CS365A: Artificial Intelligence Programming Assignment 1

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January 18, 2014

Question 2

Labelling

Label the given list of tasks, according to the given list of parameters.

	Determinstic vs Stochastic	Episodic vs Sequential	Static vs Dynamic
Playing Football	Stochastic	Sequential	Dynamic
Brushing your teeth	Determinstic	Sequential	Static
Playing a tennis match	Stochastic	Sequential	Dynamic
Practising tennis against a wall	Determinstic	Sequential	Static
Deciding what item to take at hostel lunch	Determinstic	Episodic	Static

	Discrete vs Continuous	Fully Observable vs Partially Observable	Single Agent vs Multiagent
Playing Football	Continuous	Partially Observable	Multiagent
Brushing your teeth	Continuous	Fully Observable	Single Agent
Playing a tennis match	Continuous	Partially Observable	Multiagent
Practising tennis against a wall	Continuous	Fully Observable	Single Agent
Deciding what item to take at hostel lunch	Discrete	Fully Observable	Single Agent

Explanation

This subsection explains the reasoning behind labelling the task **"deciding what item to take for hostel lunch"** as *deterministic, episodic, static, discrete, fully observable and single agent.*

- The next state of the environment is completely determined by the choice that the agent takes and the current state of the environment, hence the environment is *deterministic.*

- There is an implicit assumption that the decision is taken by a single agent. Hence, it is *single agent* task.

- The number of choices avaible are finite. Hence, the task is *discrete.*

- The environment is changed and influenced only by the decision taken by the agent. Hence, it is a *static* environment.

- The sensors of the agent can give it a complete list of all the possibilites, hence the task enviornment is *fully observable.*

- The task of choosing what to have for lunch is *episodic*, assuming the agent's only task is to choose and has no bias for any of the items.

Question 1

HOW DEEP BLUE DEFEATED GARY KASPAROV

In September 2012, the wired.com reported that the book 'The Signal and the Noise' revealed that the first move which startled Kasparov and lead to a panic - caught him off guard as stated by Kasparov himself - was due to a computer bug. This is what had actually happened.
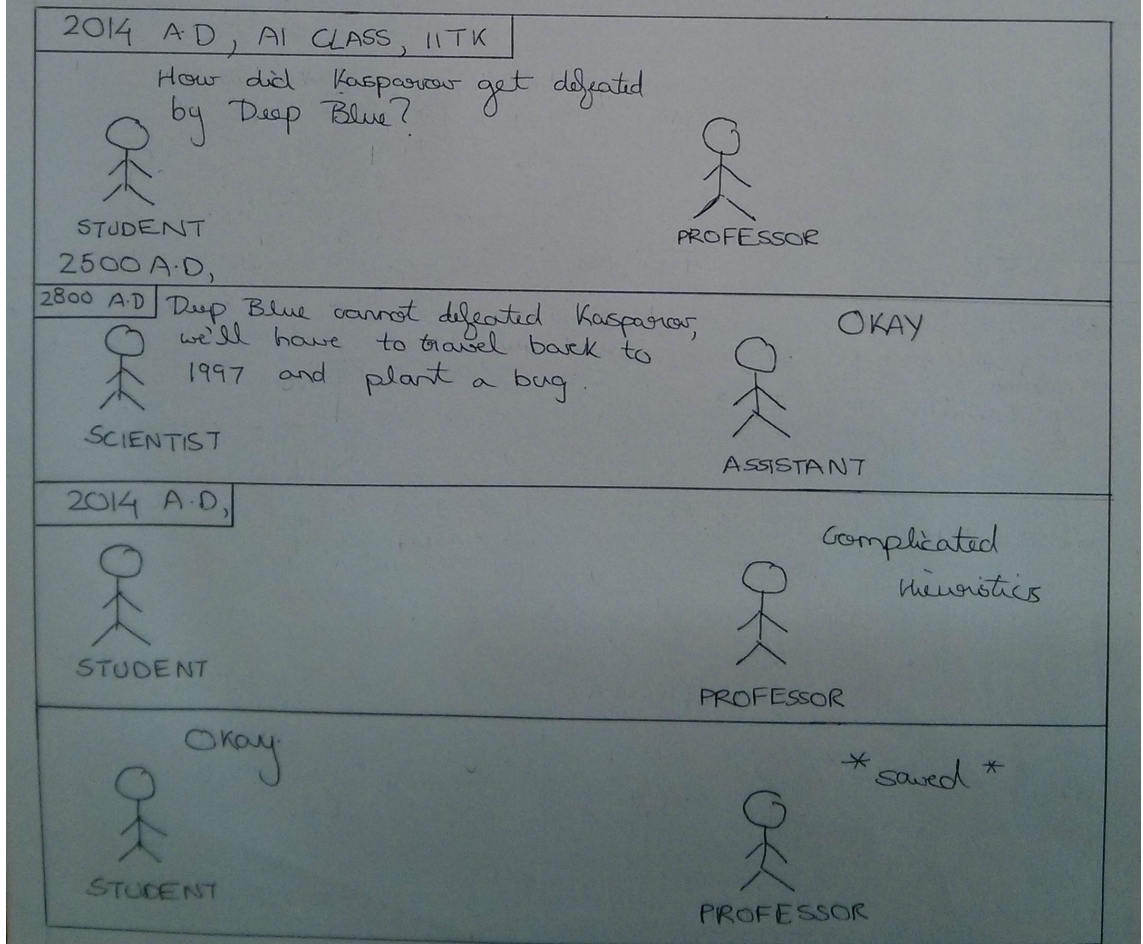

Figure 1: How Kasporov was defeated