

Answer the questions in the spaces provided on the question sheets. If you run out of room for an answer, continue on the back of the page.

Name: _____

Adding States to FSMs

1. In this assignment, you will use the solutions from the in-class exercises as a starting point. You will add two states in `game.py`, `IdleState` and `HomeState`. Implementing these states will allow us to simulate the behavior of the AI in games such as Assassin's Creed.
 - (a) Add stub `IdleState` and `HomeState` states.
 - (b) Add a property called `home` to the `girl`'s blackboard. This property should contain the `home` position of the `girl`, `(550.0, 350.0)`.
 - (c) The `IdleState` should perform as follows: The AI does nothing until the player less than or equal to 2 manhattan distance units from the AI. When this condition occurs, the AI will switch to the `SeekState`.
 - (d) The `HomeState` should perform as follows: If the player cannot be found, the AI will move back to its home position. If it is within 10 pixels of its home position, the AI will switch to the `IdleState`.
2. Submit your entire directory (including `avatar.py` and `pathfind.py`) in `lastname.zip`.