**EGR 111 Quiz 1 MATLAB sheet**

**Make a vector:**

Var = start:increment:end

X = 10:-1:1

Declare: var = [matrix]

B = [2 4 6; 8 10 12]

Replace: B(pos­X,posY) = replacenumber

**Plots:**

X = var

Y = var

Plot(X,Y, ‘+’)

Xlabel(‘x’)

Ylabel(‘y’)

Title(‘insert title here’)

**Compare 2 functions**

figure

X = linspace(0,2\*pi);

Y = cos(x);

Z = sin(x);

Plot(x,y,x,z)

Xlabel(‘x’)

Ylabel(‘cos & sin’)

Title(‘insert title’)

Legend(‘sin’, ’cos’)

**Using subplots (separates)**

Figure

X= linspace(0,2\*pi);

Y=

Z=

Subplot(2,1,1)

Plot(x,y)

Xlabel(‘x’)

Ylabel(‘y1’)

title(‘insert title’)

subplot(2,1,2)

plot(x,z)

xlabel(‘x’)

ylabel(‘y2’)

title(‘insert title’)

**Copy Data from Excel:**

[data, txt, raw] = xlsread(‘file.xlsx’);

hours = data(:,1);

power=data(:,2);

**Audio**

[y,fs]=wavread(file.wav);

sound(y,fs)

**Generate backwards**

X=10:10:100

Xcopy = x(1:end)

Xreverse=x(end:1:1)

**Make tones**

fs = 44100; %Sampling freq (Hz)

Ts = 1/fs; %Sampling interval(s)

t= 0:Ts:0.5; %Sampling every Ts

E=0.5\*cos(2\*pi\*amp\*t);%tone1

D=0.5\*cos(2\*pi\*amp\*t);%tone2

C=0.5\*cos(2\*pi\*amp\*t);%tone3

s=zeros(1,fs\*0.1); %Silence

x= 0.5\*cos(2\*pi\*500\*t+pi/2);

plot(t,x) %Plots Sinusoid

sound(x,fs)

y=[tone1,tone2,tone1]%concat notes

soundsc(y,fs)