challenge, but with a lot of google search and reading through many different ways, HTML Canvas solved this issue for us.

- **Any features that did not make the demo version**

  We did not add any pictures in this version. The functionality of revealing all mines when a mine is clicked is not in this version.

- **Retrospective on what the team would have done different**

  The team could have done many things differently but since Xingjian Ding and Hanwen Jia did not have a lot of experience with JavaScript, we struggled a bit with some basic implementation of this project. Saharsh Gupta did a good job with organization of the code (put them in right class, make code look clean) and make the project better. It took some time but with the learning and with the help of each other we were able to finish the project with the required functionality in it. Everyone in this team worked well together.

Works cited

The whole code is written from scratch only a few function calls are from the web, we did use these two websites for any error we faced and to find the functionality in JS we needed to use.

1. stackoverflow:- For all the errors in the implementation of the code. This resource helped us with many questions in the code.

   https://stackoverflow.com/

2. w3schools:- Specifically for the Graphics class, this resource provided us with the information about Canvas in HTML, did use the function calls from there and how they were used.

   https://www.w3schools.com/