Frame based Expert system

→ data structure

★ Frame : collection of slots.

slots

Computer:

Model	Processor	memory	price	
				→

slots: use to store value
- default value
- pointer to another frame
- rules: to obtain slot values.

Informations in slot:

- Frame Name: relationship of frame to other frame
  IBM Captiva 535 → Computer → Hardware
- slot Value: can be symbolic → Name
  numeric → Age
  boolean
  assigned when frame is created
- Default slot value: true: when no contrary evidence found
  car → four wheels
  chair → four legs
- Range slot value: range of the value:
  comp: $750 - $1500
- Procedural information: procedure attached to it to find value of the slot

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Script:

- use to represent events.
- components of script.

1. Entry condition - must be satisfied before events in script occur
2. Results : Condition that will be true after events in script occur
3. Props : object involved in events.
4. Roles : persons involved in events
5. Track :- variations on the script
   - track share components of script
6. Scenes - sequence of event that occur.
   - Events are represented in conceptual dependency form

// components for script : ss

Ex: Restaurant script:

Script: Restaurant
Track : coffe shop
Props: Tables
Menu
Food
check | Money

Roks: s = customer
w = waiter
c = cook
M = Cashier
o = owner

Entry conditions:

S is hungry
S has money

Results: S has less money
☺ has more money
S is not hungry
S is pleased (optional)

Scenes: 1. ~~Entering~~ SS

Search Optimization

- Random Search
- Informed Search
- Uninformed search

Random Search

Evolutionary Computing

- PS
- Genetic Algo
- ~~Ant Colony optimization~~ AE

- Goal of Random search
  - a case is picked up at random and it is evaluated
  - Then compare to arrive at an optimal solution.