#include<graphics.h>

#include<dos.h>

#include<math.h>

#include<stdlib.h>

#include<stdio.h>

#include<conio.h>

union REGS i, o;

int leftcolor[15];

int get\_key()

{

union REGS i, o;

i.h.ah=0;

int86(22,&i,&o);

return(o.h.ah);

}

void draw\_color\_panel()

{

int left,top,c,color;

left=100;

top=436;

color=getcolor();

setcolor(GREEN);

rectangle(4,431,635,457);

setcolor(RED);

settextstyle(TRIPLEX\_FONT,0,2);

outtextxy(10,431,"Colors: ");

for(c=1;c<=15;c++)

{

setfillstyle(SOLID\_FILL,c);

bar(left,top,left+16,top+16);

leftcolor[c-1]=left;

left+=26;

}

setcolor(color);

}

void draw\_shape\_panel()

{

int left,top,c,color;

left=529;

top=45;

color=getcolor();

setcolor(GREEN);

rectangle(525,40,633,255);

for(c=1;c<=7;c++)

{

rectangle(left,top,left+100,top+25);

top+=30;

}

setcolor(RED);

outtextxy(530,45,"Bar");

outtextxy(530,75,"Line");

outtextxy(530,105,"Pixel");

outtextxy(530,135,"Ellipse");

outtextxy(530,165,"Freehand");

outtextxy(530,195,"Rectangle");

outtextxy(530,225,"Clear");

setcolor(color);

}

void change\_color(int x,int y)

{

int c;

for(c=0;c<=13;c++)

{

if(x>leftcolor[c]&&x<leftcolor[c+1]&&y>437&&y<453)

setcolor(c+1);

if(x>leftcolor[14]&&x<505&&y>437&&y<453)

setcolor(WHITE);

}

}

char change\_shape(int x,int y)

{

if(x>529&&x<625&&y>45&&y<70)

return 'b';

else if(x>529&&x<625&&y>75&&y<100)

return 'l';

else if(x>529&&x<625&&y>105&&y<130)

return 'p';

else if(x>529&&x<625&&y>135&&y<160)

return 'e';

else if(x>529&&x<625&&y>165&&y<190)

return 'f';

else if(x>529&&x<625&&y>195&&y<220)

return 'r';

else if(x>529&&x<625&&y>225&&y<250)

return 'c';

}

void showmouseptr()

{

i.x.ax=1;

int86(0x33,&i,&o);

}

void hidemouseptr()

{

i.x.ax=2;

int86(0x33,&i,&o);

}

void restrictmouseptr(int x1,int y1,int x2,int y2)

{

i.x.ax=7;

i.x.cx=x1;

i.x.dx=x2;

int86(0x33,&i,&o);

i.x.ax=8;

i.x.cx=y1;

i.x.dx=y2;

int86(0x33,&i,&o);

}

void getmousepos(int \*button,int \*x,int \*y)

{

i.x.ax=3;

int86(0x33,&i,&o);

\*button=o.x.bx;

\*x=o.x.cx;

\*y=o.x.dx;

}

int main()

{

int gd=DETECT,gm;

int maxx,maxy,x,y,button,prevx,prevy,temp1,temp2,key,color;

char ch='f';

initgraph(&gd,&gm,"c:\\Turboc3\\BGI");

maxx=getmaxx();

maxy=getmaxy();

setcolor(BLUE);

rectangle(0,0,maxx,maxy);

setcolor(WHITE);

settextstyle(8,HORIZ\_DIR,2);

outtextxy(maxx/2-180,maxy-28,"press Esc for Exit");

draw\_color\_panel();

draw\_shape\_panel();

setviewport(1,1,maxx-1,maxy-1,1);

restrictmouseptr(1,1,maxx-1,maxy-1);

showmouseptr();

rectangle(2,2,518,427);

setviewport(1,1,519,428,1);

while(1)

{

if(kbhit())

{

key=get\_key();

if(key==1)

{

closegraph();

exit(0);

}

}

getmousepos(&button,&x,&y);

if(button==1)

{

if(x>4&&x<635&&y>431&&y<457)

change\_color(x,y);

else if(x>529&&x<625&&y>40&&y<250)

ch=change\_shape(x,y);

temp1=x;

temp2=y;

if(ch=='f')

{

hidemouseptr();

while(button==1)

{

line(temp1,temp2,x,y);

temp1=x;

temp2=y;

getmousepos(&button,&x,&y);

}

showmouseptr();

}

while(button==1)

getmousepos(&button,&x,&y);

hidemouseptr();

if(ch=='p')

putpixel(x,y,getcolor());

else if(ch=='b')

{

setfillstyle(SOLID\_FILL,getcolor());

bar(temp1,temp2,x,y);

}

else if(ch=='l')

line(temp1,temp2,x,y);

else if(ch=='e')

ellipse(temp1,temp2,0,360,abs(x-temp1),abs(y-temp2));

else if(ch=='r')

rectangle(temp1,temp2,x,y);

else if(ch=='c')

{

ch='f';

clearviewport();

color=getcolor();

setcolor(WHITE);

rectangle(2,2,518,427);

setcolor(color);

}

showmouseptr();

}

}

}