**OBERHIRHI FAVOUR OGHENENYORE**

**17/ENG01/019**

**CHEMICAL ENGINEERING**

**MATHS ASSIGNMENT V**

**Simulation File**

**commandwindow**

**clearvars**

**clc**

**format short g**

**syms t kp td tp**

**v = kp\*(1-exp(-((t-td)/tp)));**

**mdata = xlsread(' 1587203818odevbesdata', 'data1');**

**t1 = mdata(:,1);**

**v = mdata(:,2);**

**V1 = round(mdata(900,2),1)**

**t0 = ones(length(v),1)**

**t = [t0 t1]**

**[mcoeff, mcoeffint, mresid, mresidint, manova] = regress(v,t);**

**% mcoeff**

**% rsquaredvalue=mcoeff(1)**

**plot(t,v);**

**xlabel('Time (min)')**

**ylabel('Volume (m^3)')**

**grid on**

**Or**

**commandwindow**

**clearvars**

**clc**

**format short g**

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**mdata = xlsread('1587203818odevbesdata', 'data1');**

**t1 = mfig(:,1);**

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**V1 = round(mfig(900,2),1)**

**t0 = ones(length(v),1)**

**t = [t0 t1]**

**[mcoeff, mcoeffint, mresid, mresidint, mania] = regress (v,t);**

**%mcoeff**

**%rsquaredvalue = mcoeff(1);**

**mcoeff**

**manova**

**kp = V1**

**td = -mcoeff(1)**

**tp = mcoeff(2)**

**plot(t,v(:,1));**

**grid on**

**grid minor**

**Beta = nlinfit(V,t,vf,beta0)**

**Beta0 = [t0 t1 ]**

**Plot(t,Beta)**

****

**G**

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**mdata = xlsread(' 1587203818odevbesdata', 'data1');**

**t1 = mdata(:,1);**

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**V1 = round(mdata(900,2),1)**

**t0 = ones(length(v),1)**

**t = [t0 t1]**

**[mcoeff, mcoeffint, mresid, mresidint, manova] = regress(v,t);**

**% mcoeff**

**% rsquaredvalue=mcoeff(1)**

**plot(t,v(:,1), 'g-0', 'Marketindices',([1:40::length(t)]);**

**xlabel('Time (min)')**

**ylabel('Volume (m^3)')**

**grid on**

**GRAPH WAS GOTTEN WITH THE AID OF THE CODE ABOVE .....................**

**GRAPH OF VOLUME(m3) AGAINST TIME(min)**