Bài tập tuần 05

**Exercise 1: Give at least one example (different from the examples mentioned in the lectures) for each of the following types of environments:**

* **Fully observable, partially observable, unobservable**
* **Episodic, sequential**

**Briefly explain why your example belongs to its category.**

**Fully observable:**

In Tetris game, agent can determine the position of all the block on the screen, so agent can determine the state of the evironment at all times.

**Partially observable:**

At home, google assistant do not have enough sensor to receive all the percept, so home is an evironment that agent can not fully determine the state.

**Unobservable:**

In maze solving game, agent don’t know the map of the maze, and the agent have no sensor, so agent can not determine anything from evironment.

**Episodic:**

In restaurant, a waiter agent can take and process order, so each order is a single episode.

**Sequential:**

In tennis, a player observes the opponent’s shot and takes action, so their action can affect to the next state.

**Exercise 2: Describe components of the problem of finding routes to go from one city/province to another. Cities/provinces are shown on the map given in the next slide.**

Initial state: Any provinces

Possible actions: Go from one privince to their successor

Transition model: Position of agent after moving

Goal test: wheter agent at the destination province.

Cost:

Strep cost: the distance of province

Path cost: the total distance was traveled