**Assignment no: 02 (On UBUNTU)**

**//Aim:Writing a C++ class for displaying pixel or point on the screen.**

#include<iostream>

#include<graphics.h>

using namespace std;

class pixel

{

private:

int xc,yc,cl;

public:

pixel()

{

xc=yc=0;

cl=15;

}

void setcor(int x,int y)

{

xc=x;

yc=y;

}

void setcolor(int p)

{

cl=p;

}

void draw()

{

putpixel(xc,yc,cl);

}

};

int main()

{

int x1,y1,cl1,ch;

char a;

int gd=DETECT,gm=VGAMAX;

initgraph(&gd,&gm,NULL);

pixel p1;

do

{

cout<<" 1.PIXEL BY HARDCOADED VALUE..";

cout<<"\n2.ACCEPTING CO-ORDINATES..";

cout<<"\n3.DRAWING PIXEL ON SCREEN..";

cout<<"\nEnter your choice??";

cin>>ch;

switch(ch)

{

case 1:

p1.setcor(50,50);

p1.setcolor(2);

p1.draw();

break;

case 2:

cout<<"\nEnter Your X & Y co-ordinates??";

cin>>x1>>y1;

p1.setcor(x1,y1);

cout<<"\nEnter Color For Pixel??";

cin>>cl1;

p1.setcolor(cl1);

break;

case 3:

p1.draw();

break;

}

cout<<"\nDO U Want To Continue y OR n??";

cin>>a;

}while(a!='n');

getch();

closegraph();

return 0;

}

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**Assignment no: 02 (On Windows)**

**//Aim:Writing a C++ class for displaying pixel or point on the screen.**

/\* CLASS :S E COMP

DRAW A PIXEL

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#include<iostream.h>

#include<conio.h>

#include<graphics.h>

#include<stdlib.h>

#include<string.h>

#include<stdio.h>

#include<dos.h>

class pixel

{

      int x,y,color;

      public:

            void disco(int,int,int);

            pixel()

            {

                  x=500;

                  y=400;

                  color=10;

            }

            pixel(int a,int b,int c)

            {

                  x=a;

                  y=b;

                  color=c;

            }

            pixel(int a,int b)

            {

                  x=a;

                  y=b;

                  color=10;

            }

            pixel(int a)

            {

                  x=a;

                  y=400;

                  color=10;

            }

            ~pixel()

            {

            }

            void init();

            void fun(int,int,int);

            inline void draw()

            {

                  int k;

                  putpixel(x,y,color);

                  k=getpixel(x,y);

                  cout<<"\n COLOR IS:"<<k;

            }

};    //class ends

      void pixel::init()

      {

            int gm,gd;

            gd=DETECT;

            initgraph(&gd,&gm,"..\\bgi");

      }

      void pixel::fun(int x=300,int y=300,int z=10)

      {

            int q;

            putpixel(x,y,z);

            q=getpixel(x,y);

            cout<<"\n COLOR IS:"<<q;

      }

      void pixel::disco(int p,int q,int r)

      {

                   char a[4],b[4],c[3];

            itoa(p,a,10);

            itoa(q,b,10);

            itoa(r,c,10);

            gotoxy(2,2);

            cout<<"X- COORDINATE=="<<a<<endl;

            cout<<"Y-COORDINATE=="<<b;

      }

      void main()

      {

            int ch,ch1,a,b,c,d,p,q,r,s,r1,t;

            clrscr();

            pixel p1;

            p1.init();

            do

            {

                  cout<<"\n 1.PUT USING CONSTRUCTOR\n 2.PUT USING FUNCTION\n 3.PUT USING ARROW KEYS\n 0.EXIT";

                  cout<<"\n Enter your choice:";

                  cin>>ch1;

                  switch(ch1)

                  {

                        case 0: break;

                        case 1:  cout<<"\n 1.ALL VALUES\n 2.ONE VALUE\n 3.TWO VALUES\n 4.ALL DEFAULT\n";

                                     cout<<"\n Enter your choice:";

                                     cin>>ch;

                                     switch(ch)

                                    {

                                    case 1: cout<<"\n Enter the x,y co-ordinates and color(1-15):";

                                                cin>>a>>b>>c;

                                                pixel p1(a,b,c);

                                                p1.draw();

                                                break;

                                    case 2: cout<<"\n Enter the one Attribute of Pixel:";

                                                cin>>a;

                                                pixel p2(a);

                                                p2.draw();

                                                break;

                                    case 3: cout<<"\n Enter the two Attributes of Pixel:";

                                                cin>>a>>b;

                                                pixel p3(a,b);

                                                p3.draw();

                                                break;

                                    case 4: pixel p4;

                                                p4.draw();

                                                break;

                                    } //switch

                                    break;

                        case 2:     int z;

                                          cout<<"\n1. No Parameters\n2. One Parameter\n3. Two Parameters\n4. All Attributes";

                                          cin>>z;

                                          switch(z)

                                          {

                                                case 1: p1.fun();

                                                            break;

                                                case 2: cout<<"\n Enter the value of X co-ordinate:";

                                                            cin>>s;

                                                            p1.fun(s);

                                                            break;

                                                case 3: cout<<"\n Enter the X and Y co-ordinate:";

                                                            cin>>s>>r1;

                                                            p1.fun(s,r1);

                                                            break;

                                                case 4: cout<<"\n Enter the All Attributes about pixel:";

                                                            cin>>s>>r1>>t;

                                                            p1.fun(s,r1,t);

                                                            break;

                                                }

                                                break;

                        case 3:  cout<<"\n Enter the starting co ordinates:";

                                    cin>>a>>b;

                                    p=a;

                                    q=b;

                                    r=1;

                                    clrscr();

                                    cleardevice();

                                    //PRESS 0 TO END

                                    do

                                    {

                                          d=getch();

                                          p1.disco(p,q,r);

                                          putpixel(p,q,r);

                                          if(d==77)

                                                p++,r++;

                                          else if(d==72)

                                                q--,r++;

                                          else if(d==80)

                                                q++,r++;

                                          else if(d==75)

                                                p--,r++;

                                          if(d=='0')

                                                break;

                                    }while(p>=0&& q>=0 &&p<650 && q<650);

                              int e,t;

                              cout<<"\n Do you want to Erase:(1/0)";

                              cin>>t;

                              if(t==1)

                                {

                                    cout<<"\n8.UP\n6.RIGHT\n2.DOWN\n4.LEFT\n0.END";

                                    cout<<"\n Enter color to Erase:";

                                    cin>>e;

                                    do

                                    {

                                          d=getch();

                                          p1.disco(p,q,e);

                                          putpixel(p,q,e);

                                          if(d=='6')

                                                p++;

                                          else if(d=='8')

                                                q--;

                                          else if(d=='2')

                                                q++;

                                          else if(d=='4')

                                                p--;

                                          if(d=='0')

                                                break;

                                    }while(d!='0');

                                }

                                else

                                    break;

                  } //switch

                  delay(2000);

                  clrscr();

                  cleardevice();

      }while(ch1!=0);

getch();

closegraph();

}