Q&A for coursework

1: Hint button and algorithm

- The basic requirement is that you use one algorithm and analyze the time/space complexity. It is great that you use different algorithms to make your game more fancy. For example, you can design two hint buttons, one button for one algorithm. In your report, you can compare the performance of these two algorithms.
- For the player, when he clicks the Hint button, it just shows the next step. But for the game designer, you can design some strategies to choose the next step and write them in your report.

2. The obstacle and treasure are generated on map **randomly**, then what about player's **starting position**?

- 'Randomly' refers to **different maps**. For example, when the player plays the game **twice**, **each map is different**, and obstacles and treasures are generated randomly so that the player cannot guess related positions. But when **the player starts the game**, everything is fixed. As for the player's position, you have **different options**: 1) the designer specifies the exit and entrance of the map; 2) players choose the start position by themselves like Mine-sweeping game. 3) settle the player in one position randomly

3: Map design and boundary

- The basic requirement is to design 20*20 map. Then you need to put the obstacles in some locations. When the player hits the obstacles, the score is reduced by **10** and the obstacle will appear on the map. The player needs to choose another direction.
- As for the boundary, there is no penalty, and how to design the boundary, depends on you. Some options for you: 1) when the player hits the boundary, show some notes: ‘This is the boundary of the map…..’ 2) show the boundary on the map, then the player will try to avoid the boundary.

4: How to display the game

- It depends on you. The key point of this coursework is how to use the data structure and algorithm to design the game.

5: A reachability check before releasing a map

- Before you release the map, please make sure all treasures are reachable (How to do this part, it depends on you). For example you cannot generate a map that the treasure is surrounded by obstacles.