Introduction

To

Microsoft Visual C++ 6.0

By: Shahed Shahir

Email: *shahir@uwindsor.ca*

Office hour: Mondays 9:00am-11:00am

Requirements

- Object Oriented Programming
- C++ programming

Introduction

Advantage:

Microsoft Visual C++ is a powerful tool. Visual C++ is inherited window's functionality. In fact, developers can manipulate hardware and software at the same time; however, no other programming platforms can provide such a powerful tool for users in a windows operating system.

Microsoft Visual C++ includes Comprehensive debug tools.

Introduction

Disadvantage:

In order to monopolize computer software market, Microsoft does not reveal the key functions to public.

Reference

Microsoft Developer Network

http://msdn.microsoft.com/

Online Help US\$3000.00 for helping in a single project US\$240.00 for a single solution

My recommendation is to learn C++ and Object Oriented software Programming)

Computer Aided Design II (Professor M. Sid-Ahmed)

Outline

- I. Console Application
- II. Dialog Based Application

I. Console Application

• Start new project

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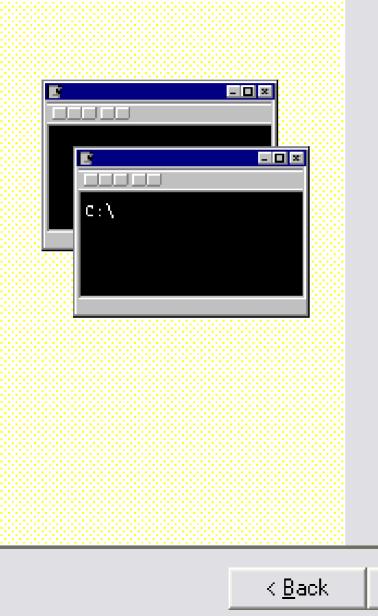
1. Choose the project type as a Win32 console Application.

2. Type the project name as you wish.

New	? 🔀			
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 ATL COM AppWizard Cluster Resource Type Wizard Clustom AppWizard Custom AppWizard Custom AppWizard Database Project DevStudio Add-in Wizard Extended Stored Proc Wizard ISAPI Extension Wizard MFC ActiveX ControlWizard MFC AppWizard (dll) MFC AppWizard (exe) 	Project <u>name:</u> Logation: C:\Documents and Settings\Sha C[reate new workspace Add to current workspace Dependency of:			
New Database Wizard It Utility Project Vision AppWizard Win32 Application	Platforms: Win32 OK Cancel			

Win32 Console Application - Step 1 of 1





What kind of Console Application do you want to create?

- O An empty project.
- A simple application.
- A "Hello, World!" application.
- \bigcirc An application that supports <u>M</u>FC.

<u>F</u>inish

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New Project Information



Win32 Console Application will create a new skeleton project with the following specifications:

+ Simple Win32 console application.

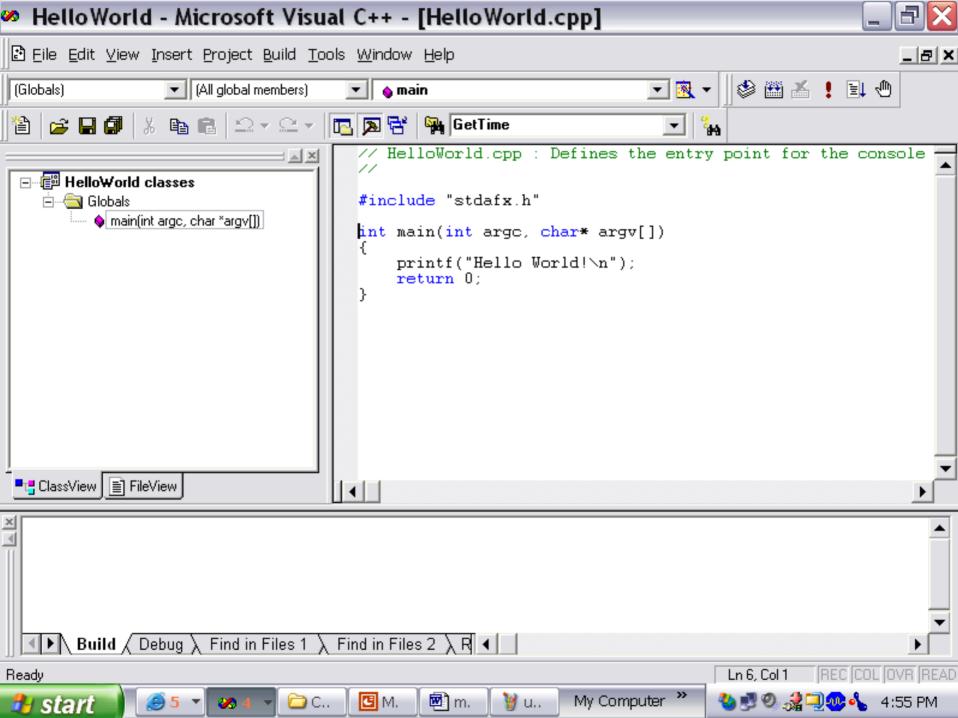
+ Prints "Hello, World!" to the console and then exits.

