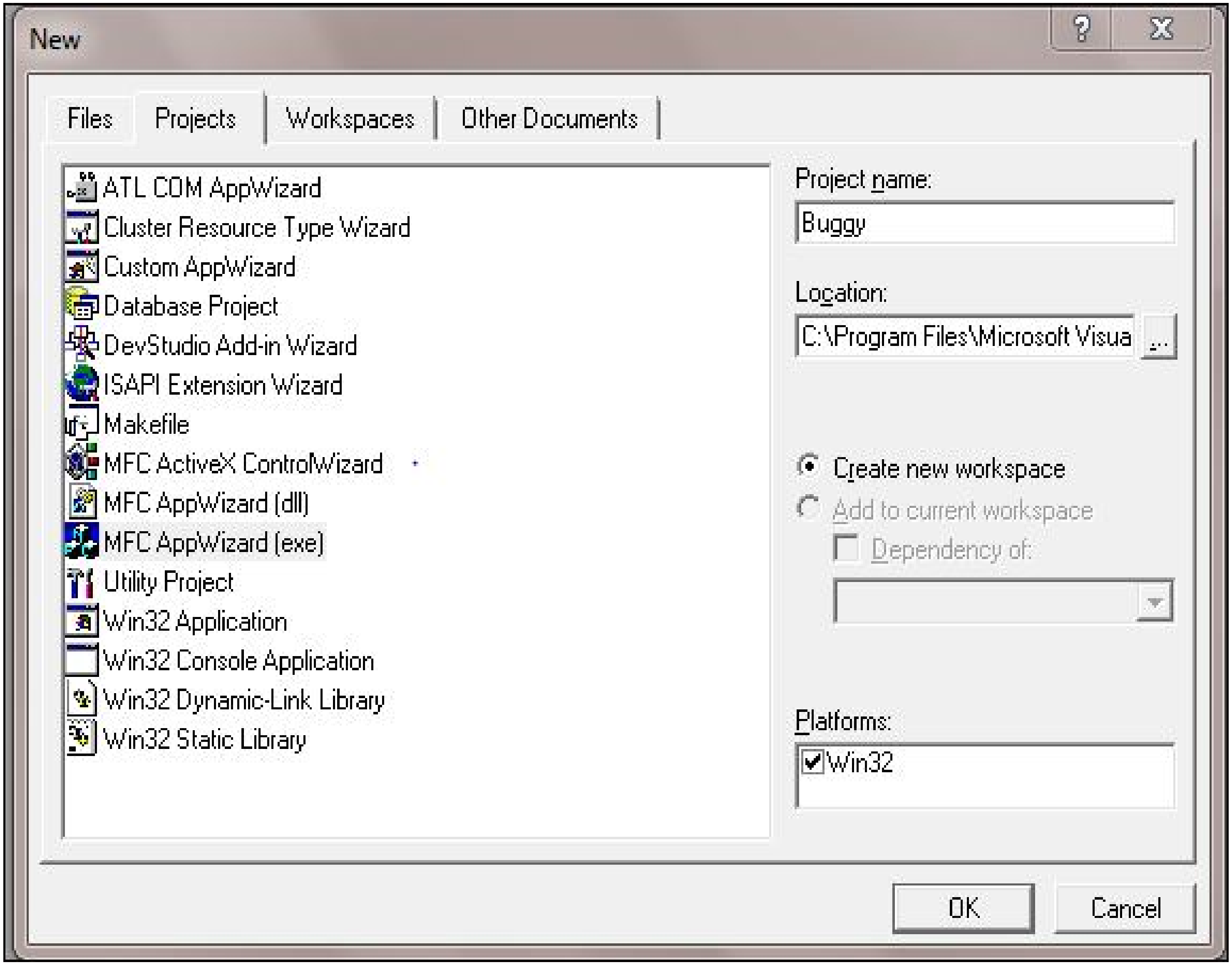
# Debugging



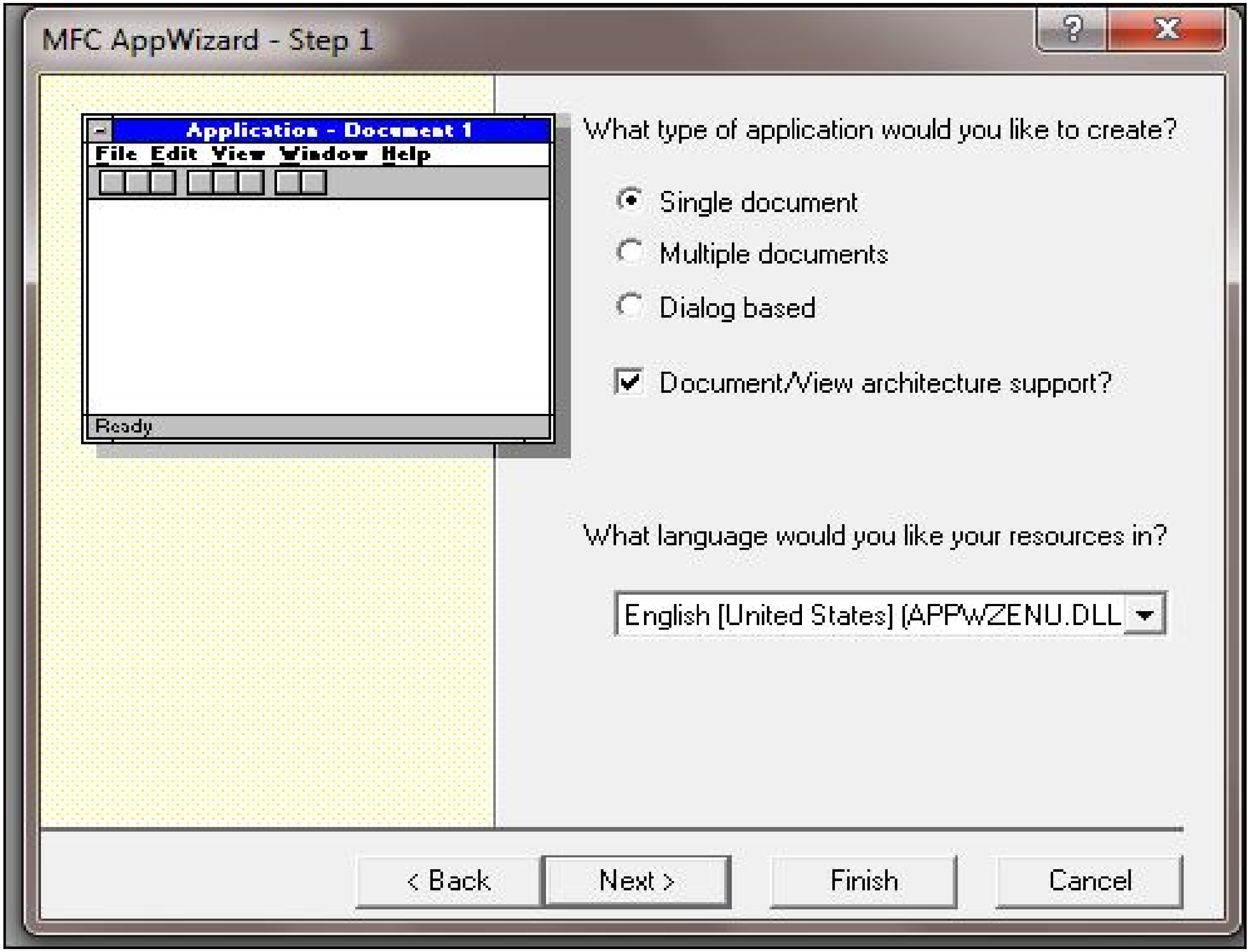
ATL COM AppWizard
Cluster Resource Type Wizard
Custom AppWizard
Database Project
DevStudio Add-in Wizard
ISAPI Extension Wizard
Makefile
MFC ActiveX ControlWizard
MFC AppWizard (dll)
MFC AppWizard (exe)
Utility Project
Win32 Application
Win32 Console Application
Win32 Dynamic-Link Library
Win32 Static Library

Project name: Buggy

Location: C:\Program Files\Microsoft Visua ...

● Create new workspace
○ Add to current workspace
□ Dependency of:

Platforms:
☑ Win32



MFC AppWizard - Step 1

What type of application would you like to create?

