

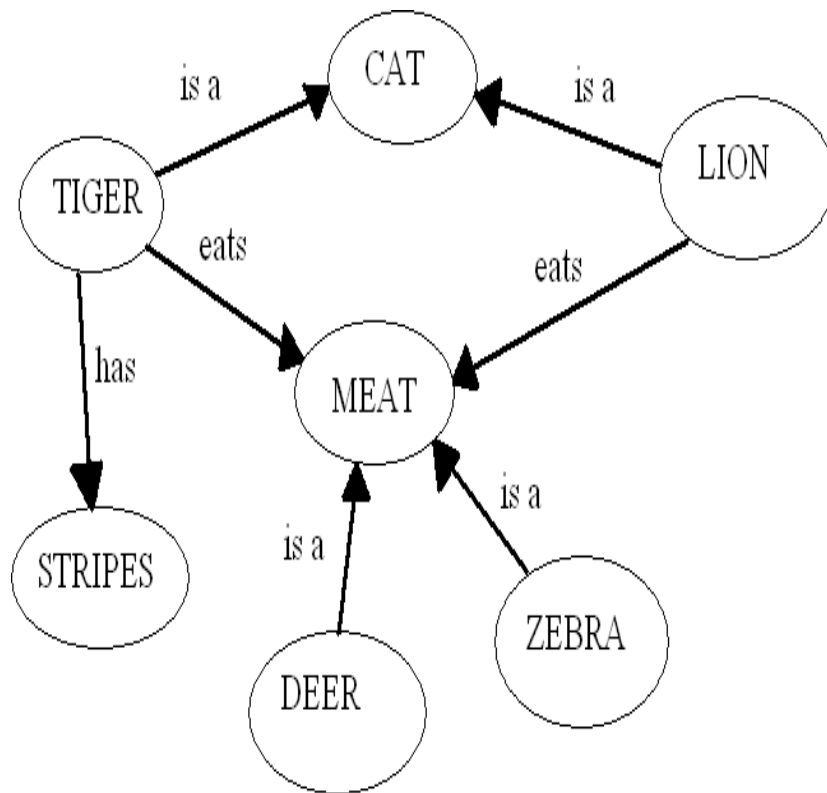
Artificial Intelligence Knowledge Representation

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Overview about knowledge Representation

- AI programs cannot solve a problem without storing information about the problem in a Knowledge Base
- Semantic nets are used to represent known facts before coding the Knowledge Base

Overview



cat(tiger) or

is_a(tiger,cat)

cat(lion) or

Is_a(lion,cat)

eats(tiger, meat)

eats(lion, meat)

has(tiger, stripes)

meat(deer)

meat(zebra)

eats(tiger, meat)

eats(lion, meat)

Semantic Nets

Mint and basil are herbs.

Pennyroyal and spearmint are types of mint. Genovese basil and purple basil are two types of basil.

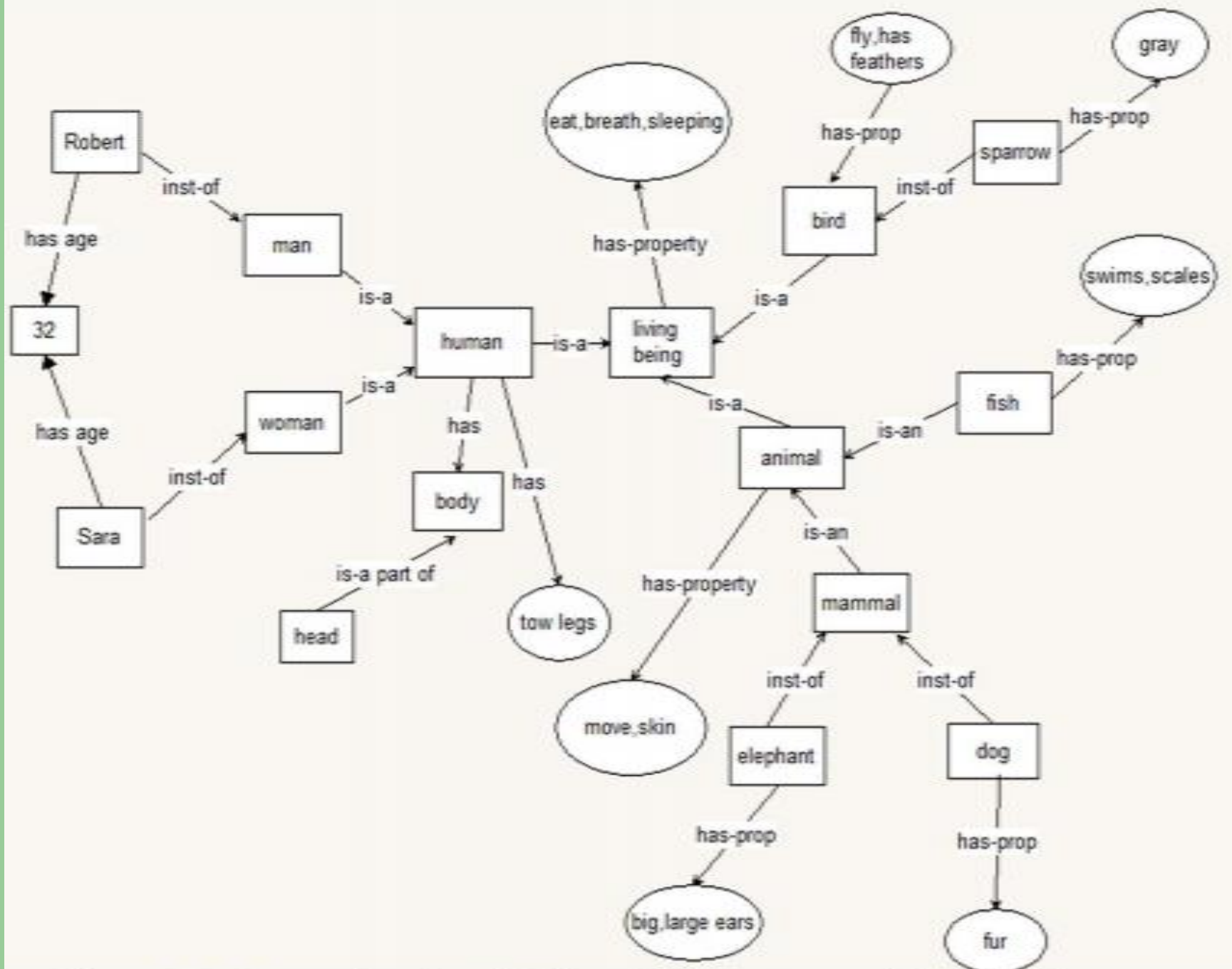
Mints can be used in making tea, basil is used In the making of pesto.

