Source Code

%Parachute Simulation Project Task 0;

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clc;

clear all;

close all;

timeStep = .1;

time(1) = 0;

alt(1) = 4000;

g = 9.8;

vel(1) = 0;

i = 1;

km = .1;

while(alt(i)>0)

vel(i+1) = vel(i) + deltaV(vel(i), timeStep, time(i));

distFall = ((vel(i+1) + vel(i))/2)\*timeStep;

alt(i+1) = alt(i) - distFall;

time(i+1) = time(i) + timeStep;

i = i + 1;

end

disp(' ');

disp('Max Velocity')

disp(max(vel))

disp('Velocity before hitting ground')

disp(vel(i))

disp('Time taken')

disp(max(time))

subplot(1,2,1)

plot(vel);

xlabel('Time in s');

ylabel('Velocity in m/s');

subplot(1,2,2);

plot(alt);

xlabel('Time in s');

ylabel('Altitude in m');

Output

Max Velocity

58.7975

Velocity before hitting ground

5.8800

Time taken

194.9000

Graphs

