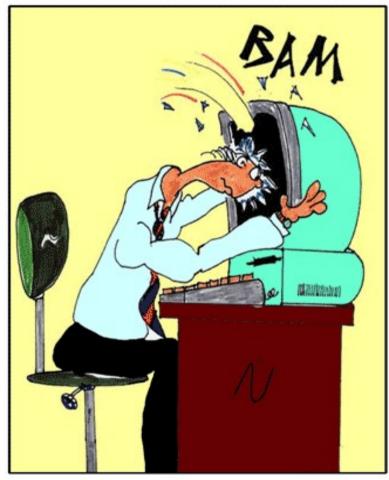
#### COMPSCI 367 Tutorial 2

#### Artificial Intelligence vs. Natural Stupidity



### Overview

- Debugging
- Deffunctions
  - Prefix form
    - Bind, test
- Error handling example
  - Assignment Hints

# Debugging

(watch facts)

(watch instances)

(watch slots)

(watch rules)

#### (watch activations)

(watch messages) ; used with objects (watch message-handlers) ; used with objects (watch generic-functions) ; used with objects (watch methods) (watch deffunctions) (watch compilations) ; on by default (watch statistics) (watch globals) (watch focus) (watch all)

; watch everything

; used with objects

; used with objects

#### Deffunction

(deffunction <function-name> [optional comment] (?arg1 ?arg2 ...?argM [\$?argN]) ;argument list. Last one may (<action1> ;be optional multifield arg. ;action1 to ;action1 to ;action(K-1) do not ;return a value ;only last action returned

Returned

## Bind

- Normally used on RHS of rule
- Create & assign value to variable on-the-fly
- Sometimes used with create\$

#### (defrule list-stuff

#### =>

(bind ?list(create\$ joe moe hoe))
(printout t ?list crlf))

#### test

- Compare numbers, variables and strings on the LHS of rule
- Rule will only be activated if test evaluates to true

(defrule is-greater-than (num1 ?num1) (num2 ?num2) (test (> ?num1 ?num2))

=>

(printout t ?num1 " is greater than " ?num2 crlf))

#### Incorrect Input Example

• How to deal with garbage input?

## **Assignment Hints**

- Many ways to do assignment
- E.g. poker pre-flop decision tree
- E.g. clips structures (deftemplate, deffacts, defrule)

