CLIPS

Create Expert systems using CLIPS

- **Install CLIPS (clips_windows_64_bit_installer_640.rar)**

- **Launch CLIPSDOS.exe**

- **Create a fact (assert) :**

CLIPS> (assert(father Ahmed Mohamed))

```
CLIPS> (assert(father Ahmed Mohamed))
<Fact-1>
CLIPS> (assert(mother Yamina Mohamed))
<Fact-2>
```

- **Preview the list of facts:**

CLIPS> (facts)

```
CLIPS> (facts)
f-1     (father Ahmed Mohamed)
f-2     (mother Yamina Mohamed)
For a total of 2 facts.
```

- **Create a rule (defrule): Rules must have different names**

CLIPS> (defrule parent
(father ?X ?Y)=>(assert (parent ?X ?Y)))

```
CLIPS> (defrule parent
(father ?X ?Y)=>(assert (parent ?X ?Y)))
CLIPS> (defrule parent1
(mother ?X ?Y)=>(assert (parent ?X ?Y)))
```

- **Re-Initialize the fact base (Run the inference engine):**

CLIPS> (run)

```
CLIPS> (run)
CLIPS> (facts)
f-1      (father Ahmed Mohamed)
f-2      (mother Yamina Mohamed)
f-3      (parent Yamina Mohamed)
f-4      (parent Ahmed Mohamed)
For a total of 4 facts.
```

Running trace (Family tree) :

```
CLIPS> (assert(father Ahmed Mohamed))
<Fact-1>
CLIPS> (assert(mother Yamina Mohamed))
<Fact-2>
CLIPS> (facts)
f-1      (father Ahmed Mohamed)
f-2      (mother Yamina Mohamed)
For a total of 2 facts.
CLIPS> (defrule parent
(father ?X ?Y)=>(assert (parent ?X ?Y)))
CLIPS> (defrule parent1
(mother ?X ?Y)=>(assert (parent ?X ?Y)))
CLIPS> (run)
CLIPS> (facts)
f-1      (father Ahmed Mohamed)
f-2      (mother Yamina Mohamed)
f-3      (parent Yamina Mohamed)
f-4      (parent Ahmed Mohamed)
For a total of 4 facts.
CLIPS> (assert(father Youcef Ahmed))
<Fact-5>
CLIPS> (assert(mother Fatma Ahmed))
<Fact-6>
```

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```
CLIPS> (facts)
f-1      (father Ahmed Mohamed)
f-2      (mother Yamina Mohamed)
f-3      (parent Yamina Mohamed)
f-4      (parent Ahmed Mohamed)
f-5      (father Youcef Ahmed)
f-6      (mother Fatma Ahmed)
For a total of 6 facts.
CLIPS> (defrule grandparent
(parent ?X ?Y)(parent ?Y ?Z)=>(assert(grandparent ?X ?Z)))
CLIPS> (run)
CLIPS> (facts)
f-1      (father Ahmed Mohamed)
f-2      (mother Yamina Mohamed)
f-3      (parent Yamina Mohamed)
f-4      (parent Ahmed Mohamed)
f-5      (father Youcef Ahmed)
f-6      (mother Fatma Ahmed)
f-7      (parent Fatma Ahmed)
f-8      (grandparent Fatma Mohamed)
f-9      (parent Youcef Ahmed)
f-10     (grandparent Youcef Mohamed)
For a total of 10 facts.
```

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