**AI LAB 01 REPORT**

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Lab report answers:

1. Describe the behavior of **RandomAgent** from Step 7:

* It retrieves the list of legal actions using **state.getLegalPacmanActions().**
* If there are legal actions available, it randomly selects one of these actions using **random.choice(legalActions).**
* Else it will stop.

1. A screenshot of **myLayout.lay** from Step 8**:**

**A screen shot of a game

Description automatically generated**

1. Describe the behavior of **BetterRandomAgent** from Step 9:

* This agent has the same task as the RandomAgent, but with a modification, it will significantly speed up Pacman.
* After retrieving a list of legal actions, if it has “STOP”, remove “STOP” from the list.

1. Describe the behavior of **ReflexAgent** from Step 10:

* It retrieves a list of legal actions and a list of food positions.
* For each legal action, the agent generates the successor state using state.generatePacmanSuccessor(action) as the new position.
* If the new position is in the list of food positions, the agent will prioritize eating the food.
* Else, if no action leads to food, the agent will randomly select one from the legal action list.

1. For each of the percepts listed in Step 10, show what command/code enables you to access it:

* Get a list of available actions: **state.getLegalPacmanActions()**
* Get a list of food positions: **state.getFood().asList()**
* Generate the successor state for each action: **state.generatePacmanSuccessor()**
* Get the successor state as the new position: **successor.getPacmanPosition()**