Ahsanullah University of Science and Technology

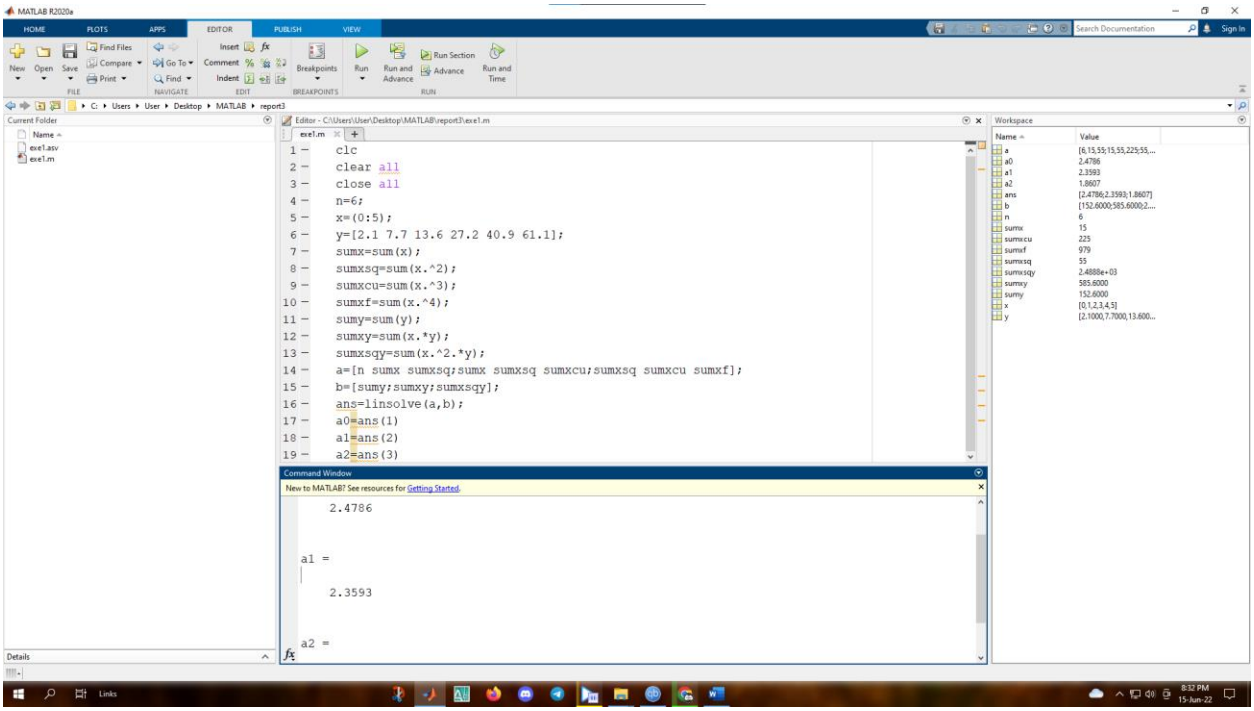
LAB REPORT

Course No: *EEE3110*
Course Name: *Numerical Technique Laboratory*

