

1- Write a CLIPS rule called "check\_color" that prints the hair color of a person, given that the color is neither black nor brown.

```
(deftemplate person
  (slot name)
  (slot hair-color))

(defrule check_color
  (person (name ?name) (hair-color ?color&~black&~brown))
  =>
  (printout t ?name "has hair color:" ?color crlf))
```

```
CLIPS> (assert (person (name Alice) (hair-color blonde)))
<Fact-1>
CLIPS> (assert (person (name Bob) (hair-color black)))
<Fact-2>
CLIPS> (run)
Alice has hair color: blonde
```

2- Define a CLIPS template for a person where the name field can accept either symbols or strings, must contain between 2 to 4 items, and the age field should be an integer restricted to values between 20 and 25.

```
(deftemplate person
  (multislot name
    (type SYMBOL STRING)
    (cardinality 2 4))
  (slot age
    (type INTEGER)
    (range 20 25)))

CLIPS> (assert (person (name John Doe) (age 22)))
```

<Fact-1>

CLIPS> (assert (person (name John) (age 22)))

[CSTRNCHK1] Literal slot values found in the 'assert' command does not satisfy the cardinality restrictions for slot 'name'.