This short assignment is to get you started on your course project. Your task is to form a team of 1–4 students in the "Project teams" group set and make a group submission. In one paragraph of 3–4 sentences, describe your project topic. I'll give feedback in a week on the topic and scope.

What would make a good project topic for this course? AI covers many topics, and we don't have time to cover them all in class. You might think about:

* applying AI algorithms or models, whether discussed in class or not, to existing problems or datasets;
* applying AI methods to new problems or datasets; or
* comparing or evaluating multiple approaches.

I'll expect more of larger teams and of students in CS5100. In general, estimate that each student on a team will do one programming assignment's worth of work. In a future submission, you'll list specific milestones your team should achieve to receive different grades.

Ideas:

* Snake 🡪 use the various search algorithms to find the shortest path to the food

I have created a group on Canvas called *Snake* and I plan to works on my own.

My idea is to implement the video game, *Snake*. Snake is as it sounds, a snake hunting for food. Once the snake eats the food, a new piece of food appears in a new location and if the snake hits a wall, the game is over. Similar to pacman, I plan to implement various search algorithms (BFS, DFS, greedy, uniform cost, and A\* search) to see which can repeatedly find the food the fastest. Additionally, I plan to create a few heuristics and compare their speed in finding the food.

Considerations: Since the search algorithms would continuously find the food (and not hit the edge walls), I plan to run the algorithm some *x* number of times to compare their time and space. For example, while BFS might find the food the fastest, DFS will take less memory space. While people don’t use *Snake* on a daily basis, they might be using BFS or DFS for another search instance so with my project I can show instances where DFS might be better than BFS.