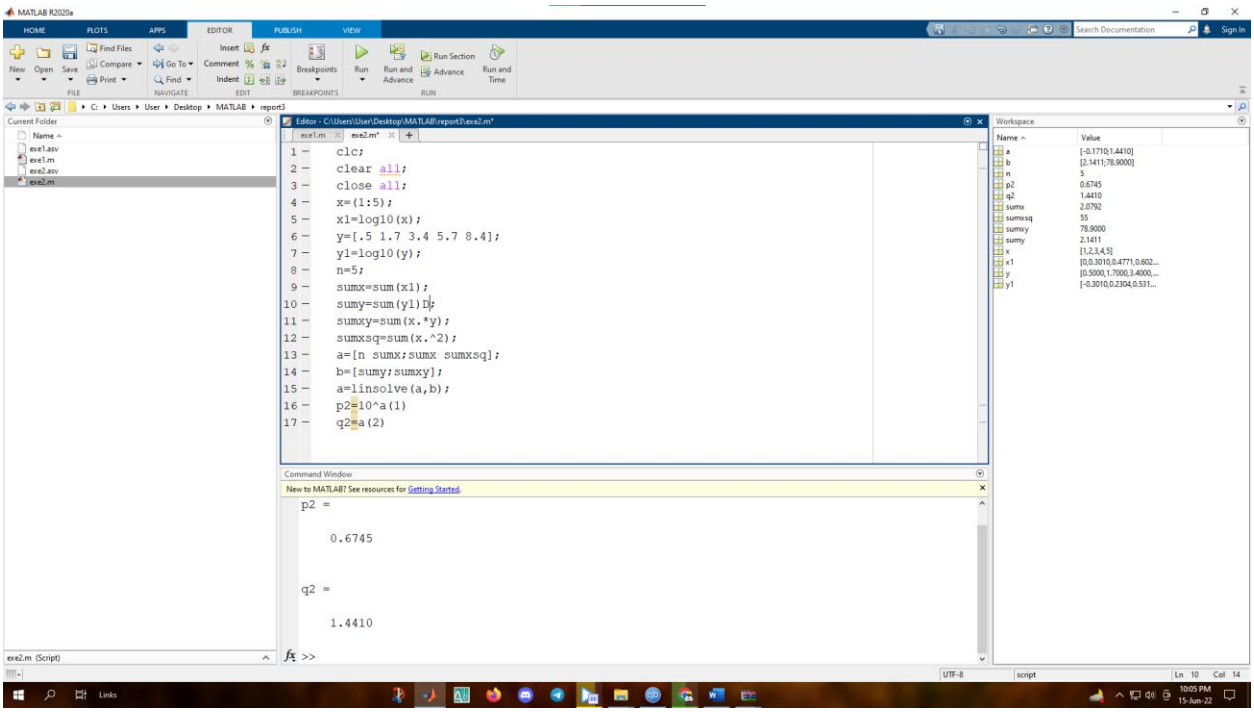
Exp No:03
Exp Name: Curve Fitting

- Name: *Md. Idrak Efaz*
- ID: *190205121*
- Year: 3 , Semester: 1
- Section: B-2
- Department of *EEE*.