Assignment 1

- Question 1
 - Make Predicates of this semantic network.
- Question 2
 - Make Predicates of the Semantic network at slide 7
- Question 3
 - Make Semantic Network and Predicates of the following set of statements at slide 6.

Assignment 2

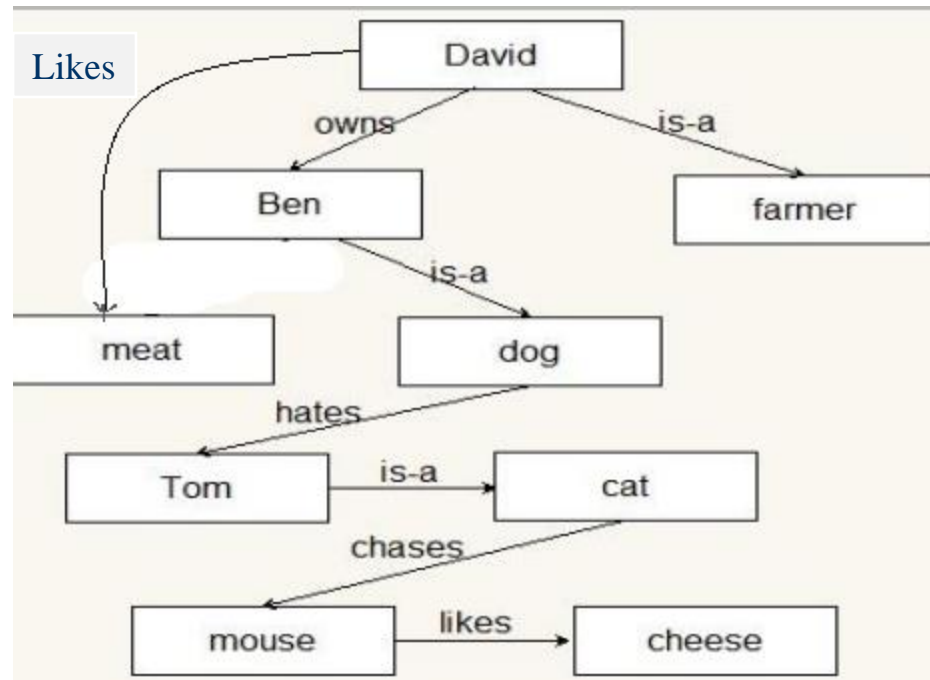
A fish has fins, scales, is cold blooded and has gills. There are lots of kinds of fish, including cod, haddock, shark, goldfish, and trout. A fish is a vertebrate - that means it has a backbone. I have a goldfish called Sammy. Cod, haddock and sharks are salt-water fish (they live in salt water). Goldfish and trout are fresh-water fish (they live in fresh water).



Frame Representation

- Data is represented in frames.
- Every frame provides a number of slots which are designated as slot values. This is the way the frame network is created.

Frame Representation



Frame name	Slot	Slot values
David	is-a	farmer
	Owns	Ben
	Likes	meat
Ben	is-a	dog
	Hates	Tom
Tom	is-a	cat
	Chases	mouse
Mouse	Likes	cheese

Diagrammatic form of frame representation

