

DEV BHOOMI INSTITUTE OF TECHNOLOGY

Department of Computer Science and Engineering

Year: 3rd

Semester: 6th



Visual Programming and .NET Technologies PCS-655

LAB MANUAL

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DEV BHOOMI INSTITUTE OF TECHNOLOGY


Department of Computer Science and Engineering

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LAB MANUAL

	Course Name : Visual Programming and .NET Technologies	EXPERIMENT NO. 1	
	Course Code : PCS 655	Branch: CSE	Semester: VI
	Faculty : Mrs. Abhilasha Rathor		

OBJECTIVE: To Create a simple window using vc++ programming

Steps:

1. Start →programs Microsoft Visual Studio6.0→Microsoft Visual C++6.0.
2. Visual C++ Window will be opened.
3. Select File→New→Win32 Application, then give the project name and then choose empty project button and finally give finish→OK.
4. Again go to File→New→C++ Source File→File Name→OK.
5. Type the coding.
6. Build and test the application.

Simple Window Creation Program

```
#include <windows.h>
```

```
LRESULT CALLBACK WndProc(HWND,UINT,WPARAM,LPARAM);
```

```
int WINAPI WinMain(HINSTANCE hInstance,HINSTANCE hPrevInstance,PSTR  
szCmdLine,int iCmdShow)
```

```
{
```

```
static TCHAR szAppName[]=TEXT("Hello Win");
```

```
HWND hwnd;
```

```
MSG msg;
```

```
WNDCLASS win1;
```

```
win1.style=CS_HREDRAW|CS_VREDRAW;
```

```
win1.lpfnWndProc=WndProc;
```

```
win1.cbClsExtra=0;
```

```
win1.cbWndExtra=0;
```

```
win1.hInstance=hInstance;
```

```
win1.hIcon=LoadIcon(NULL,IDI_APPLICATION);
```

```

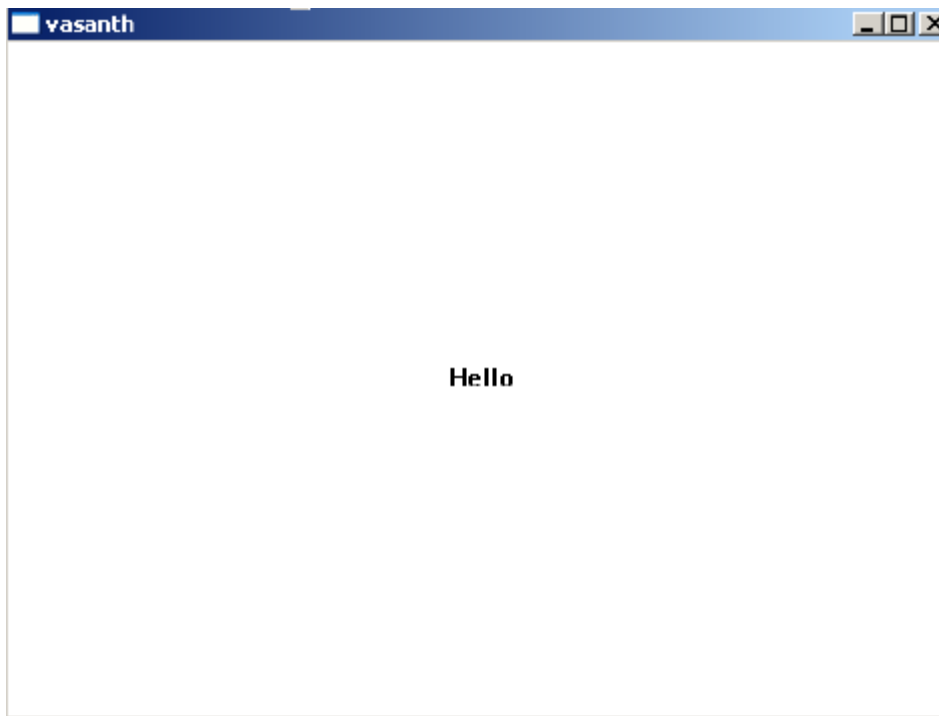
win1.hCursor=LoadCursor(NULL,IDC_WAIT);
win1.hbrBackground=(HBRUSH)GetStockObject(WHITE_BRUSH);
win1.lpszMenuName=NULL;
win1.lpszClassName=szAppName;
if(!RegisterClass(&win1))
{
MessageBox(0,"welcome",szAppName,MB_OK);
return FALSE; 9

}
hwnd=CreateWindow(szAppName,"vasanth",WS_OVERLAPPEDWINDOW,10,
20,500,400,NULL,NULL,hInstance,NULL);
ShowWindow(hwnd,iCmdShow);
UpdateWindow(hwnd);
while(GetMessage(&msg,0,0,0))
{
TranslateMessage(&msg);
DispatchMessage(&msg);
}
return (0);
}
LRESULT CALLBACK WndProc(HWND hwnd,UINT message,WPARAM
wParam,LPARAM lParam)
{
HDC hdc;
PAINTSTRUCT ps;
RECT rect;
switch(message)
{
case WM_PAINT:
hdc=BeginPaint(hwnd,&ps);
GetClientRect(hwnd,&rect);
DrawText(hdc,TEXT("Hello"),-1,&rect,DT_SINGLELINE|DT_CENTER|DT_VCENTER);
EndPaint(hwnd,&ps);

