**ST.XAVIER’S COLLEGE**

MAITIGHAR, KATHMANDU



Computer Graphics

Assignment #3

Submitted By:

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2nd year/ 4th semester

Submitted to:

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**STATEMENT**

Write a program to draw a line using DDA algorithm in C++ builder.

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**SOURCE CODE**

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

#include <vcl\vcl.h>

#pragma hdrstop

#include "DDA\_Algo.h"

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

#pragma resource "\*.dfm"

TForm1 \*Form1;

int i;

int x2, x1, y2, y1, dx, dy, m;

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

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

void \_\_fastcall TForm1::X1Change(TObject \*Sender)

{

x1 = StrToInt(X1->Text);

}

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

void \_\_fastcall TForm1::X2Change(TObject \*Sender)

{

x2 = StrToInt(X2->Text);

}

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

void \_\_fastcall TForm1::Y1Change(TObject \*Sender)

{

y1 = StrToInt(Y1->Text);

}

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

void \_\_fastcall TForm1::Y2Change(TObject \*Sender)

{

y2 = StrToInt(Y2->Text);

}

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

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

{

m = (y2 - y1) / (x2 - x1);

for ( i = x1; i<= x2; i++)

{

if (m<=1)

{

dx = 1;

dy = m + dx;

}

else

{

dy = 1;

dx = dy/m;

}

}

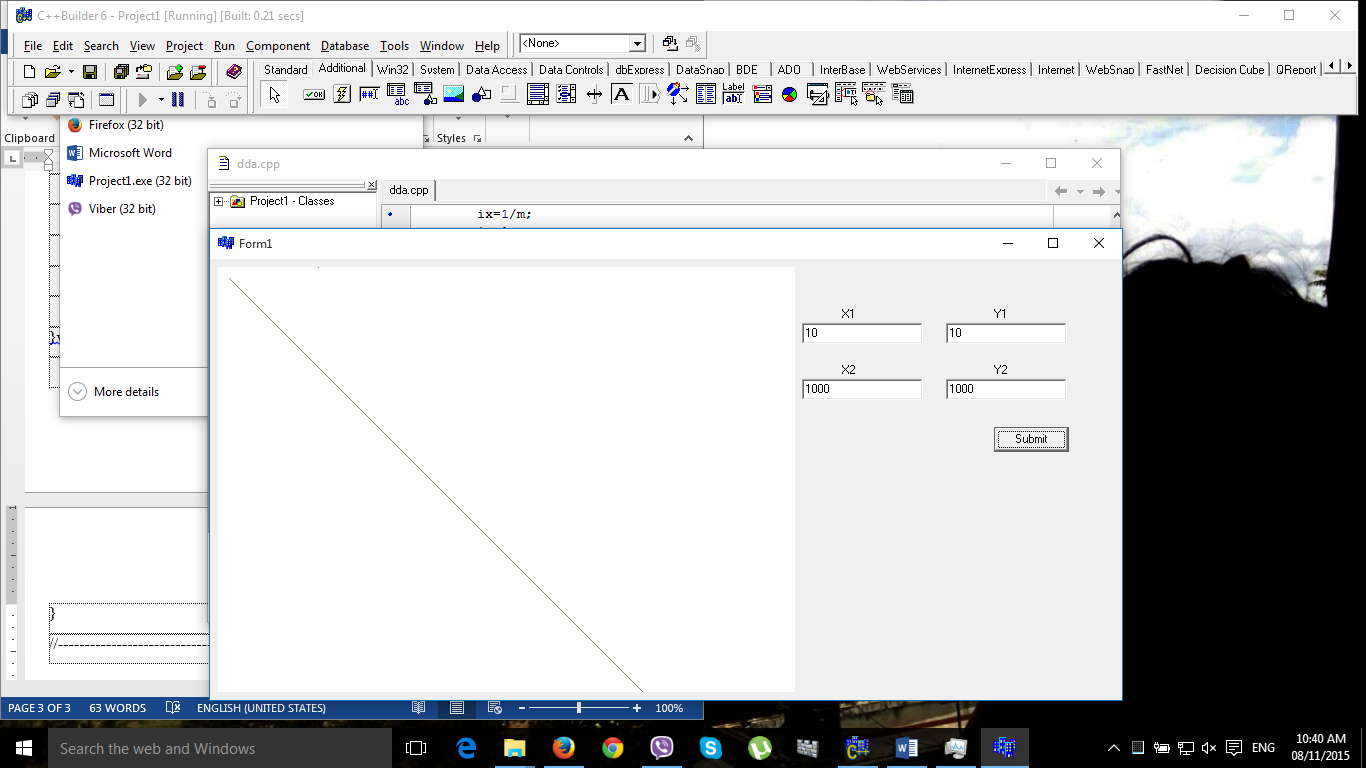
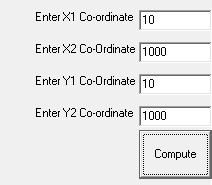
x1 = x1 + dx;

y1 = y1 + dy;

Image1->Canvas->Pixels[x1][y1];

}

**OUTPUT SCREENS**

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**CONCLUSION**

Hence, a program to draw a line was implemented using DDA algorithm in C++ builder.