● Single document

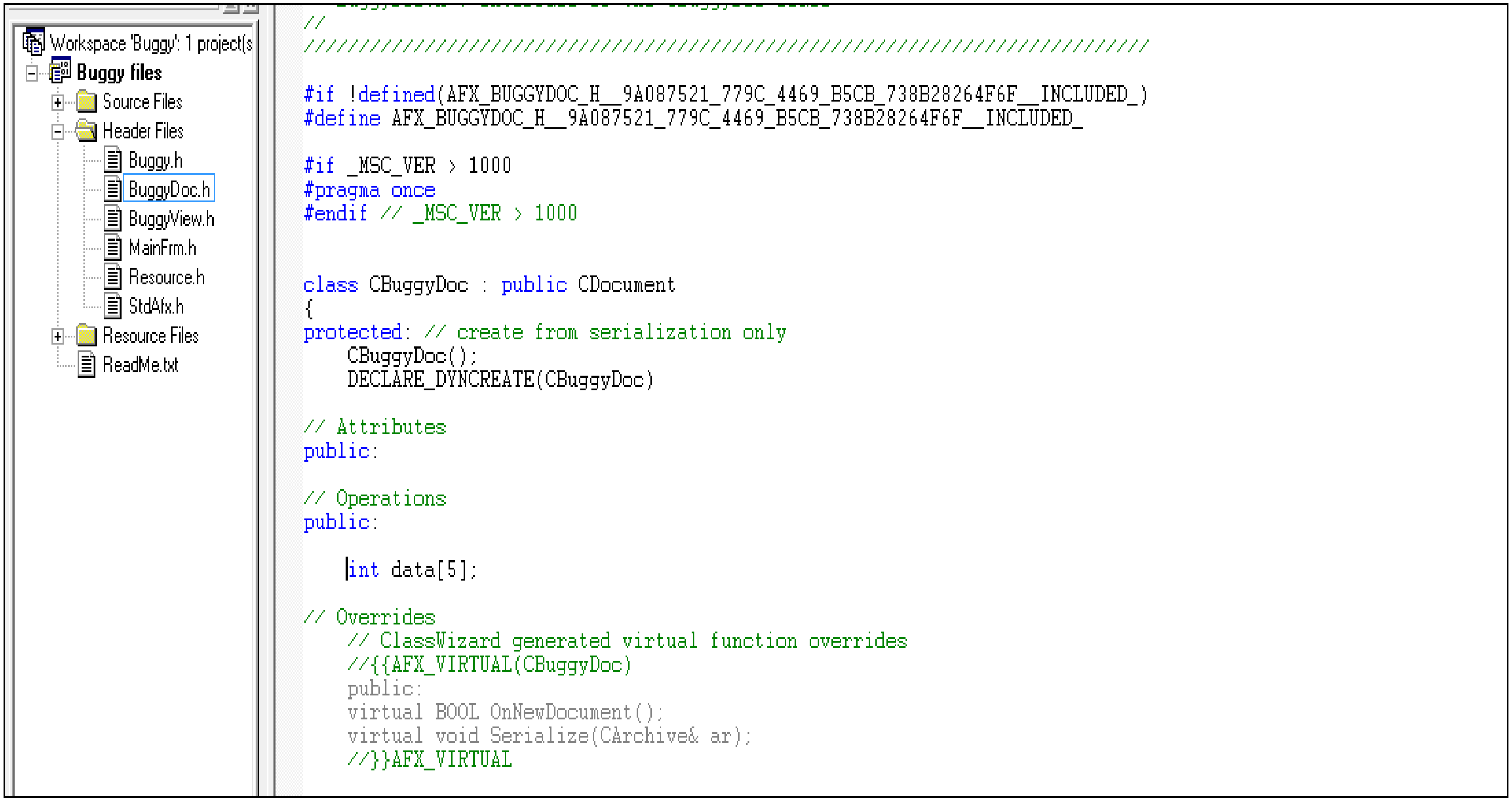
○ Multiple documents

○ Dialog based

☑ Document/View architecture support?

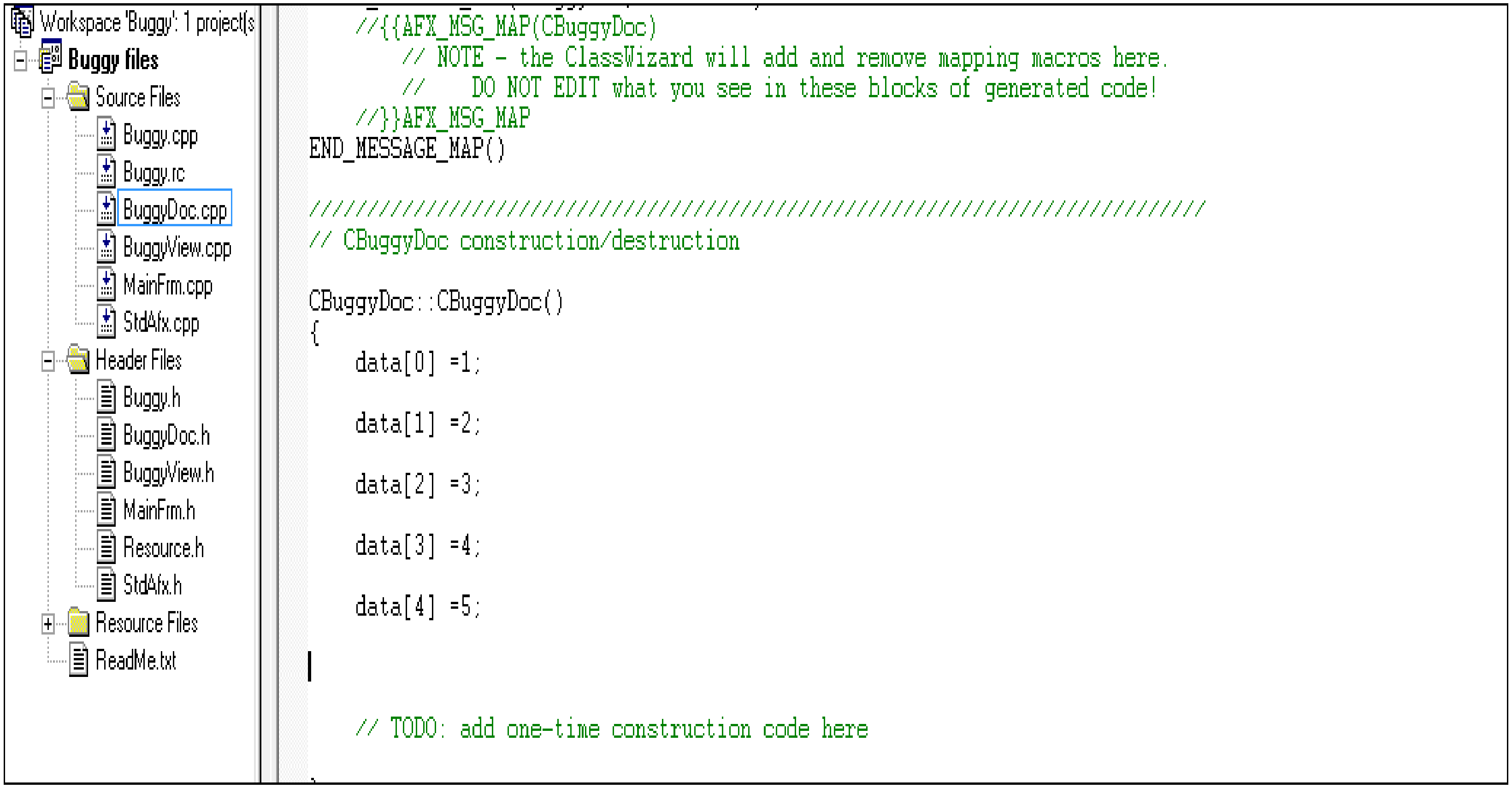
What language would you like your resources in?