```

```
return(0);  
case WM_DESTROY:  
PostQuitMessage(0);  
return(0);  
}  
return DefWindowProc(hwnd,message,wParam,lParam);  
}
```


OUTPUT :



OUTCOME: Student will implement a simple window using vc++.

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LAB MANUAL

	Course Name : Visual Programming and .NET Technologies	EXPERIMENT NO. 2	
	Course Code : PCS 655	Branch: CSE	Semester: VI
	Faculty : Mrs. Abhilasha Rathor		

OBJECTIVE: To Create a simple window using vc++ programming

Steps :

- 1 .Start → programs Microsoft Visual Studio6.0→Microsoft Visual C++6.0.
- 2 Visual C++ Window will be opened.
- 3 Select File→New→Win32 Application, then give the project name and then choose empty project button and finally give finish →OK.
- 4 Again go to File→ New→ C++ Source File→ File Name → OK.
- 5 Type the coding.
- 6 Build and test the application.

Mouse Events program:

```
#include<windows h>
LRESULT CALLBACK WndProc (HWND,UINT,WPARAM,LPARAM);
WNDCLASS a; 11
int flag=0;
int WINAPI WinMain(HINSTANCE i,HINSTANCE j,LPSTR k,int l)
{
  HWND h;
  MSG m;
  a.style=CS_HREDRAW|CS_VREDRAW;
  a.hInstance=i;
  a.cbClsExtra=0;
  a.lpfnWndProc=WndProc;
  a.lpszMenuName=NULL;
  a.cbWndExtra=0;
  a.lpszClassName="my";
  a.hCursor=LoadCursor(NULL,IDC_ARROW);
```