Main: HelloWorld.cpp Precompiled Header: Stdafx.h and Stdafx.cpp

Project Directory:

C:\Documents and Settings\Shahed\My Documents\88-446\HelloWorld

OK



EXAMPLE ONE

II. Dialog Based Application

- 1. Start new project
- 2. Choose the project type and name

Start new project

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Microsoft Fundation Class Project

- •Choose Application Wizard for MFC
- •Type the desire project name

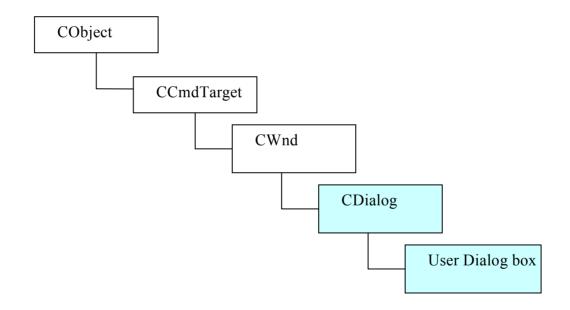
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Microsoft Foundation Class Library Version 6.0

CObject		-				Classes Not Derived	
Application Architecture			File Services	Graphical Drawing	Arrays	from CObject	
CCmdTarget		-user objects	-CFile	- CD C	-CArray (template)	Internet Sorvor ABI	
-CWinThread	CDocument	Exceptions	- CM em Fil e	-CClientDC	-CByteArray	Server API CHtmlStream	Support Classes CCmdUI
CWinApp	-COleDocument	CException	_CSharedFile	-CMetaFileD C	-CDWordArray	CHttpFilter	
COleControlModule	COleLinkingDoc	_CArchiveException	- COleStream File	_CPaintDC	_CObArray	CHttpFilterContext	CDaoFieldExchange
Luser application	COleServerDoc	_CDaoException	CMonikerFile	CWindowDC	_CPtrArray	CHttpServer	_
-CDocTemplate	CRichEditDoc		CAsyncMonikerFile	Control Support			CDataExchange
-CSingleDocTemplate	user documents	CFileException	CD ataPathProperty	- CD ock State		CHttpServerContext	CDBVariant
-CMultiDocTemplate	-CDocItem	-CInternetException			-CWordArray	Run-time Object Model Support	CFieldExchange
-COleObjectFactory	COleClientItem	-CMemoryException	-CSocketFile	Graphical	arrays of user types	CArchive	COleDataObject
LCOleTemplateServer	-COleDocObjectItem	-CNotSupportedException	CStdioFile	Drawing Objects		CDumpContext	COleDispatchDriver
-COleDataSource	-CRichEditCntrItem	-COleException	CInternetFile	-CG diObject	Lists CList (template)	CRuntimeClass	CPropExchange
-COleDropSource	user client items	-COleDispatchException	-CG opher File	-CBitmap	-CPtrList		CRectTracker
-COleDropTarget	-COleServerItem	-CResourceException	CHttpFile	- CB rush	-CObList	Simple Value Types	CWaitCursor
-COleMessageFilter	-CDocObjectServerItem	-CUserException	CRecentFileList	-CFont	-CStringList	CPoint	Typed Template
-		CoserException		- CPalette	-	CRect	Collections
-CConnectionPoint	Luser server items			- CPen	-lists of user types	CSize	CTypedPtrArray
	-CDocObjectServer			-CR an	Maps	CString	CTypedPtrList
Window Support					-CMap (template)	CTime	CTypedPtrMap
– C W n d	1			Menus 	-CMapWordToPtr	CTimeSpan	OLE Type
Frame Windows	Dialog Boxes	Views	Controls		-CMapPtrToWord		Wrappers CFontHolder
-CFrameWnd	L-CDialog	CView	-CAnimateCtrl	Command Line 	-CMapPtrToPtr	Structures CCreateContext	CPictureHolder
-CMDIChildWnd	-CCommonDialog	-CCtrlView	- CB utton		-CMapWordToOb	CMemoryState	
Luser MDI windows	-CColorDialog	-CEditView	- CB itm apB utton	ODBC Database Support	-CMapStringToPtr	COleSafeArray	OLE Automation Types
-CMDIFrameWnd	-CFileDialog	-CListView	- CComboBox	- CD at ab as e	-CMapStringToOb		COleCurrency
Luser MDI workspaces	-CFindReplaceDialog	-CRichEditView	- CCom boB ox Ex	CRecordset	-CMapStringToString	CPrintInfo	COleDateTime
_CMiniFrameWnd	-CFontDialog	_CTreeView	-CD ateTimeCtrl	Luser recordsets	-maps of user types		COleDateTimeSpan
user SDI windows	-COleDialog	CScrollView	-CEdit	-CLongBinary	Internet Services		COleVariant
_COleIPFrameWnd	-COLeBusyDialog	_user scroll views	-CHeaderCtrl		-CInternetSession		
-CSplitterWnd	-COleChangeIconDialc	cFormView	-CHotKeyCtrl	DAO Database Support	-CInternetConnection		Synchronization CMultiLock
Control Bars	-COLeChangeSourceDi	alog _user form views	-CIPAddressCtrl	- CD aoD atabase	-CFtpConnection		CSingleLock
-CControlBar	-COleConvertDialog	-CD aoRecordView		- CD aoQuer y Def	-CGopherConnection		Comgrozook
-CDialogBar	_COleInsertDialog	-CHtmlView	-CCheck ListB ox	- CD aoRecordset	CHttpConnection		
_COleResizeBar	_COIeLink sDialog	-COleDBRecordVit	ewCDragListBox	- CD aoTableDef	_CFileFind		
_CReBar	COleUpdateDialog	CRecordView	_CListCtrl		_CFtpFileFind		
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Property Sheets	-CPageSetupDialog	-	- CProgressCtrl	_CCriticalSection			
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	LCPropertyPageEX		-CSliderCtrl				
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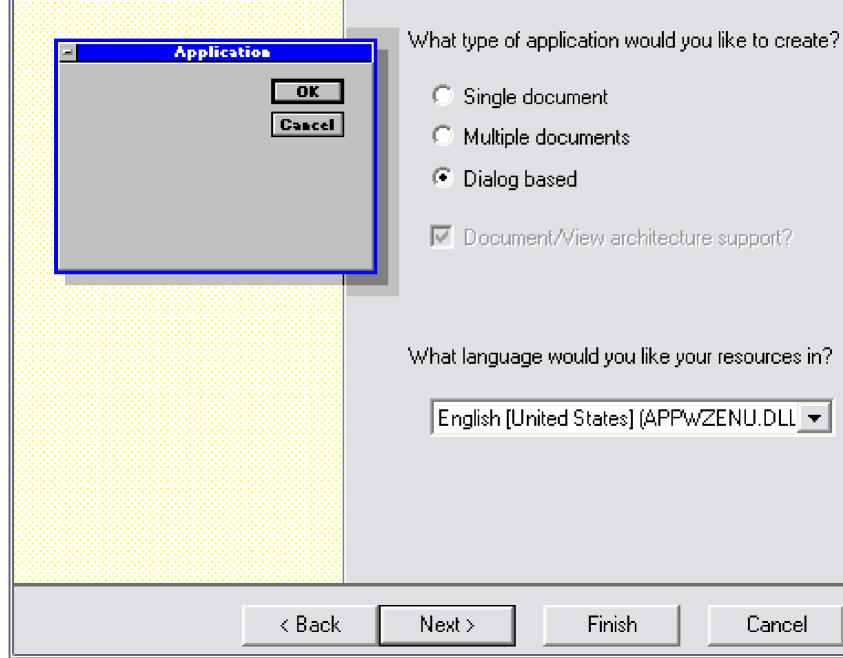
–CToolTipCtrl –CTreeCtrl



