**ST. Xavier's College**

**Maitighar, Kathmandu**



**LAB ASSIGNMENT #3**

**DDA line drawing algorithm**

# 

# SUBMITTED BY

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**STATEMENT: Implement DDA line drawing algorithm in C++ builder**

**Source code of DDA Algorithm**

//---------------------------------------------------------------------------

#include <vcl.h>

#pragma hdrstop

#include "dda.h"

//---------------------------------------------------------------------------

#pragma package(smart\_init)

#pragma resource "\*.dfm"

int x,y,x1,y1,x2,y2,dx,dy;

floatm,ix,iy;

TForm1 \*Form1;

//---------------------------------------------------------------------------

\_\_fastcall TForm1::TForm1(TComponent\* Owner)

: TForm(Owner)

{

}

//---------------------------------------------------------------------------

void \_\_fastcall TForm1::Button1Click(TObject \*Sender)

{

x1=StrToInt(Edit1->Text);

y1=StrToInt(Edit2->Text);

x2=StrToInt(Edit3->Text);

y2=StrToInt(Edit4->Text);

dx=x2-x1;

dy=y2-y1;

m=dx/dy;

x=x1;

x=x2;

Image1->Canvas->Pixels[x][y]=RGB(115,145,100);

if(dy>dx)

{

ix=1;

iy=m;

}

else

{

ix=1/m;

iy=1;

}

do

{

x=x1+ix;

y=y1+1;

x1=x;

y1=y;

Image1->Canvas->Pixels[x][y]=RGB(115,145,100);

}while(x1<x2);

}

//---------------------------------------------------------------------------

**Output Screen:**

