clc;

close all;

clear all;

x=[1 0 1 1 0 1];

nx=size(x,2);

sign=1;

i=1;

while i<nx+1

t = i:0.001:i+1-0.001;

if x(i)==1

unipolar\_code=square(t\*2\*pi,100);

polar\_code=square(t\*2\*pi,100);

bipolar\_code=sign\*square(t\*2\*pi,100);

sign=sign\*-1;

manchester\_code=-square(t\*2\*pi,50);

else

unipolar\_code=0;

polar\_code=-square(t\*2\*pi,100);

bipolar\_code=0;

manchester\_code=square(t\*2\*pi,50);

end

subplot(4,1,1);

plot(t,unipolar\_code);

ylabel('unipolar code');

hold on;

grid on;

axis([1 10 -2 2]);

subplot(4,1,2);

plot(t,polar\_code);

ylabel('polar code');

hold on;

grid on;

axis([1 10 -2 2]);

subplot(4,1,3);

plot(t,bipolar\_code);

ylabel('bipolar code');

hold on;

grid on;

axis([1 10 -2 2]);

subplot(4,1,4);

plot(t,manchester\_code);

ylabel('manchester code');

hold on;

grid on;

axis([1 10 -2 2]);

i=i+1;

end