

# Assignment2

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## 1 Reflex Agent

The evaluation function I implemented is mainly based on two factors,

1. **The distance between ghosts and Pacman.** The evaluation function give higher score, while Pacman is further away from ghosts. The Manhattan Distance between ghost and Pacman is greater than 5 is regarded as a safe distance, and returns 5 point bonus each ghost. while less than 2 is a dangerous, immediately return minimum score. When ghost is eatable, this value will times -1.
2. **The distance between Pacman and food.** If next position contains a food, add 10 points, otherwise, minus the distance between Pacman and its nearest food

Also this function will give one bonus if the action is not STOP.

Normally, this evaluation function acts very good in "testClassic". But as I don't take wall into consideration, this function does not act so well in "mediumClassic"

## 2 Minimax Agent