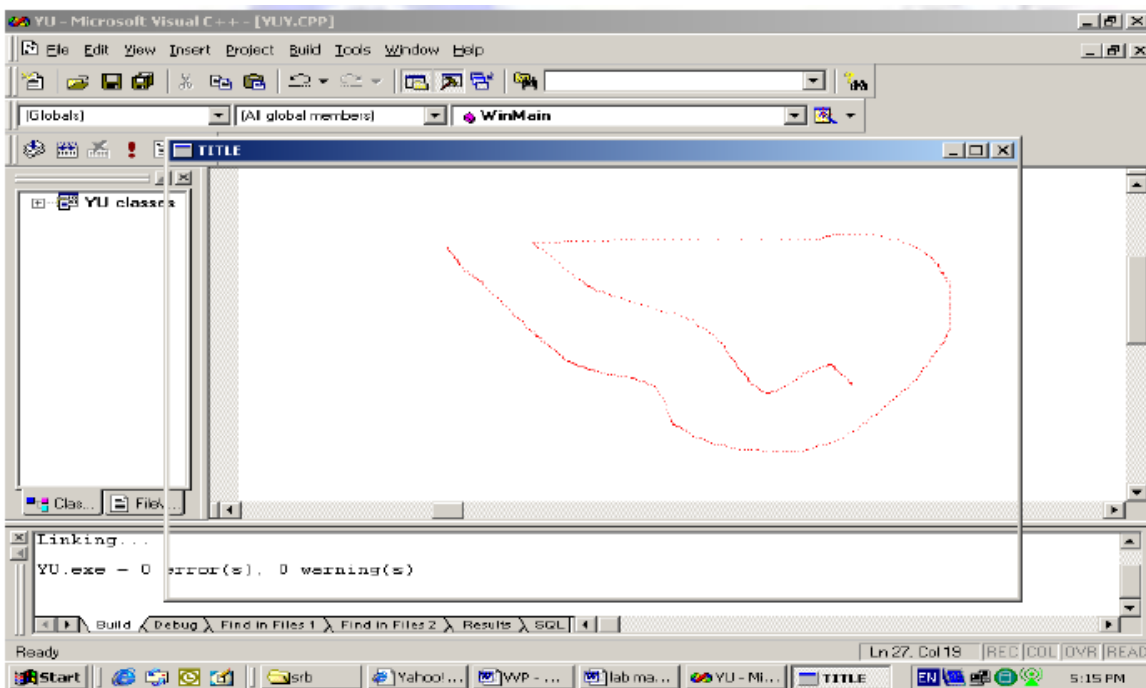
```

a.hIcon=LoadIcon(NULL,IDI_APPLICATION);
a.hbrBackground=(HBRUSH)GetStockObject(RGB(255,0,0));
if(!RegisterClass(&a))
{
MessageBox(h,TEXT("Error"),"my",MB_ICONERROR);
return 0;
}
h=CreateWindow("my",TEXT("TITLE"),WS_OVERLAPPEDWINDOW,100,100,150,100,
NULL,NULL,NULL,NULL);
ShowWindow(h,1);
while(GetMessage(&m,NULL,0,0))
{
TranslateMessage(&m);
DispatchMessage(&m);
}
return m.wParam;
}
LRESULT CALLBACK WndProc(HWND w,UINT x,WPARAM y,LPARAM z)
{
HDC d;
switch(x)
{
case WM_LBUTTONDOWN:
flag=1;
return 0;
case WM_MOUSEMOVE:
if(flag==1)
{
d=GetDC(w);
SetPixel(d,LOWORD(z),HIWORD(z),RGB(255,0,0));
ReleaseDC(w,d);
}
}
return 0;
}

```

```
case WM_LBUTTONDOWN:  
flag=0;  
return 0;  
case WM_DESTROY:  
PostQuitMessage(10);  
return 0;  
}  
return DefWindowProc(w,x,y,z);  
}
```


OUTPUT:



OUTCOME: Student will implement a simple window using vc++.

DEV BHOOMI INSTITUTE OF TECHNOLOGY

LAB MANUAL

	Course Name : Visual Programming and .NET Technologies	EXPERIMENT NO. 3	
	Course Code : PCS 655	Branch: CSE	Semester: VI
	Faculty : Mrs. Abhilasha Rathor		

OBJECTIVE: To perform the calculator operation using VC++ programming.