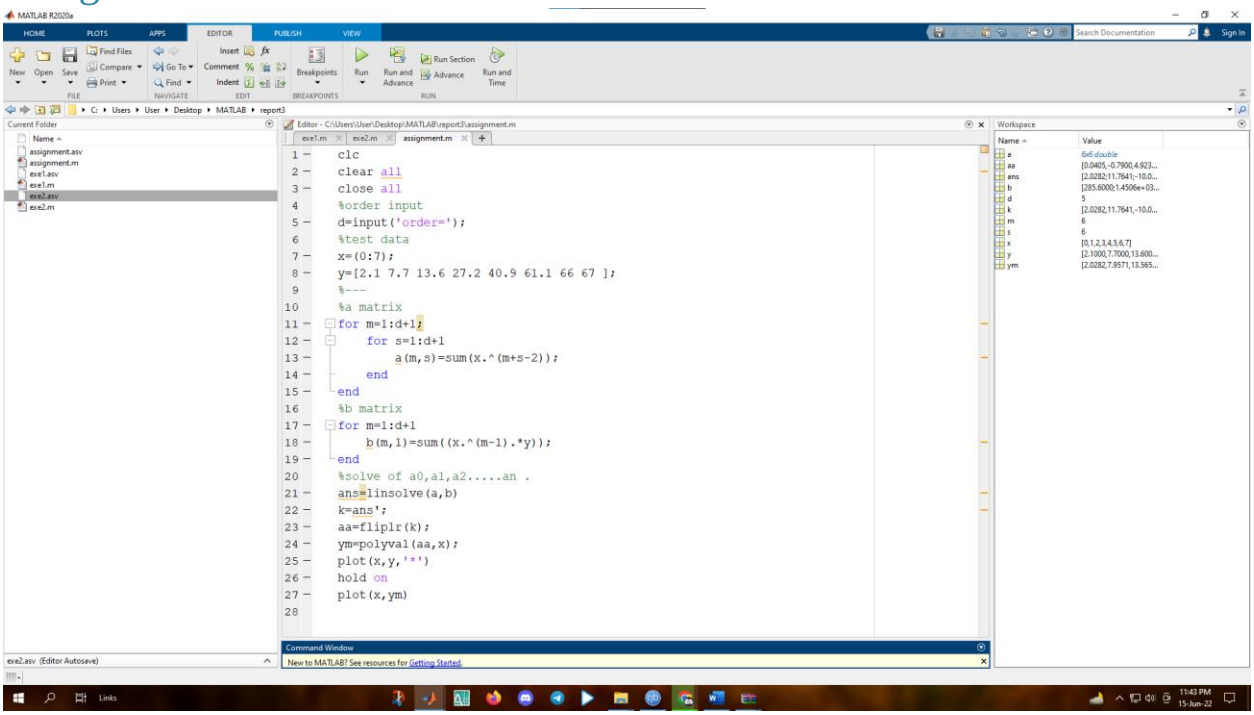
Exercise1

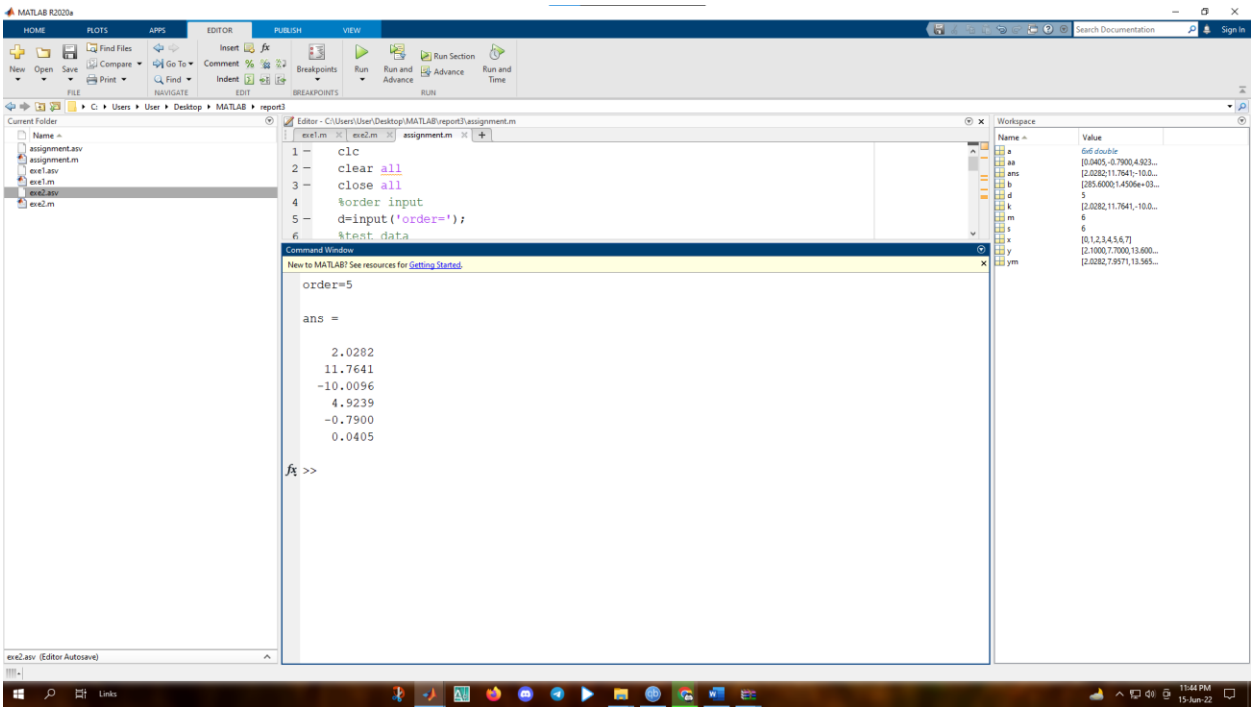


Exercise2



Assignment


clc
clear all
close all
%order input
d=input('order=');
%test data
x=(0:7);
y=[2.1 7.7 13.6 27.2 40.9 61.1 66 67];
%---
%a matrix
for m=1:d+1;
for s=1:d+1
a(m,s)=sum(x.^(m+s-2));
end
end
%b matrix
for m=1:d+1
b(m,1)=sum((x.^(m-1).*y));
end
%solve of a0,a1,a2.....an .
ans=linsolve(a,b)
