

## 22CSAI04H AI Planning for Robot Systems

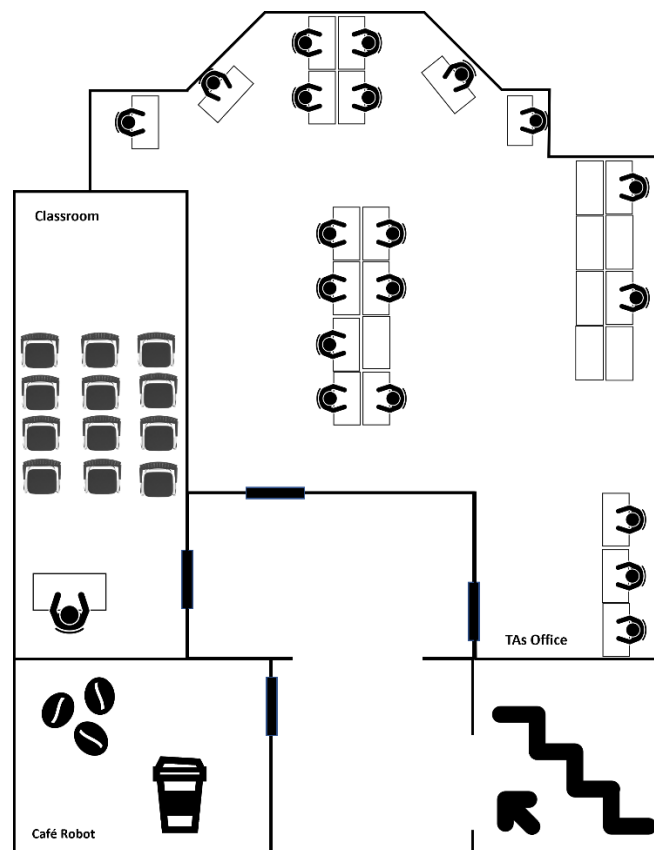
### Assignment 1 Scenario – ‘Café Robot’

Below is a sketch of the area that includes Classroom 1 (H-CR-104), the foyer area outside Classroom 1, which includes doorways to Classroom 1, two doorways to the TA’s office, and the exit to the main corridor on Floor 1 of building H.

The sketch includes a coffee shop, which I have named Café Robot, that will be located in what is now Lab 12 (H105), and of course opposite the lab are the stairs. I am not interested in the rest of Floor 1 or the rest of building H since Café Robot only serves to staff or teaching assistants in H103 and H104.

Café Robot employs one robot. It can carry coffee. Don’t worry about how it carries the coffee, but it does need to be able to pick up the coffee when it is to deliver it and put it down when it has got to its destination, which is a TA’s desk or the desk in the classroom. It can make multiple deliveries at the same time.

The task for you is to develop a planning system that Café Robot can use to enable its robot to deliver coffee and once it has delivered the coffee to return to Café Robot.



The initial state is the robot in Café Robot with one or more coffees to be delivered to TAs or MLs, the goal state is for the robot to be back in Café Robot with the coffees successfully delivered.

4 October 2022