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**Lab Report**

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| Assignment Title: | Lab Report | | | |
| Assignment No: | 1 | | Date of Submission: | 9 February 2021 |
| Course Title: | Data Communication | | | |
| Course Code: | 00068 | | Section: | J |
| Semester: | Spring | 2020-21 | Course Teacher: | Md Mehedi Hasan |

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| **No** | **Name** | **ID** | | **Program** | | **Signature** | |
| 1 | Md.Yousuf Afendi | 19-39887-1 | | BSc [CSE] | |  | |
| ***Faculty use only*** | | | | | | |
| FACULTYCOMMENTS | | | **Marks Obtained** | |  | |
|  | | |  | |  | |
|  | | |  | |  | |
|  | | | **Total Marks** | |  | |
|  | | |  | |  | |
|  | | |  | |  | |

Id:19-39887-1

AB-CDEFG-H

A=1, B=9, C=3, D=9, E=8, F=8, G=7, H=1

x1(t) = A1 cos(2π(CDEF)t + j1)

x2(t) = A2 cos(2π(CDEF)t + j2)

a) A1= AB=19,

A2 = GH=71,

CDEF=3988

j1 = DG=97°,

j2 = GE=78°,

x1=A1\*cos(2\*pi\*(CDEF)\*t+j1);

=>x1=71\*cos(2\*pi\*3988\*t+97);

x2=A2\*cos(2\*pi\*(CDEF)\*t+j2);

=> x2=71\*cos(2\*pi\*3988\*t+78);

b) A1=19

j1=97\*(pi/180)

b=CDEF=3988

t=-1.5/b:3/2000000:1.5/b

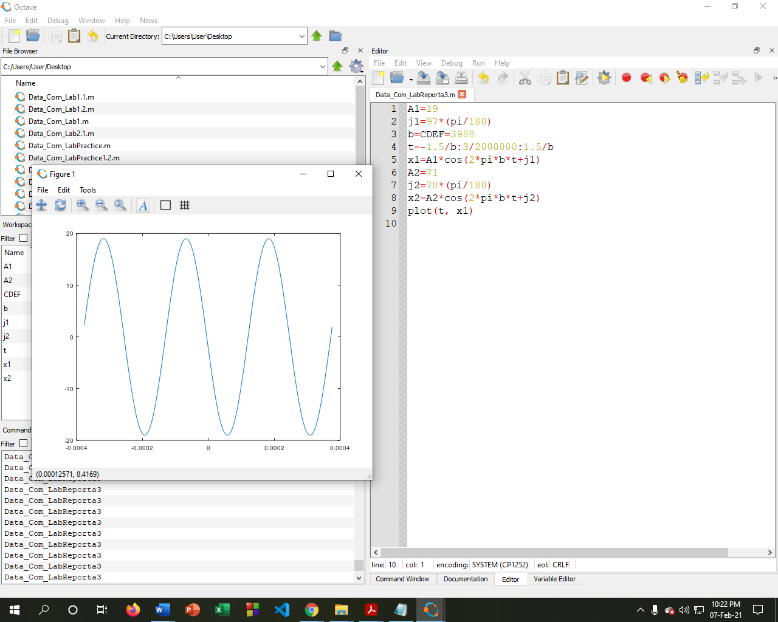
x1=A1\*cos(2\*pi\*b\*t+j1)

A2=71

j2=78\*(pi/180)

x2=A2\*cos(2\*pi\*b\*t+j2)

plot(t, x1)



c) A1=19

j1=97\*(pi/180)

b=CDEF=3988

t=-1.5/b:3/2000000:1.5/b

x1=A1\*cos(2\*pi\*b\*t+j1)

A2=71

j2=78\*(pi/180)

x2=A2\*cos(2\*pi\*b\*t+j2)

plot(t, x1)

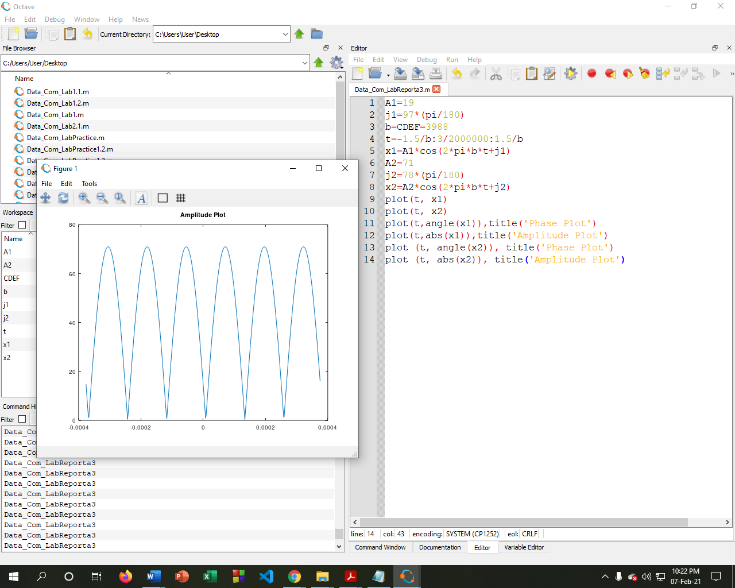
plot(t, x2)

plot(t,angle(x1)),title('Phase Plot')

plot(t,abs(x1)),title('Amplitude Plot')

plot (t, angle(x2)), title('Phase Plot')

plot (t, abs(x2)), title('Amplitude Plot')



d) A1=19

j1=97\*(pi/180)

b=CDEF=3988

t=-1.5/b:3/2000000:1.5/b

x1=A1\*cos(2\*pi\*b\*t+j1)