Steps :

1. Start →programs Microsoft Visual Studio6.0→Microsoft Visual C++6.0
2. File→ New→ MFC AppWizard (exe) →project name →ok.
3. Choose Dialog Based Applications finish.
4. Dialog box will be opened.
5. Design the dialog box like this.
6. Change each of the button name as 0,1,=,+
7. After adding button name the dialog box look like this.
8. Right click on the edit box and choose Class Wizard click on the Member Variables Tab and choose IDC_EDIT1→Add Variable and member variable name as m_t1
9. Give OK
10. Click on the 0 button give the member function name and give OK.
11. Add the Coding for each buttons like this.
12. In the CalcDlg header file under the construction comment line add the declaration part.

```
i.e int index,val,data,data1;
```

```
double m,a,b;
```

```
char temp [10];
```

13. Build and test the application

PROGRAM:

```
//eDlg.h header file
```

```
int index,val,data,data1;
```

```
double m,a,b;
```

```
char temp[10];
```

```
//eDlg.cpp
```

```

void CEDlg::OnOne()
{
UpdateData(true);
if(m_t1=="0"|| m_t1==" ")
m_t1="1";
else
m_t1+="1";
UpdateData(false);
}

```

9. Give OK

10. Click on the 0 button give the member function name and give OK.

11. Add the Coding for each buttons like this.

12. In the CalcDlg header file under the construction comment line add the declaration part.

i.e int index,val,data,data1;

double m,a,b;

char temp [10];

13. Build and test the application

PROGRAM:

//eDlg.h header file

int index,val,data,data1;

double m,a,b;

char temp[10];

//eDlg.cpp

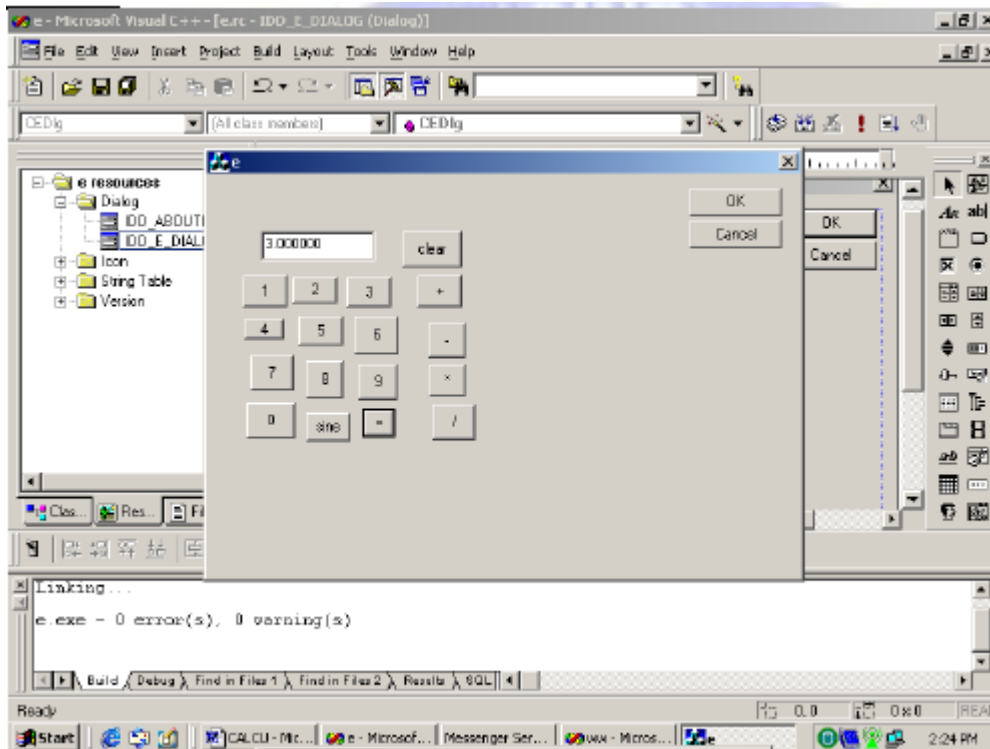
void CEDlg::OnOne()

```

{
UpdateData(true);
if(m_t1=="0"|| m_t1==" ")
m_t1="1";
else
m_t1+="1";
UpdateData(false);
}

```


OUTPUT:



OUTCOME: Student will implement a calculator operation using VC++.

