ST. XAVIER’S COLLEGE

**Maitighar, Kathmandu**

**(Affiliated to Tribhuvan University)**



**Computer Graphics**

**Lab Assignment #2**

DESIGN A SIMPLE CALCULATOR.

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**STATEMENT**

DESIGN A SIMPLE CALCULATOR.

**SOURCE CODE**

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

#include <vcl\vcl.h>

#pragma hdrstop

#include "Unit1.h"

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

#pragma resource "\*.dfm"

TForm1 \*Form1;

double inter=0, result=0;

char oper=' ';

double point=1;

void operate();

void numeval(double num);

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

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

: TForm(Owner)

{

}

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

//This calculator is developed by Alok Shrestha (aalooksth@gmail.com).

//NOTE: This section has been added to recognise copies of this project.

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

void \_\_fastcall TForm1::Button8Click(TObject \*Sender)

{

numeval(2);

Edit1->Text=inter;

}

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

void \_\_fastcall TForm1::Button9Click(TObject \*Sender)

{

numeval(3);

Edit1->Text=inter;

}

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

void \_\_fastcall TForm1::Button4Click(TObject \*Sender)

{

numeval(4);

Edit1->Text=inter;

}

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

void \_\_fastcall TForm1::Button5Click(TObject \*Sender)

{

numeval(5);

Edit1->Text=inter;

}

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

void \_\_fastcall TForm1::Button6Click(TObject \*Sender)

{

numeval(6);

Edit1->Text=inter;

}

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

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

{

numeval(7);

Edit1->Text=inter;

}

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

void \_\_fastcall TForm1::Button2Click(TObject \*Sender)

{

numeval(8);

Edit1->Text=inter;

}

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

void \_\_fastcall TForm1::Button3Click(TObject \*Sender)

{

numeval(9);

Edit1->Text=inter;

}

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

void \_\_fastcall TForm1::Button10Click(TObject \*Sender)

{

numeval(0);

Edit1->Text=inter;

}

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

void \_\_fastcall TForm1::Button14Click(TObject \*Sender)

{

operate();

Edit1->Text=result;

oper='-';

}

void operate()

{

switch(oper)

{

case '-':

result=result-inter;

break;

case '+':

result=result+inter;

break;

case '/':

result=result/inter;

break;

case '\*':

result=result\*inter;

break;

case ' ':

result=inter;

break;

}

inter=0;

point=1;

}

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

void \_\_fastcall TForm1::Button13Click(TObject \*Sender)

{

operate();

Edit1->Text=result;

oper='\*';

}

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

void \_\_fastcall TForm1::Button11Click(TObject \*Sender)

{

operate();

Edit1->Text=result;

oper='/';

}

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

void \_\_fastcall TForm1::Button15Click(TObject \*Sender)

{

operate();

Edit1->Text=result;

oper='+';

}

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

void \_\_fastcall TForm1::Button19Click(TObject \*Sender)

{

operate();

Edit1->Text=result;

oper=' ';

}

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

void \_\_fastcall TForm1::Button12Click(TObject \*Sender)

{

point=point/10;

}

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

void \_\_fastcall TForm1::Button16Click(TObject \*Sender)

{

inter=0;

point=1;

Edit1->Text=inter;

}

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

void numeval(double num)

{

if(point==1)

{

inter=inter\*10+num;

}

else

{

inter=inter+num\*point;

point=point/10;

}

}

void \_\_fastcall TForm1::Button7Click(TObject \*Sender)

{

numeval(1);

Edit1->Text=inter;

}

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

**OBSERVATION/S**

|  |  |  |
| --- | --- | --- |
| General view |  |  |
|  |  |  |
| **Performing calculation:** | **12.01\*3-1.03** |  |
| Entering first number (12.01) | Entering first Operator (\*) | Entering second Number (3) |
|  |  |  |
| Entering second Operator (\*) | Entering third Number (3) | The final result (=) |

**CONCLUSION**

Hence a simple calculator was designed using C++builder to perform continuous addition, subtraction, multiplication and division with floating point numbers.