# Assignment Number: 1.1

# Problem Statement:

To calculate the position of ball at time t=5s.

# Inputs :

# Outputs:

X=Distance travelled by ball in 5sec

# Pseudocode:

* Read the variables ,,t,a
* Calculate x=+t+1/2a
* Display x
* Use x to determine the position
* Stop

# Program : free\_fall.m

%script file:free\_fall

%objective:To find the position of ball

%Record of revision

% date programmer description of change

% ==== ========== =====================

% 09/08/15 satyabrat sahoo original code

%

%Define variables

%x1=intial position

%v1=initial velocity

%t=time

%a=accelerarion

%x=distance travelled

%prompt the user for the input variables

x1 = input('initial position=');

v1 = input('initial velocity=');

t = input('time=');

a = input('accelerarion=');

%calculation

x=(x1)+(v1\*t)+(1/2)\*(a)\*(t^2);

%write the result

Disp(‘Result’);

disp(x);

# Test Results:

1.

initial position=10

initial velocity=15

time=5

accelerarion=-9.81

Result

-37.605