DEV BHOOMI INSTITUTE OF TECHNOLOGY

LAB MANUAL

	Course Name : Visual Programming and .NET Technologies	EXPERIMENT NO. 4	
	Course Code : PCS 655	Branch: CSE	Semester: VI
	Faculty : Mrs. Abhilasha Rathor		

OBJECTIVE: To Create a ToolBar Using VC++ Programming

Steps:

- 1:** Run VC++ AppWizard to create an SDI application and select the document view architecture and deselect the printing and print preview by accepting all the default settings and click finish to design the project.
- 2:** Use the resource editor to edit the application's main menu.
- 3:** In Resource View, double-click on *IDR_MAINFRAME* under Menu and Edit the *IDR_MAINFRAME* menu resource to create a menu.
- 4:** Edit the *IDR_MAINFRAME* toolbar resource to create a bitmap.
- 5:** Assign the IDs *ID_DIAGRAMS_RECT*, *ID_DIAGRAMS_ELLIPSE* to the two buttons.
- 6:** Use ClassWizard to add ToolbarView view class message handlers.
- 7:** Add message handlers for the following command and update command UI messages, and accept the default function names shown in the following table.
- 8:** Edit the ToolbarView.cpp file.

```
void CToolbarView::OnDiagramsRect()
```

```
{
```

```
    CClientDC dc(this);
```

```
    dc.SelectStockObject(GRAY_BRUSH);
```

```
    dc.Rectangle(50,50,100,100);
```

```
}
```

```
void CToolbarView::OnUpdateDiagramsRect(CCmdUI* pCmdUI)
```

```
{
```

```
    pCmdUI->Enable(TRUE);
```

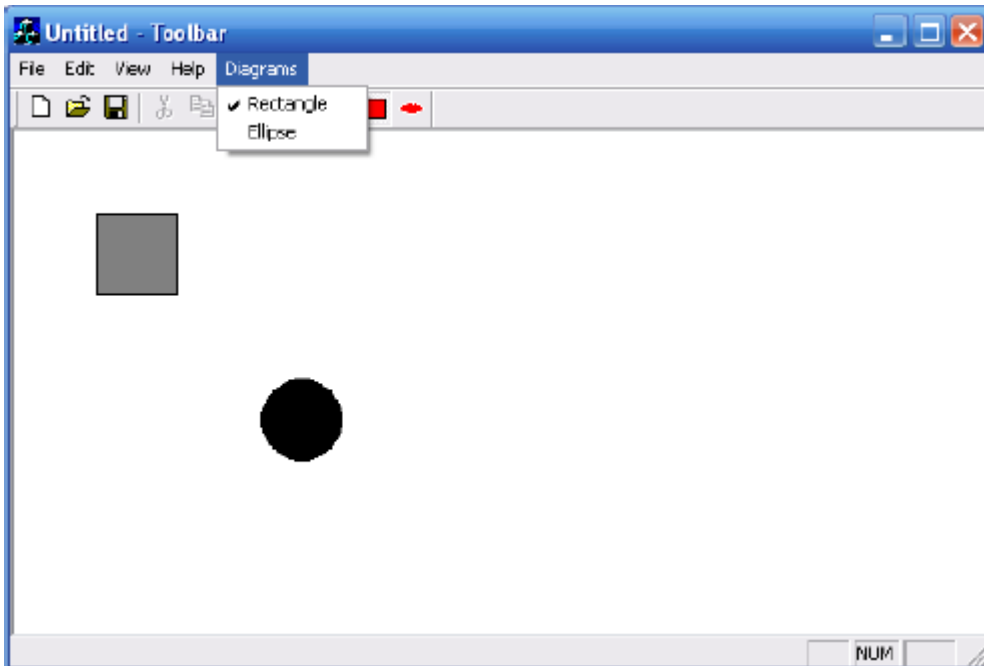
```
    pCmdUI->SetCheck(1);
```

```
}
```

```
void CToolbarView::OnDiagramsEllipse()
```

```
{
```


```
CClientDC dc(this);  
dc.SelectStockObject(BLACK_BRUSH);  
dc.Ellipse(150,150,200,200);  
}  
void CToolBarView::OnUpdateDiagramsEllipse(CCmdUI* pCmdUI)
```



OUTCOME: Student will implement toolbar using vc++.

