#include<stdio.h>

#include<conio.h>

#include<dos.h>

#include<graphics.h>

int main()

{

int gd=DETECT,gm;

clrscr();

initgraph(&gd,&gm,"C:\\TC\\BGI");

rectifier();

getch();

cleardevice();

return 0;

}

rectifier()

{

int choice;

float T2,T3,T4,T5,T6,V1,V2,V3,V4;

char v1[10],v2[10],t2[10],t3[10],t4[10],t5[10],t6[10];

printf("Enter the time period\n");

scanf("%f",&T3);

printf("Enter the peak voltage\n");

scanf("%f",&V1);

printf("\nRectification options\n\n1.Full Wave Rectification\n2.Half Wave Rectification\n");

printf("\nEnter your choice\n");

scanf("%d",&choice);

T2=0.5\*T3;

T4=1.5\*T3;

T5=2.0\*T3;

T6=2.5\*T3;

V2=0.5\*V1;

clrscr();

cleardevice();

switch(choice)

{

case 1:

rectangle(70,56,575,162); /\*input graph body\*/

outtextxy(70,75,"............ ............ ........... ............ ............");

outtextxy(70,102,"...............................................................");

outtextxy(70,130,"...............................................................");

outtextxy(160,55," . . . .");

outtextxy(160,65," . . . .");

outtextxy(160,75," . . . .");

outtextxy(160,85," . . . .");

outtextxy(160,95," . . . .");

outtextxy(160,105," . . . .");

outtextxy(160,115," . . . .");

outtextxy(160,125," . . . .");

outtextxy(160,135," . . . .");

outtextxy(160,145," . . . .");

outtextxy(160,155," . . . .");

outtextxy(70,170,"0s"); /\*input time axis\*/

sprintf(t3,"%0.1fs",T3);

outtextxy(250,170,t3);

sprintf(t2,"%0.1fs",T2);

outtextxy(150,170,t2);

sprintf(t4,"%0.1fs",T4);

outtextxy(350,170,t4);

sprintf(t5,"%0.1fs",T5);

outtextxy(450,170,t5);

sprintf(t6,"%0.1fs",T6);

outtextxy(550,170,t6);

outtextxy(310,190,"Time");

outtextxy(0,100,"Vol"); /\*input voltage axis\*/

sprintf(v1,"-%0.1f",V1);

outtextxy(30,155,v1);

sprintf(v2,"-%0.1f",V2);

outtextxy(30,130,v2);

outtextxy(55,110,"0");

sprintf(v1,"%0.1f",V1);

outtextxy(40,50,v1);

sprintf(v2,"%0.1f",V2);

outtextxy(40,80,v2);

outtextxy(280,40,"INPUT SIGNAL");

setcolor(YELLOW); /\*input sinusoidal curve\*/

arc(122,110,0,180,50);

arc(222,110,180,360,50);

arc(322,110,0,180,50);

arc(422,110,180,0,50);

arc(522,110,0,180,50);

setcolor(WHITE);

rectangle(70,248,575,352); /\*output graph body\*/

outtextxy(70,270,"...............................................................");

outtextxy(70,295,"...............................................................");

outtextxy(70,320,"...............................................................");

outtextxy(160,250," . . . .");

outtextxy(160,260," . . . .");

outtextxy(160,270," . . . .");

outtextxy(160,280," . . . .");

outtextxy(160,290," . . . .");

outtextxy(160,300," . . . .");

outtextxy(160,310," . . . .");

outtextxy(160,320," . . . .");

outtextxy(160,330," . . . .");

outtextxy(160,340," . . . .");

setcolor(GREEN);

arc(122,300,0,180,50); /\*output full wave rectified curve\*/

arc(222,300,0,180,50);

arc(322,300,0,180,50);

arc(422,300,0,180,50);

arc(522,300,0,180,50);

setcolor(WHITE);

outtextxy(70,360,"0s"); /\*output time axis\*/

sprintf(t3,"%0.1fs",T3);

outtextxy(250,360,t3);

sprintf(t2,"%0.1fs",T2);

outtextxy(150,360,t2);

sprintf(t4,"%0.1fs",T4);

outtextxy(350,360,t4);

sprintf(t5,"%0.1fs",T5);

outtextxy(450,360,t5);

sprintf(t6,"%0.1fs",T6);

outtextxy(550,360,t6);

