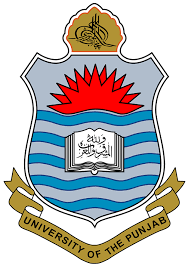
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**Artificial Intelligence**

**Assignment # 1**

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**PEAS description for the starting player in tic-tac-toe.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Agent Type | Performance Measure | Environment | Actuators | Sensors |
| Tic Tac Toe Game | Place three X’s in a row.  Prevent three O’s from being placed in a row. | 3x3 Grid.  Game pieces (X’s and O’s) | The game pieces. | Something to detect the current state of the board, for example: camera. |

**Classify the tic-tac-toe task environment according to these properties:**

* Fully observable/partially observable
* Deterministic/stochastic
* Episodic/\*sequential
* Static/dynamic/semi-dynamic
* Discrete/continuous

**Fully observable:** Nothing is hidden from the agent. The agent can

see all parts of the environment at all times.

**Deterministic:** The next state of the board is completely determined

by the move of the agent.

**Sequential:** Later moves will depend on what moves were taken

previously.

**Static:** The game board remains constant while the agent is determining its next move.

**Discrete:** Tic-Tac-Toe has a finite state space.