A2=71

j2=78\*(pi/180)

x2=A2\*cos(2\*pi\*b\*t+j2)

plot(t, x1)

plot(t, x2)

plot(t,angle(x1)),title('Phase Plot')

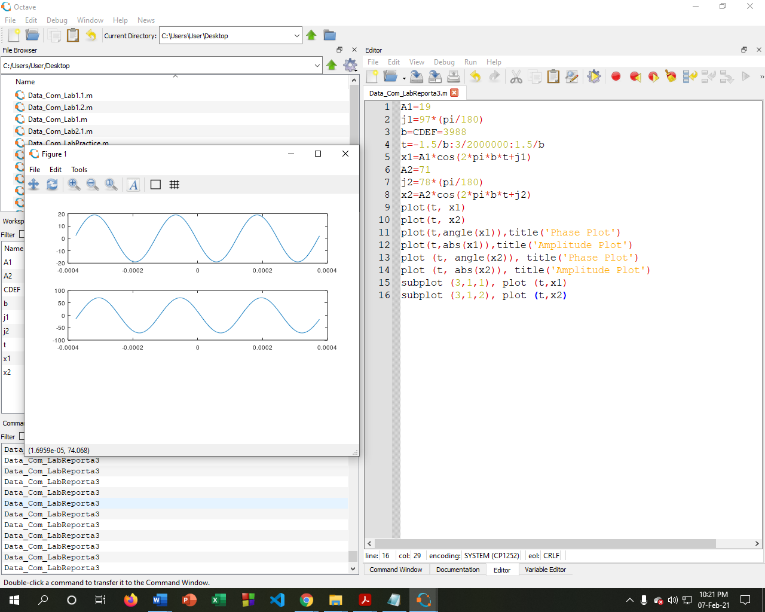
plot(t,abs(x1)),title('Amplitude Plot')

plot (t, angle(x2)), title('Phase Plot')

plot (t, abs(x2)), title('Amplitude Plot')

subplot (3,1,1), plot (t,x1)

subplot (3,1,2), plot (t,x2)



e) A1=19

j1=97\*(pi/180)

b=CDEF=3988

t=-1.5/b:3/2000000:1.5/b

x1=A1\*cos(2\*pi\*b\*t+j1)

A2=71

j2=78\*(pi/180)

x2=A2\*cos(2\*pi\*b\*t+j2)

plot(t, x1)

plot(t, x2)

plot(t,angle(x1)),title('Phase Plot')

plot(t,abs(x1)),title('Amplitude Plot')

plot (t, angle(x2)), title('Phase Plot')

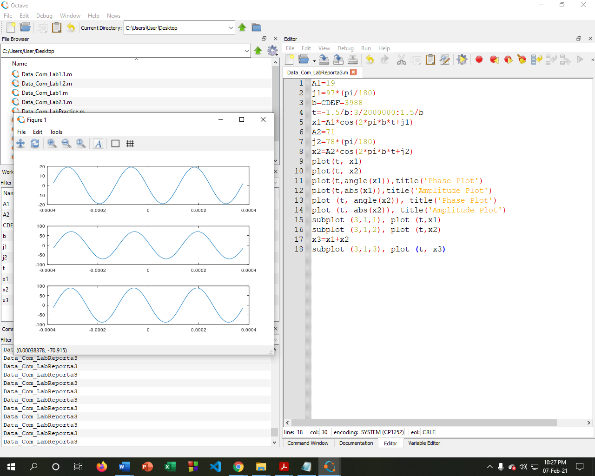
plot (t, abs(x2)), title('Amplitude Plot')

subplot (3,1,1), plot (t,x1)

subplot (3,1,2), plot (t,x2)

x3=x1+x2

subplot (3,1,3), plot (t, x3)



f) A1=19

j1=97\*(pi/180)

b=CDEF=3988

t=-1.5/b:3/2000000:1.5/b

x1=A1\*cos(2\*pi\*b\*t+j1)

A2=71

j2=78\*(pi/180)

x2=A2\*cos(2\*pi\*b\*t+j2)

plot(t, x1)

plot(t, x2)

plot(t,angle(x1)),title('Phase Plot')

plot(t,abs(x1)),title('Amplitude Plot')

plot (t, angle(x2)), title('Phase Plot')

plot (t, abs(x2)), title('Amplitude Plot')

subplot (3,1,1), plot (t,x1)

subplot (3,1,2), plot (t,x2)

x3=x1+x2

subplot (3,1,3), plot (t, x3)

subplot (3,1,3), plot (t, x3)

plot (t, abs(x3)), title('Amplitude Plot')

plot (t, angle(x3)), title('Phase Plot')

