```
clc;
pi=3.14;
x=[1,0,1,1,0,1,0,1];
nx=length(x);
sign=1;
i=1;
while i<nx+1
   t=i:0.001:i+1-0.001;
   if x(i)==1
      unipolar_nrz=squarewave(t*2*pi,100);
      ami_nrz=sign*squarewave(t*2*pi,100);

      unipolar_rz=(1+squarewave(t*2*pi,50))/2;
      polar_rz=(1+squarewave(t*2*pi,50))/2;
      polar_rz=(1+squarewave(t*2*pi,50))/2;
      ami_rz=sign*(1+squarewave(t*2*pi,50))/2;
     sign=sign*-1;
      manchester_code=squarewave(t*2*pi,50);
   else
      unipolar_nrz=0;
      ami_nrz=0;
      unipolar_rz=0;
      polar_rz=-(1+squarewave(t*2*pi,50))/2;
      ami_rz=0;
      manchester_code=-squarewave(t*2*pi,50);
   end;
   subplot(4,2,1);
   plot(t,unipolar_nrz);
   ylabel('unipolar_nrz');
   set(gca(),"grid",[1 1]);
   a=gca();
   a.data_bounds=[1 -2;9 2]
    subplot(4,2,5);
   plot(t,ami_nrz,'b');
   ylabel('ami_nrz');
   set(gca(),"grid",[1 1]);
   a=gca();
   a.data_bounds=[1 -2;9 2]
    subplot(4,2,2);
   plot(t,unipolar_rz,'r');
```

```
ylabel('unipolar_rz');
set(gca(),"grid",[1 1]);
a=gca();
a.data_bounds=[1 -2;9 2]
 subplot(4,2,4);
plot(t,polar_rz);
ylabel('polar_rz');
set(gca(),"grid",[1 1]);
a=gca();
a.data_bounds=[1 -2;9 2]
 subplot(4,2,3);
plot(t,ami_rz,'r');
ylabel('ami_rz');
set(gca(),"grid",[1 1]);
a=gca();
a.data_bounds=[1 -2;9 2]
 subplot(4,2,7);
plot(t,manchester_code,'r');
ylabel('manchester_code');
set(gca(),"grid",[1 1]);
a=gca();
a.data_bounds=[1 -2;9 2]
i=i+1;
end;
```