

Logic and Game Theory

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Every game has three main ingredients:

1. the set of players, $[n] = \{1, 2, \dots, n\}$
2. the rule of game
3. **outcomes** or winning conditions

The game arena, that gives the rules of the game, can be envisaged as a finite graph

- vertices denote game positions
- edges correspond to moves
- each vertex is labelled by the player whose turn it is to move
- winning conditions are not present in the arena

Game tree: the tree unfolding of a game arena is **extensive form**