Phase 4 Report

- **The Game**:
  - faithful to origin plan:
    - `The game components doesn't change.` For instance, we still have five key rewards, one freeze reward, two tealth reward, three enemies, two score bombs, two health bombs, one hero, some barriers ,one end point and some regular cells.
    - `The functionality for each component doesn't change.` For instance, when enemy collide with hero, hero health will reduce; hero health will reduce if collide with health bomb; hero score will reduce if collide with score bomb; when hero collect key reward, score increase. In order to win the game, hero need to collect five key rewards; when hero collect freeze reward, hero score will increase and all enemies will be frozen for some amount of time. In addition, the freeze reward just appear for some amount of time; hero health and score will increase if hero collect health reward; The enemies will move towards hero's position; both hero and enemies connot go through barriers.
    - `Some of UI doesn't change.`
      - Game window:

        We still have the player score appears on the top of game windows; we still have player health appear on the left top corner of the game window; we still have number of collected key rewards appear on the right top corner of game window; The game board is shows in the middle on the game window.
      - Main menu:

        We have play a new game button, exit button and the game tittle(BATTLE FIELD) as origin plan.
      - Game over window:

        Still shows the final score and the Game Over tittle.
      - Pause menu:

        We have resume button, exit button and Pause Menu tittle as origin plan .
  - Changes:
    - `The feature of some game component changes.` The freeze reward should be initialized in a random regular cell as state in origin plan, but in actually game, the freeze reward is located at fixed position.
    - `Removed the restart game functionality`
    - `Some of UI changes`

- Game window:

  We remove the timer and highest score from the game window. The score instead shows in the left top corner of window, now it's shows in the middle top of the game window. The position of player health changed from right top corner to left top corner. The position of number of key rewards collected by hero changed from left down corner to right top corner. We removed the pause button from window, instead, the user can press the key "p" in the keyboard to pause the game.

- Main menu:

  Removed the highets record from main menu.

- Game over window:

  Removed the highest record from game over window. Removed the message: "press any key to return to main menu". Added a exit button to exit the game.

- Pause menu:

  Removed the restart button.

- Map choice menu:

  Add this menu to let user choose which map(button map1 and button map2) to play.

- Learned:

  Sometimes, the original plan and the actually project is not the same because we might encounter some problems or find better ideas leads to change of the orginal plan.

- **Tutorial**:

  video link: