GROUP-A

ASSIGNMENT NUMBER-3

1 Aim

Concurrency in LISP

2 Problem Statement

Implement an calculator (64 bit Binary Multiplication) application using concurrent lisp

3 Tools used

Operating System:Ubuntu 14.04 LTS(64 bit) or
windows, sbcl

4 Mathematical Model

Let S be the solution perspective of the class calculator such that

S={s, e, i, o, f, DD, NDD, success, failure}

s=initial state

e =end state.

i= input of the system.

o=output of the system.

f = functions used by the class

DD-deterministic data it helps identifying the load store functions or assignment functions.

NDD-Non deterministic data of the system S to be solved.

Success-desired outcome generated.

Failure-Desired outcome not generated or forced exit due to system error.

For class calculator:

s=initial state of the variables

{init()}- sets the default values for all three variables to respective values given in assignment.

e= and e be the end state i.e. result of the calculation

Input I = (I1,I2)

I1= value of first variable

I2= value of the second variable

O = result calculated according to function

f=add, multiply, subtract, divide

add = addition of the numbers

multiply = multiply the two numbers

subtract = subtraction of two numbers

divide = division of two numbers

Success- correct result generated and displayed on the console.

Failure- correct result not generated and error is shown on the console.