AGENT - Black Box

**ENVIRONMENT**

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Input | Percept | Response | Action
Stimulus (through sensors) | (through effectors) | Goal | Performance measure: Criteria to determine how successful an agent is.

**An agent may be:**

**Rational:** does the right thing.

**Omniscient:** does the perfect thing.

**Ideal:** does the optimal thing given its state of knowledge.

**Autonomous:** Initial kn. + ability to learn.

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**Type of Agents:**

– Simple reflex agents
– Model-based reflex agents (keep track of the world)
– Goal-based agents
– Utility-based agents
– Learning agents

**Agents are expected to:**

– **Achieve goals:** search and planning
– **Sense environment:** machine vision, NLP
– **Be autonomous:** machine learning
– **Store knowledge:** knowledge representation
### ENVIRONMENT

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<th>Input</th>
<th>MAPPING</th>
<th>Output</th>
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<td>/</td>
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<tr>
<td>Percept</td>
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(through sensors)  (through effectors)

- This mapping/function is implemented using a **program** that runs on an architecture.