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LAB MANUAL

	Course Name : Visual Programming and .NET Technologies	EXPERIMENT NO. 5	
	Course Code : PCS 655	Branch: CSE	Semester: VI
	Faculty : Mrs. Abhilasha Rathor		

OBJECTIVE: To Create a simple window using vc++ programming

To create a DLL using them in a application using VC++ programming.

Steps:

1. Start →programs Microsoft Visual Studio6.0→Microsoft Visual C++6.0
2. File→Win32 Dynamic Link Library →project name (dynamic) &clearly note the Location where your project is stored and give OK.
3. Choose A simple DLL project in the step1 then Finish →OK.
4. Go to File View and in the source file double click on dynamic .cpp (where dynamic is the project name).
5. Add the coding &Build the application .You can see the .lib file &.dll file in your projects Debug folder.
6. Now close the workspace and choose a new MFC Appwizard (exe) &give the project name (dynamic1).
7. Choose the dialog based application &paste one command button on the dialog box double click the button and write the coding.
8. Copy the .lib file and .dll file in the debug folder of the dynamic project and paste in dynamic1 projects debug folder.
9. Go to the coding window of the dynamic1 project select the Project menu and select add to project &now you can see the debug folder. Now change the file of type as all files and just double click it.
10. Build &test the application

PROGRAM

//The below coding should be typed in Win32 Dynamic Link Library in mydl.cpp at the top.

```
extern "C" __declspec(dllexport)double sum(double,double);
extern "C" __declspec(dllexport)double mul(double,double);
double sum(double a, double b)
{
```

```

return(a+b);
}
double mul(double a, double b)
{
return(a*b);
}

```

The below coding should be typed in MFC Appwizard[exe]

//dynamicdllDlg.cpp 27

```

void CBhuvanaDlg::OnDisplay()
{
CString x;
x.Format("SUM=%2f\n product=%2f",sum(3,4),mul(5,6));
MessageBox(x);

```

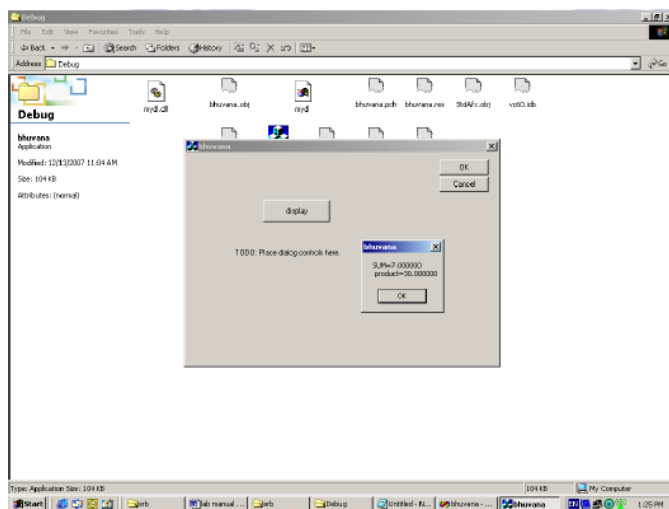
At the Top include the below coding

```

extern "C" __declspec(dllimport) double sum(double,double);
extern "C" __declspec(dllimport) double mul(double,double);

```

OUTPUT



OUTCOME: Student will create a DLL using using vc++.