

Procedural representation:

Array of Strings

String [] months = {"January", ... }

String next-month(String x){

Int i = 0;

If (x == month[i]) ...

Declarative representation:

Next-month(January, February)

Next-month(February, March)

...

Query: Next-month(January, X)

Colorless green ideas sleep furiously.

If (x == y) z=23;

If (x/q == y) z = 23;

Today(Monday)

$$X + y = 4$$

P = Today is Monday.

Q = We have AI class today.

$$P \Rightarrow Q$$

$$P \Leftrightarrow Q$$

$$Q \Rightarrow P$$

Model

logic

Painting a house

Painter 1 – 3 days

1/3

house/day

Painter 2 – 4 days

1/4

house/day

How long if both work together?

$$1/3 + 1/4 =$$

$$4/12 + 3/12 = 7/12 \text{ house/day}$$

$$12/7$$

$$\text{day/house} = 1 \frac{5}{7}$$

Water towers

Pipe 1 – 3 hours

Pipe 2 – 4 hours

1 $\frac{5}{7}$ hours

Models -----→ logic

Representation

Models ←----- logic

Interpretation

Wumpus world: $4 \times 4 = 16$ squares to represent

$$10,000 \times 10,000 = 100,000,000 \text{ squares}$$

