```
//EXAMPLE 8.3//
//flip flop//
clc
//clears the history//
close
//closes all other files//
clear
//clears the variables//
disp('The first three entries of the function table indicate the JK
flip flop has active high PRESET and clear inputs. Referrinf to fourth
and fifth entries of the function table, it has active low J and K
inputs The seventh row of function table confirms this. The output
responds to positive (LOW to HO+IGH) edges of clock input. Thus the
flip flop represented by the given function table is presettable,
clearable, positive edge triggered flip flop with active HIGH PRESET,
CLEAR and aCTIVE LOW J & K inputs')
disp ("since J=K=1 ,the flipflop simply toggles each time the clock
goes low , The waveform at Q has a period twice of that of the waveform
. In other words , the frequency of Q is only one-half of that of .
This circuit acts as a frequency divider the output frequency divide by
2. Note that Q changes state on NTs of the clock. The waveforms are as
shown in the figure");
t =50;
//taken time period//
p =1;
while p<t*10
//taking values for ploting the graph//
if p ==1 | modulo (p,t)==0 then
for k=1: t/2
cin (p+k)=0;
end
p=p+t/2;
else
cin (p)=1;
p=p+1;
end
end
t =100;
p =1;
while p<t*5
if p ==1 | modulo (p,t)==0 then
for k=1: t/2
dout (p+k) =0;
end
p=p+t/2;
else
dout (p)=1;
p=p+1;
end
end
y =[3 3];
subplot (2 ,1 ,1)
//plotin both the plots in a single window//
title ( ' input at pin C ' )
plot (cin)
plot (y)
```

```
subplot (2 ,1 ,2)
title('output at pin D' )
plot ( dout )
plot (y)
```