outtextxy(310,380,"Time");

outtextxy(0,290,"Vol"); /\*output voltage axis\*/

sprintf(v1,"-%0.1f",V1);

outtextxy(30,345,v1);

sprintf(v2,"-%0.1f",V2);

outtextxy(30,320,v2);

outtextxy(55,300,"0");

sprintf(v1,"%0.1f",V1);

outtextxy(40,250,v1);

sprintf(v2,"%0.1f",V2);

outtextxy(40,275,v2);

outtextxy(210,230,"OUTPUT SIGNAL: FULL WAVE RECTIFIED");

break;

case 2:

rectangle(70,56,575,162); /\*input graph body\*/

outtextxy(70,75,"............ ............ ........... ............ ............");

outtextxy(70,102,"...............................................................");

outtextxy(70,130,"...............................................................");

outtextxy(160,55," . . . .");

outtextxy(160,65," . . . .");

outtextxy(160,75," . . . .");

outtextxy(160,85," . . . .");

outtextxy(160,95," . . . .");

outtextxy(160,105," . . . .");

outtextxy(160,115," . . . .");

outtextxy(160,125," . . . .");

outtextxy(160,135," . . . .");

outtextxy(160,145," . . . .");

outtextxy(160,155," . . . .");

outtextxy(70,170,"0s"); /\*input time axis\*/

sprintf(t3,"%0.1fs",T3);

outtextxy(250,170,t3);

sprintf(t2,"%0.1fs",T2);

outtextxy(150,170,t2);

sprintf(t4,"%0.1fs",T4);

outtextxy(350,170,t4);

sprintf(t5,"%0.1fs",T5);

outtextxy(450,170,t5);

sprintf(t6,"%0.1fs",T6);

outtextxy(550,170,t6);

outtextxy(310,190,"Time");

outtextxy(0,100,"Vol"); /\*input voltage axis\*/

sprintf(v1,"-%0.1f",V1);

outtextxy(30,155,v1);

sprintf(v2,"-%0.1f",V2);

outtextxy(30,130,v2);

outtextxy(55,110,"0");

sprintf(v1,"%0.1f",V1);

outtextxy(35,50,v1);

sprintf(v2,"%0.1f",V2);

outtextxy(35,80,v2);

outtextxy(280,40,"INPUT SIGNAL");

setcolor(YELLOW); /\*input sinusoidal curve\*/

arc(122,110,0,180,50);

arc(222,110,180,360,50);

arc(322,110,0,180,50);

arc(422,110,180,0,50);

arc(522,110,0,180,50);

setcolor(WHITE);

rectangle(70,248,575,352); /\*output graph body\*/

outtextxy(70,270,"...............................................................");

outtextxy(70,295,"...............................................................");

outtextxy(70,320,"...............................................................");

outtextxy(160,250," . . . .");

outtextxy(160,260," . . . .");

outtextxy(160,270," . . . .");

outtextxy(160,280," . . . .");

outtextxy(160,290," . . . .");

outtextxy(160,300," . . . .");

outtextxy(160,310," . . . .");

outtextxy(160,320," . . . .");

outtextxy(160,330," . . . .");

outtextxy(160,340," . . . .");

setcolor(GREEN);

arc(122,300,0,180,50); /\*output half wave rectified curve\*/

arc(322,300,0,180,50);

arc(522,300,0,180,50);

setcolor(WHITE);

outtextxy(70,360,"0s"); /\*output time axis\*/

sprintf(t3,"%0.1fs",T3);

outtextxy(250,360,t3);

sprintf(t2,"%0.1fs",T2);

outtextxy(150,360,t2);

sprintf(t4,"%0.1fs",T4);

outtextxy(350,360,t4);

sprintf(t5,"%0.1fs",T5);

outtextxy(450,360,t5);

sprintf(t6,"%0.1fs",T6);

outtextxy(550,360,t6);

outtextxy(310,380,"Time");

outtextxy(0,290,"Vol"); /\*output voltage axis\*/

sprintf(v1,"-%0.1f",V1);

outtextxy(30,345,v1);

sprintf(v2,"-%0.1f",V2);

outtextxy(30,320,v2);

outtextxy(55,300,"0");

sprintf(v1,"%0.1f",V1);

outtextxy(35,250,v1);

sprintf(v2,"%0.1f",V2);

outtextxy(35,275,v2);

outtextxy(210,230,"OUTPUT SIGNAL: HALF WAVE RECTIFIED");

break;

default:

printf("Error\n");

