Workshop I – Buying Shares

This workshop will take about 1-hour to complete.

Develop a small system to recommend the buying of shares. Note that the system will not tell the user to "buy" or "don't buy". Instead, it expresses a "buy" recommendation using certainty factors; e.g. **buy~{*cf 1.0*}**; **don't buy~{*cf -1.0*}**

CF is a method to handle imprecision in RBS. For e.g. the system will ask the user "*How certain are you that the company will pay good dividends*?" Unless you are an insider, you can only guess using whatever knowledge and past experience about the company.

This system uses the following 3 rules:

IF *pays-dividends* AND *good-mgmnt* AND *positive-earnings* THEN *buy-shares* (0.6)

IF *signing-large-contract* THEN *buy-shares* (1.0)

IF *penny-stocks* THEN *buy-shares* (-0.7)

These rules are usually derived from a highly experienced stock broker.

Task-1 (15 mins):

(1) Study & understand the code given in *BuyShares.clp*
    (a) Run the program
    (b) Use (facts) to see what is asserted (stored) in the working memory
(2) Convert rule-1 into CLIPS
    (a) Test your program to see that it combines the CF correctly
    (b) Study how the combination algorithm works (ref: Slide#44)

Task-2 (45 mins):

(3) Convert rule-3 into CLIPS
(4) Convert all *deffacts* to user prompts
(5) Write CLIPS code to display the recommendation with CF
(6) Write CLIPS code to perform +&- and -&- calculations (ref: slide#42)
    (a) Try your program with various combination of - and + input
    (b) Do the results of the combinations make sense to you?