

Team Member:

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Objective:

The general goal of the game is to strategically place bombs in order to kill all enemies and destroy obstacles.

Gameplay:

1. The player can choose the number of human players in the game (four human players at maximum, and one at minimum).
2. The players start at the four corners of a square map with an $n \times n$ grid.
3. There are concrete walls and destroyable obstacles on the map, interacting with players and restricting movements.
4. Each player has finite number of bombs that explode seconds after being placed on a grid.
5. If the player runs out of bombs, he needs to refill at the power station.
6. Exploding bombs can set off other bombs, kill players including the one who has placed the bomb, and destroy obstacles.
7. Powerups will randomly appear on unoccupied grids, and players can pick them up by simply walking past them.
8. Examples of powerups include an increase in walking speed, extra life, and bombs with greater damage range.
9. The game ends when fewer than 2 players survives, and their ranks (1 through 4) depend on their survival times.
10. The Player's scores will then be logged into a database.
11. Priviledged players can have extra lives, speed boost, greater bomb capacity...etc.

Player rank:

1. The player needs to login in before the game starts, so every player has a rank.
2. The menu will display the player's highest score so far, current score and the ranking table.
3. The system will keep a top scores table, which will update when every game ends.
4. A score is an estimate of a player's skill. The Glicko rating system will be utilized for the player rank. This will decrease the likelihood of multiple players all being tied with the same score. It is simple to implement.

Server:

1. The server receives requests from players to join a game.
2. Players can "wait" for other players to start a game, or choose to play with bots.
3. Players should be notified if other players disconnect during the game.

Reference:

Glicko rating system: https://en.wikipedia.org/wiki/Glicko_rating_system