Planning and Quality Manager (Yousef Aljaser 750735)

Class responsibilities:

James Michael: GameSetup, Game, GameResult, GameInfo

Ifan Sion: Diffuse, Reveal (helped with Board and Player)

Edward Harper: Tile, Square, Mine (helped with Counter and Time)

Jack Green: Board

Wang Xiao: Time, Counter

Yousef Aljaser: Player, minutes file, group report

We all contributed to the A3 project together, after learning from our mistakes from A2 and reading the feedback we improved and learnt how to deal with the assignment and work together as a group. Edward assigned classes to group members and programmed together whenever someone finished their code we would look over it together as a group and give our opinions and if a group member was not very confident or needed help with coding we all helped. We decided to remove a couple of classes because some were unnecessary for the implementation (e,g the Computer class and Human class). We also added one more class, GameInfo, which creates some labels for the counters to be printed to the screen. We still kept in contact via the whatsapp group that was created from A2 which was created by Edward. He also created a Github sharing code, group members sent their code to James and Ifan so they could be uploaded to the Github site. We all tried helping each other with code and we got everyone involved and tried not to let anyone feel left out. Most of our meetings were at the Windows lab or library. We found A3 challenging because it was a difficult program to code and challenging with finding which class we should start with, also we found it hard to make the program look visually appealing.

Report Summary:

We found A3 very challenging. The most challenging aspect was getting the user input to open in a new, second GUI window, and unfortunately the input is entered through the command line. We experimented with numerous GUIs to try and resolve this problem but whenever we tried to add them to the program it simply broke and we couldn't get the program as a whole to communicate. Because of this, we did not want to compromise the stability of the submitted program. We are also aware that if a board of 30x30 is requested the number of adjacent mines is too small to print to the tile.

However, we managed to implement a working revealing algorithm, working counters, a working timer, and the game will also result in a win or loss when necessary.

For the most part, we tried to stay as close as possible to our design from A2 when implementing A3. However, we had to change a couple of things. RevealAlgorithm now collaborates with GameResult to set the game to a loss state instead of the Mine class. The Player class now handles diffuse also since there is no computer player. A new set and a new get method has been added to GameResult to help calculate the result easier for wins and losses. We have also updated Board significantly.

We looked over notes from the first year to help us with object-oriented programming again. There were no lone wolves in this project, whenever someone was stuck we helped them and suggested what they should do in their code. One other problem is that we could not write classes in random order we had to finish specific classes first because they collaborated with each other. Overall A3 was a valuable experience and an excellent preparation on what will happen in our future jobs and the benefits of working together.

Member Contribution:

Ifan: I contributed by writing the RevealAlgorithm class and the Diffuse class and then providing a helping hand for the Board class and Player class as both classes collaborate with my class. I had to make sure that the classes still works as intended and that the method calls which was the source of communication between the classes was sharing the correct parts of system intelligence. I was the one to apply the flood fill algorithm to the context of minesweeper.

Xiao: In A3, I did the time class and counter class with help from Edward. And went to the meeting to finish work together.

Yousef: I wrote code for the player class in various ways, gave a few ideas on how the code should look and run however, Ifan told me that I did not do the code in the correct way for my class(Player class) so he helped with recreating it. I attended every CS-230 lecture, tutorial and group meeting and kept track of the minutes we met, what we did and attendance of group members. And also suggested when we should meet next time and when.

Jack: I wrote the board class and gave ideas to the group on how the board will collaborate and gave the first implementation of the board, Ifan helped me with finishing it.

James: I wrote the Game, GameResult, GameSetup and GameInfo classes. I attended every tutorial and meeting, and helped with any problems the other group members had. With the Game class we were all confused on how we could further break it down and unfortunately the result is more in the main method than we would have liked. The GameSetup class sets the name, number of tiles and mines and can be accessed from other classes with get methods. The GameResult class helps to calculate the outcome of the game, and the GameInfo class creates some labels which are used to print the counters to the screen.

Edward: I contributed in A3 by coding the Tile, Square and Mine classes. I also helped Xiao with writing code for his classes, I helped group members by assigning classes giving feedback and ideas on how they would implement their code. I also created a github code sharing account online, and attended the tutorials and group meetings. I tried my best to involve my group by keeping everyone up to date on what is happening and what will be happening next.