**Team 11  
ITRW 313  
Assignment 4**

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**#Problem Statement**

**#AND-OR Goal tree**

**#Planning of program**//Explain how the program was developed. Which tools was used etc.

**#End user documentation**

//just explain how the user would use the program

**Members:**

XN Sibiya

Thato Sibutha

Chicko Sithole

Jaco Sittig

Anjana Sivakumar

MM Skosana

Ruan Small

Nathaniel Smith

Ruan Snyman

V V Themba

**Code to be submitted by members** (Please remove your part after you have submitted your code)

**XN Sibiya**

((deftemplate current-value

(slot value))

(deftemplate required-value

(slot value))

**Anjana Sivakumar**

(deffunction ask-question (?question $?allowed-values)

(print ?question)

(bind ?response (read))

(if (or (eq ?response R5) (eq ?response 5))

then (bind ?answer 5))

(if (or (eq ?response R2) (eq ?response 2))

then (bind ?answer 2))

**Ruan Snyman**

(if (or (eq ?response R1) (eq ?response 1))

then (bind ?answer 1))

(if (or (eq ?response c50) (eq ?response 50))

then (bind ?answer 0.50))

(if (or (eq ?response c20) (eq ?response 20))

then (bind ?answer 0.20))

**Nathaniel Smith**

(if (or (eq ?response c10) (eq ?response 10))

then (bind ?answer 0.10))

(while (not (member$ ?response ?allowed-values)) do

(println crlf "'" ?answer "' is not allowed. Please try again:" crlf)

(print ?question)

(bind ?answer (read)))

?answer)

**Thato Sibutha**

(deffacts vending

(current-value (value 0))

(required-value (value 0)))

;;;####################

;;; STARTUP

;;;####################

(defrule title ""

(declare (salience 10))

=>

(println crlf "Soft Drink Vending Machine" crlf))

**Chicko Sithole**

(defrule ask-for-coin

?f1 <- (current-value (value ?x))

(required-value (value ?y))

(test (< ?x ?y))

=>

(bind ?sum (+ ?x (ask-question "Enter amount (R5, R2, R1, c50, c20 OR c10) :" R5 R2 R1 5 2 1 c50 c20 c10 50 20 10)) )

(modify ?f1 (value ?sum))

(print crlf "=============================================================" crlf)

(format t "The amount required is : R%5.2f%s%n" ?y "c ")

(format t "The current amount is : R%5.2f%s%n" ?sum "c ")

(println "=============================================================" crlf)

)

**MM Skosana**

(defrule checkA-money\_counter

(current-value (value ?x))

(required-value (value ?y))

(test (eq ?x ?y ) )

=>

(println crlf "You have just enough money to buy a soft drink!!" crlf)

)

**V V Themba**

(defrule checkB-money\_counter

(current-value (value ?x))

(required-value (value ?y))

(test (> ?x ?y ) )

=>

(bind ?change (- ?x ?y))

(format t "You have enough money to buy a soft drink, with a change of: R%5.2f%s%n" ?change " c")

)