**CMPE – 260 Assignment 1**

**1)** **A game of Chess:**

* Agent – The player or the computer program
* Environment – The chessboard and the player/agent in the opposition is the environment
* Action – All the actions that a particular character can make like move forward, backward, left, right etc.
* Observation – Your current position on the chessboard.
* Rewards – Could be positive, negative or a neutral value, could be a small or a large value as well as could be provided to the agent at every timestamp or at the end.

**2) Dog Training:**

* Agent – Dog
* Rewards – If the action is close to the desired command, the trainer will likely provide a reward, such as a food treat or a toy; otherwise, no reward or a negative reward will be provided
* Environment – Includes the surroundings of the dog as well as the trainer.
* Observation – Dog observes the action need to be taken for a particular command during its training with the trainer.
* Action – Dog then responds by taking an action.

**3) Computer game:**

* Agent – Players
* Environment: The game interface / computer program.
* Observation:  The computer game waiting for the player’s input / game state
* Rewards: Game points / scoreboard
* Action: The computer game responding to the user's input inside the game.