

**Project Title:** Hero TD

Team 4

**Team members:**

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**Problem Statement:** After playing previous video games of the "Tower Defense," or "TD," genre, one can find an excess of uninteresting and repetitive TD games. As such, the desire to improve upon existing concepts and introduce new ideas has arisen. To do so, a competitive multiplayer TD game with its own **background story** is something that we seek to produce alongside additional mechanics which keep the game type interesting and enjoyable.

**Problem Objectives:** We want to create a unique TD game that has mechanisms that boosts gaming experience and are never seen in other TD games before.

- Each player has the same number of lives, and lives will lose when an enemy arrive the its destination.
  - -1 for each common enemy. (Appears every wave)
  - -3 for each elite enemy. (Appears every 5 waves)
  - -10 for each boss. (Appears every 10 waves, and during that wave, the boss will be the only enemy)
- Randomness is also a part of this game, some interesting items and towers can only be achieved from lottery.

- At the beginning of the game, there might be some stones or obstacle at some corners at the path. Players can control towers to attack that obstacle in order to achieve a better place which has a wider shooting-range to place their tower.
- The game follows a main story, and as the game proceeds, the story will also become more and more clear.
- Each player selects an own Hero tower at the beginning of the game. Hero tower can't be upgraded, but each hero tower will have several powerful skills and skills will be upgraded with the time; the time Hero tower needs to upgrade will increase in exponential order, and there will be a level cap. **A kind of Hero tower can only be selected by one player!**
  - Skills that distract other players, including power up other players' enemies.
  - Skills that can recover the losing life(lives).
  - Skills that can do extremely large damage to a single enemy.
  - Skills that can enhance the surrounding towers.
  - There will be more skills!
- Players will upgrade a base tower to different branches
- Some specific types of tower can merge into a more powerful one
- Towers get experience by killing enemies and can learn new skills upon gaming a new experience level
- Two teams can play a competitive game by buying items to distract the other team. Plan your resources carefully to defeat the other human players on online-mode

- MA mode where you play as monsters to attack the tower defense system played by either a computer or player

**Project Deliverables:** A software product developed as a desktop application that acts as a video game service and will provide the following deliverables:

1. Producing a TD Game, complete with a multiplayer experience, using Unity game engine in C#.
2. Provide a manner of saving player scores, usernames, and miscellaneous data using MySQL.
3. Design and create custom sprites and artwork using SAI, Paint.Net, and Photoshop softwares.
4. Producing sound effects and BGMs using existing resources on unity store and custom recorded resources.

**Stakeholders:**

Users: People who want to try a multiplayer Tower-Defence Game.

Developers: Mingyong Cai, Mingqi Han, Xihao Li, Nicholas Meier, Rongxi Zhang, Xuan Zhao

Project Manager: Rongxi Zhang

Project Owners: Mingyong Cai, Mingqi Han, Xihao Li, Nicholas Meier, Rongxi Zhang, Xuan Zhao