- **CObject** is the principal base class for the MFC.
- **CCmdTarget** is the base class for all the application architecture classes in MFC. All classes that handle messages are derived, directly or indirectly, from this class.
- The **CWnd** class provides the base functionality of all window classes in MFC for Window programming.
- The **CDialog** class is the base class used for displaying dialog boxes on the screen. (modal and modeless)

MFC AppWizard - Step 1





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AppWizard will create a new skeleton project with the following specifications:

Application type of SimpleCalculator: Dialog-Based Application targeting: Win32

Classes to be created:

Application: CSimpleCalculatorApp in SimpleCalculator.h and SimpleCalculator.cpp Distant CCirculaCalculatorDista CirculaCalculatorDista and

Dialog: CSimpleCalculatorDIg in SimpleCalculatorDIg.h and SimpleCalculatorDIg.cpp

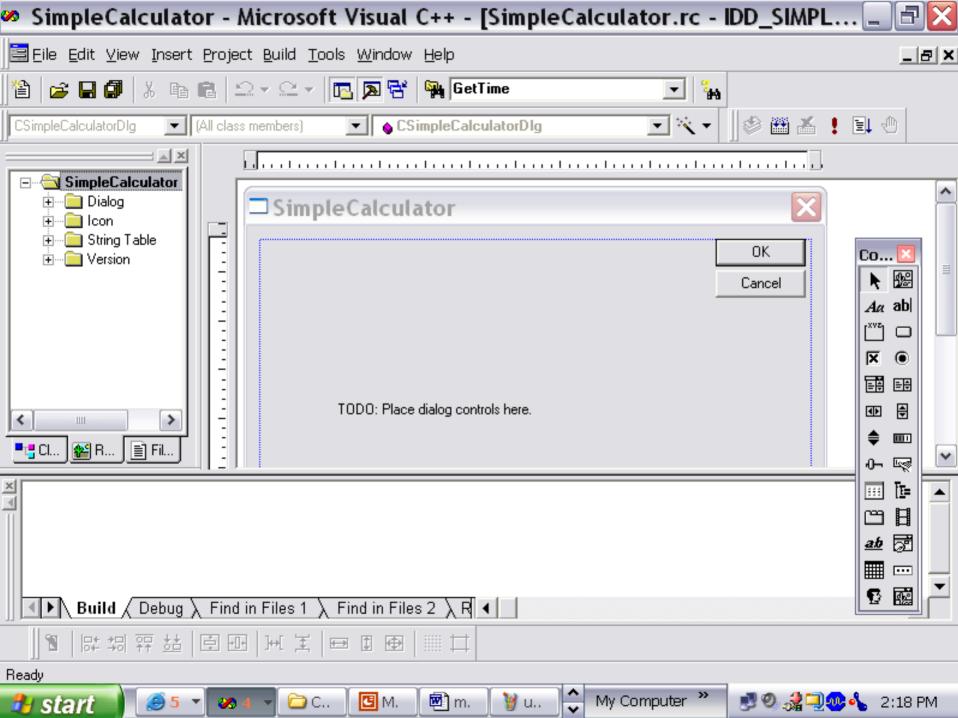
Features:

- + About box on system menu
- + 3D Controls
- + Uses shared DLL implementation (MFC42.DLL)
- + ActiveX Controls support enabled
- + Localizable text in:

English [United States]

Project Directory:

C:\Documents and Settings\Shahed\My Documents\aaa_May2003\SimpleCalculator



Functions

- 1. Switch
- 2. UpdateData
- 3. UpdateWindow

1. Switch

• The **switch** and **case** keywords evaluate *expression* and execute any statement associated the initial expression.

```
- switch( expression )
  {
  [case constant-expression:]
  ...
  [statement]
  ...
  [default:
  statement]
  }
```

2. UpdateData

• **UpdateData** function, which is a member function of **CWnd**, initializes and retrieves data from a dialog box class.

- Syntax:
 - BOOL UpdateData(BOOL Flag)
 - Return Value is non zero if the operation is successful; otherwise 0.
 - To initialize the Dialog box or any component on a dialog box, set input argument (*Flag*) to FALSE.
 - To retrieve Data from the Dialog box or the components on a dialog box, set input argument (*Flag*) to **TRUE**.

3. UpdateWindow

• **UpdateWindow**, which is a member function of **CWnd**, Updates the client area of the active window.

- syntax:
 - void UpdateWindow();

EXAMPLE TWO