What’s knowledge for AI? For human, we can take decisions depending on our knowledge. This idea of knowledge is also applied to AI.   
-Knowledge-based agents: agents that can reason based on the internal knowledge. These agents used an algorithm to find a solution based on the knowledge. To explain this, I’m going to show this example:

*If it did not rain, Harry visited Hagrid today*

*Harry visited Hagrid or Dumbledore today, but not both The information we know*

*Harry visited Dumbledore.*

**Harry did not visit Hagrid today The information we can deduce**

**It rained today**

To talk about knowledge, we need to know some new word:

Sentence: a phrase about the world to represent the knowledge to an AI.

Propositional Logic: logic based on propositions. These propositional are usually represented with single letters. If we want to concatenate our sentences must use Logical Connectives

|  |  |
| --- | --- |
| *P* | *¬P* |
| True | False |
| False | True |

Logical Connectives: ¬ means **not**;˄ means **and**;˅ means **or**; → means **implication**; ↔ means **biconditional**.  
Not(¬): Says the opposite

|  |  |  |
| --- | --- | --- |
| *P* | *Q* | *P* ˄Q |
| False | False | False |
| False | True | False |
| True | False | False |
| True | True | True |

And(˄): True only if both sentences are Ture

|  |  |  |
| --- | --- | --- |
| *P* | *Q* | *P* ˅ Q |
| False | False | False |
| False | True | True |
| True | False | True |
| True | True | True |

Or(˅): False only if both are False

|  |  |  |
| --- | --- | --- |
| *P* | *Q* | *P* → Q |
| False | False | True |
| False | True | True |
| True | False | False |
| True | True | True |

Implication(→): True only of the second sentences is True about the first one

|  |  |  |
| --- | --- | --- |
| *P* | *Q* | *P* → Q |
| False | False | True |
| False | True | True |
| True | False | False |
| True | True | True |

Biconditional(↔): Is an Implication that goes in the two ways at the same time