k=ans';
aa=fliplr(k);
ym=polyval(aa,x);
plot(x,y,'*')
hold on
plot(x,ym)


MATLAB R2020a
clc
clear all
close all
%order input
d=input('order=');
%test data
order=5
ans =
2.0282
11.7641
-10.0096
4.9239
-0.7900
0.0405
>>

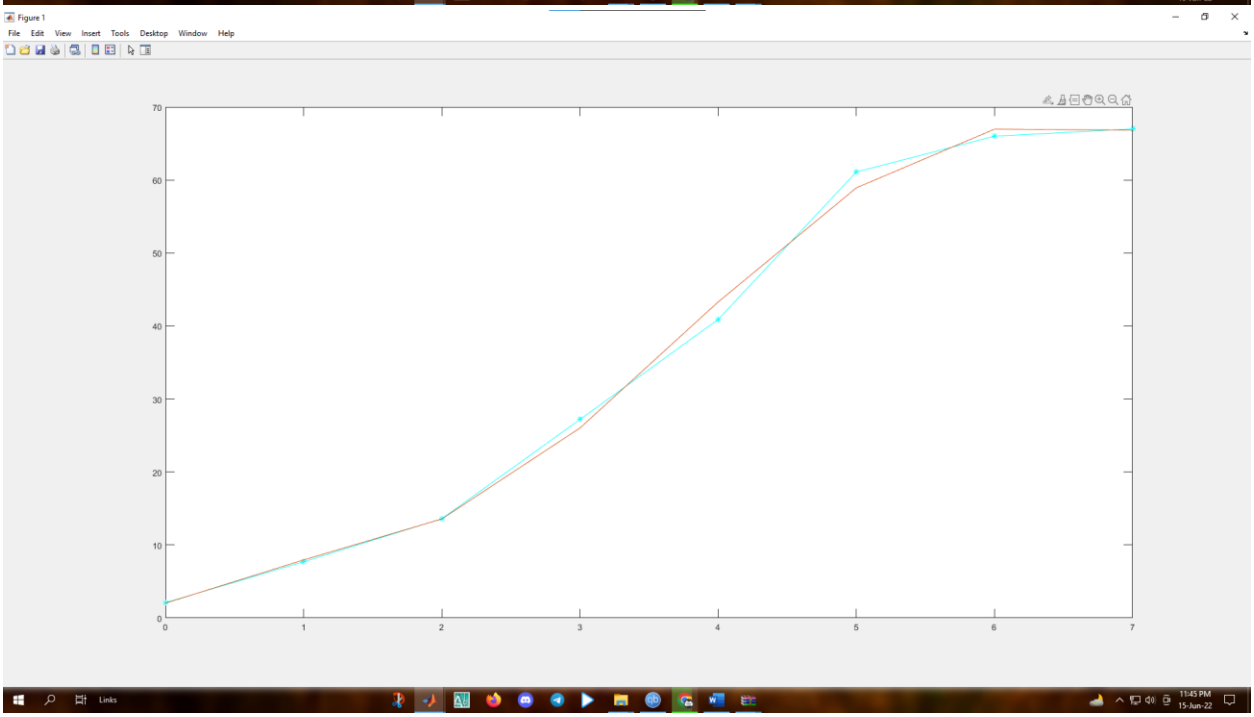


Figure 1
File Edit View Insert Tools Desktop Window Help
70
60
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30
20
10
0
0 1 2 3 4 5 6 7