English [United States] (APPWZENU.DLL

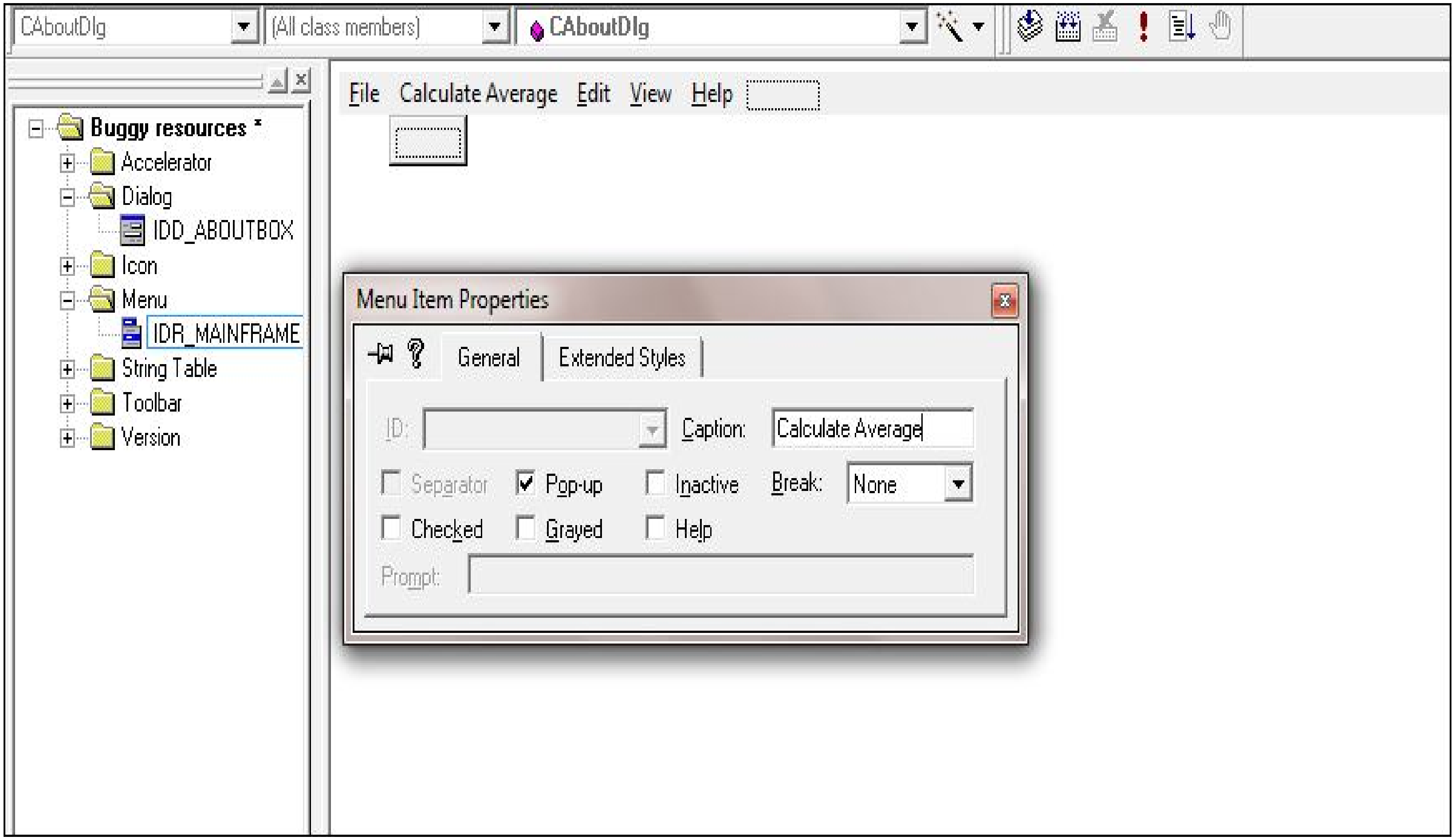


```
//
/////////////////////////////////////////////////////////////////////////////

#if !defined(AFX_BUGGYDOC_H__9A087521_779C_4469_B5CB_738B28264F6F__INCLUDED_)
#define AFX_BUGGYDOC_H__9A087521_779C_4469_B5CB_738B28264F6F__INCLUDED_

#if _MSC_VER > 1000
#pragma once
#endif // _MSC_VER > 1000


class CBuggyDoc : public CDocument
{
protected: // create from serialization only
    CBuggyDoc();
    DECLARE_DYNCREATE(CBuggyDoc)

// Attributes
public:

// Operations
public:

    int data[5];

// Overrides
    // ClassWizard generated virtual function overrides
    //{{AFX_VIRTUAL(CBuggyDoc)
    public:
    virtual BOOL OnNewDocument();
    virtual void Serialize(CArchive& ar);
    //}}AFX_VIRTUAL
```