}

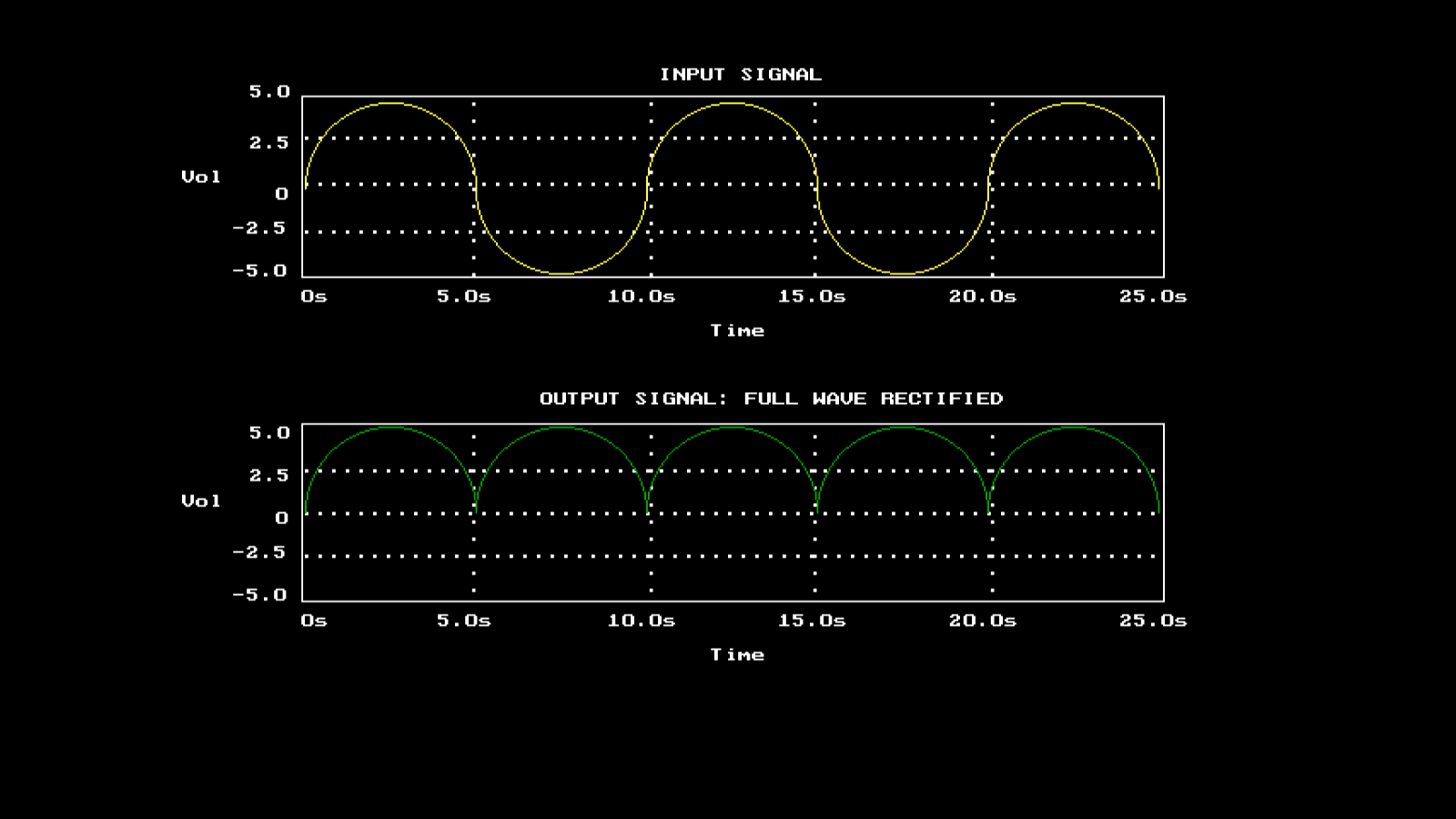
getch();

return 0;

}

**OUTPUT:**

**Enter time period  
10  
Enter peak voltage  
5  
  
Rectification options  
  
1.Full Wave Rectification  
2.Half Wave Rectification  
  
Enter your choice  
1**

****