

AI Theory

Review of variables:

$$X_1 + X_2 = 10$$

$$X_1 - X_2 = 4$$

Constraints

Constraints make assignment consistent.

State based \rightarrow CSP

Logic models \leftarrow

Logic:



Declarative language
(what to do)

Let's assume we have an
assistant.

Tell \rightarrow Assistant \leftarrow Ask



Knowledge base

(more technical definition
later)

Sentences:

A dime is better than nickel.

A nickel is better than penny.

Reasoning

↳ dime is better than penny.

Infer things from these

Back to Logic:

Covered.

Proposition Logic

First order Logic

Second order Logic

NLP

Language has some
Syntax and Semantics.

Components of Language:

① Syntax


② Semantics

③ Inference Rules

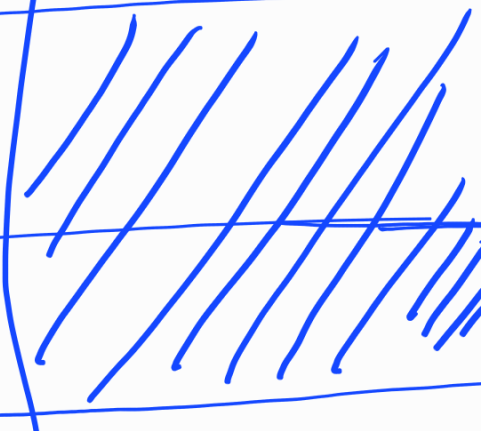


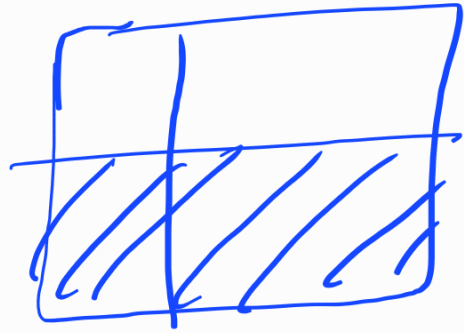
Let's take a programming language
as an example. It is more constrained in
these things as compared to natural
Language.

Example :

Rain  Wet-
and

جب بارش آتا ہے تو پانی آتا ہے

		Rain	
wet	0	1	 raining
	0		
1			



← it is
wet

here model, represents
assignment to a variable.