

Table

Task	Deterministic vs. stochastic	Episodic vs. sequential	Static vs. dynamic	Discrete vs. continuous	Fully observable vs. partially observable	Single agent vs. multiagent
Playing soccer	Stochastic	Sequential	Dynamic	Continuous	Partially observable	Multiagent
Brushing your teeth	Deterministic	Sequential	Static	Continuous	Fully observable	Single agent
Playing a tennis match	Stochastic	Sequential	Dynamic	Continuous	Partially observable	Multiagent
Practicing tennis against a wall	Deterministic	Sequential	Static	Continuous	Fully observable	Single agent
Deciding what item to take at hostel lunch	Deterministic	Episodic	Static	Discrete	Fully observable	Single agent

Explanation for Playing Soccer

The environment is stochastic because the next state of the environment is not completely determined by the current state and the action executed by the agent. One cannot predict the exact position and speed of the ball at later instant.

It is sequential environment because current decision affects future decisions. The kick to the ball at a point determines the position and speed of the ball at next moment, so the state of ball and players depend on the previous state.

The players and balls are moving and changing their position with time. So, the environment is dynamic.

The speed and location of ball and players sweep through a range of continuous values and do so smoothly over time. So, it is continuous state environment.

The environment is partially observable because players don't have access to the complete state of the environment at each point in time. A player doesn't know what other players are thinking, their strategy, exact position and velocity of players and ball, etc.

It is multi-agent environment because many players are playing together. For an agent, its team members will help it in the game while opponent team players try to decrease its performance. So, it is partially competitive and partially cooperative environment.