

## Part 1:

### In the game match:

A Player has two workers. A Player knows if it is their turn, and which stage of their turn they are on. A Player can see the whole board, and knows where its workers are, where the opponent's workers are, and where all the buildings are and their heights. Players can only change the board via valid moves on their turn.

The game board knows where all the Workers are located, and all the buildings and their heights. The board will not allow Workers to move in a way that will violate the rules of the game.

Workers can query the game board to ask if a movement is valid or if it can build on a neighboring tile. After the Worker moves, it must build to one of its neighboring tiles.

A Manager manages the set up of the game. The Manager tells a Player when it is their turn and determines a winner of the game.

Two Players playing a game communicate via changes in the game board.

### In the overall tournament:

A Tournament Leader keeps track of which players have played the game against each other. Players do not need to know who they have played against. The Tournament Leader keeps track which player won in each player pair. The Tournament Leader starts each game between every pair of two players. At the end of the tournament, the Tournament Leader will determine a winner based on which Player won the most games. If there is a tie, whichever Player won between their match up wins.

## Part 2:

### Board class:

- 6x6 2D Array of Tiles
- List of Workers
- Determines if a proposed move from a Worker is valid
  - o If so, makes that move

### Player class:

- Has two Workers
- Has a copy of the Board
  - o Can get the entire set up of the board (all the workers, buildings)
  - o Cannot change Board except through valid moves of its Workers
- Places initial workers
- Completes a turn
  - o First moves a Worker to a neighboring Tile
  - o Then builds adds height to a Tile neighboring that Worker

### Tile class:

- Has a height
- Has neighbors

### Worker class:

- Has a tile
- Can propose a move to the board

### Manager class:

- Has the game board
- Manages set up of game (who goes first, who's turn it is, etc.)
- Determines when the game is over, decides the winner

### Tournament Leader

- Has all the players competing in the tournament
- Matches each pair of players against each other
- Knows the outcome of each match
- Determines a winner of the tournament