

# CS365 : Artificial Intelligence

## Spring 2014

### Assignment 1

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Event	Deterministic vs. stochastic	Episodic vs. sequential	Static vs. dynamic
Playing soccer	Stochastic	Sequential	Dynamic
Brushing teeth	Deterministic	Sequential	Static
Playing a tennis match	Stochastic	Sequential	Dynamic
Practicing tennis against a wall	Deterministic	Sequential	Dynamic
Hostel lunch item	Deterministic	Episodic	Static

Event	Discrete vs. continuous	Fully vs. partially observable	Single vs. multiagent
Playing soccer	Continuous	Partially observable	Multiagent
Brushing teeth	Continuous	Fully observable	Single agent
Playing a tennis match	Continuous	Partially observable	Multiagent
Practicing tennis against a wall	Continuous	Fully observable	Single agent
Hostel lunch item	Discrete	Fully observable	Single agent

#### Explanation for the event “Playing soccer”

It is stochastic because the next state can't be predicted deterministically, it depends on decisions taken by other agents too.

It is sequential because the action one will be taking depends on what happened before it, one has to determine the position of the ball, which depends on what happened previously.

It is a multiagent event, and all the agents can run and the ball can also move, thus the environment is dynamic.

The agent can hit the ball at any speed and at any direction, which has continuous distribution.

It is partially observable because we don't know what strategy other agents are following.

The decision one will be taking depends on what others (other agents) do, thus it is multiagent.