Text, letter

Description automatically generated

Exercise 1

Task A

A=1;

f=5;

fi=0;

w=2\*pi()\*f;

t=linspace(0,1,200);

for ii=1:length(t)

y(ii)=A\*cos(w\*t(ii)+fi);

end

%y=A\*cos(w\*t+fi); (Another solution to make a graph)

plot(t,y)

Graphical user interface, chart

Description automatically generated

Task B

Graphical user interface, chart

Description automatically generatedA= 0

Graphical user interface, chart

Description automatically generatedA = 10

If you change A , then Y axis increases, amplitude becomes higher.

Task C

Chart, line chart

Description automatically generated

W=6.28 if f = 1

If you change f, then omega also changes and if omega is changed, then period of the graph decreases (is decreasing). Check the graph under, in this case w(omega) = 62.83, f = 10 Hz

Graphical user interface, chart

Description automatically generated

Task D

Graphical user interface, chart

Description automatically generatedIf you change , then graph shifts on horizontal axis making phase shifts.

In this case graph fi is pi/2, so graph shifts for 90 degrees from Task A graph.

Task E