# BuggyDoc.cpp



```
    //{{AFX_MSG_MAP(CBuggyDoc)
        // NOTE - the ClassWizard will add and remove mapping macros here.
        //    DO NOT EDIT what you see in these blocks of generated code!
    //}}AFX_MSG_MAP
END_MESSAGE_MAP()

/////////////////////////////////////////////////////////////////////////////
// CBuggyDoc construction/destruction

CBuggyDoc::CBuggyDoc()
{
    data[0] =1;

    data[1] =2;

    data[2] =3;

    data[3] =4;

    data[4] =5;



    // TODO: add one-time construction code here
```



Menu Item Properties

ID:

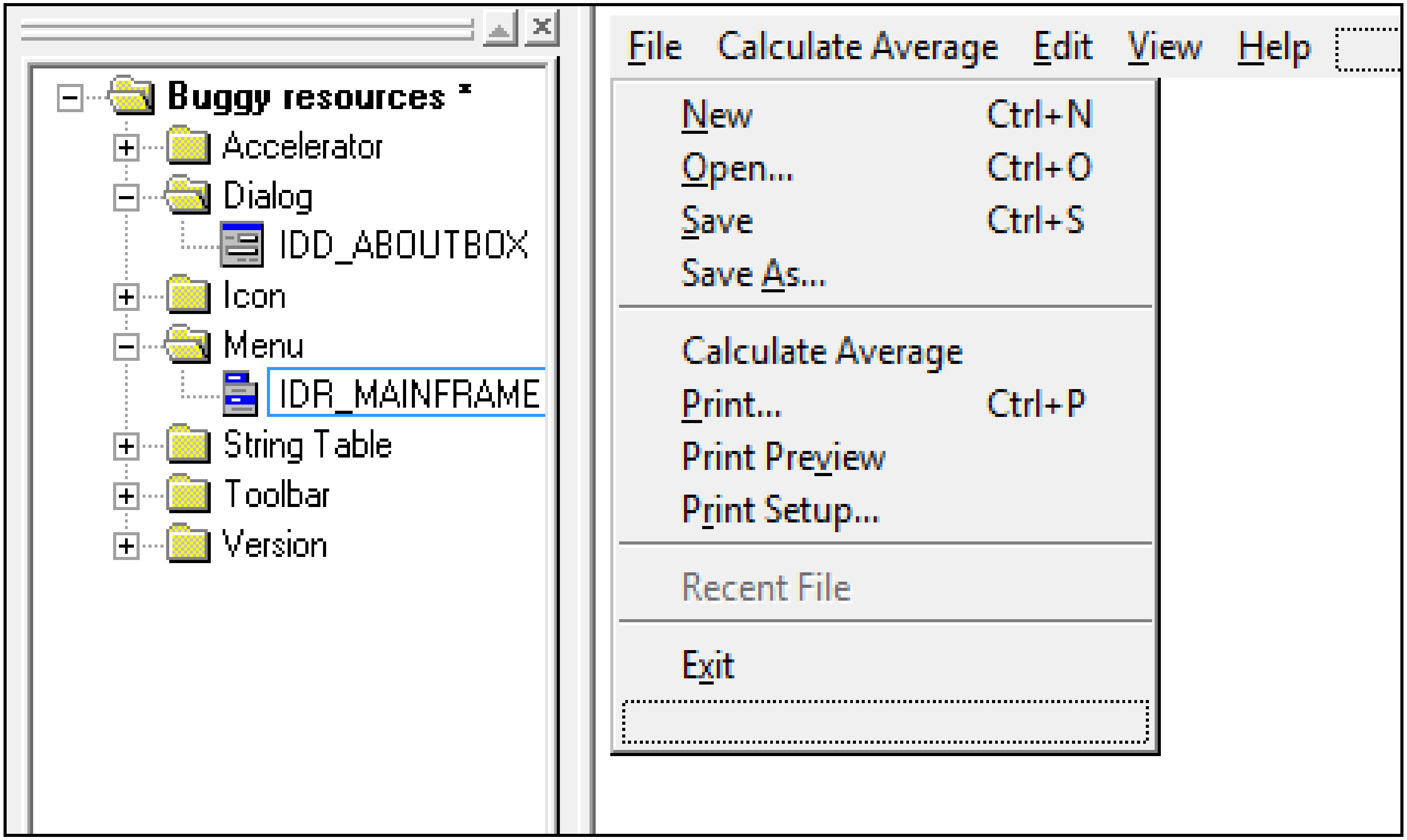
Caption: Calculate Average

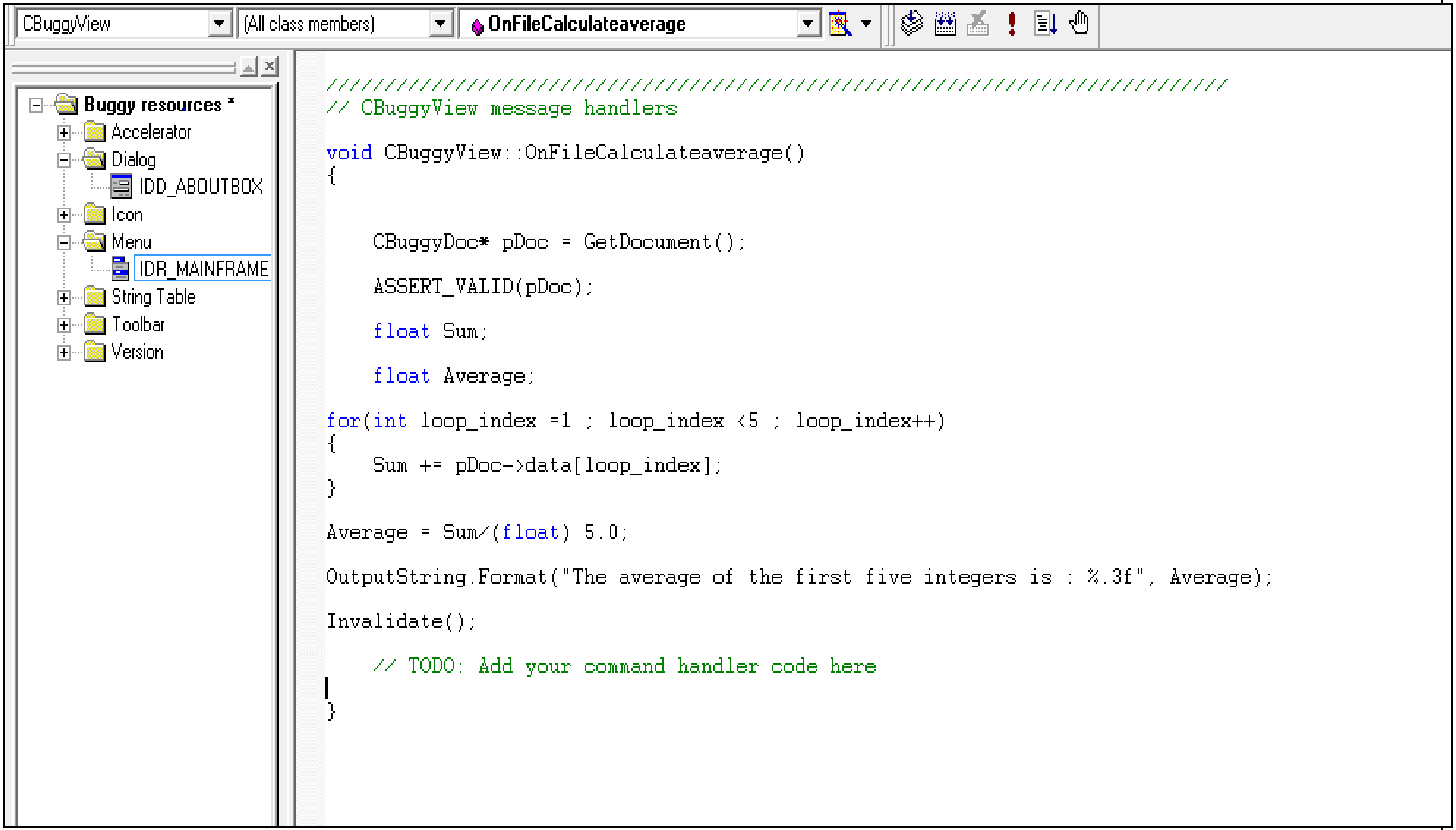
☐ Separator ☑ Pop-up ☐ Inactive Break: None

☐ Checked ☐ Grayed ☐ Help

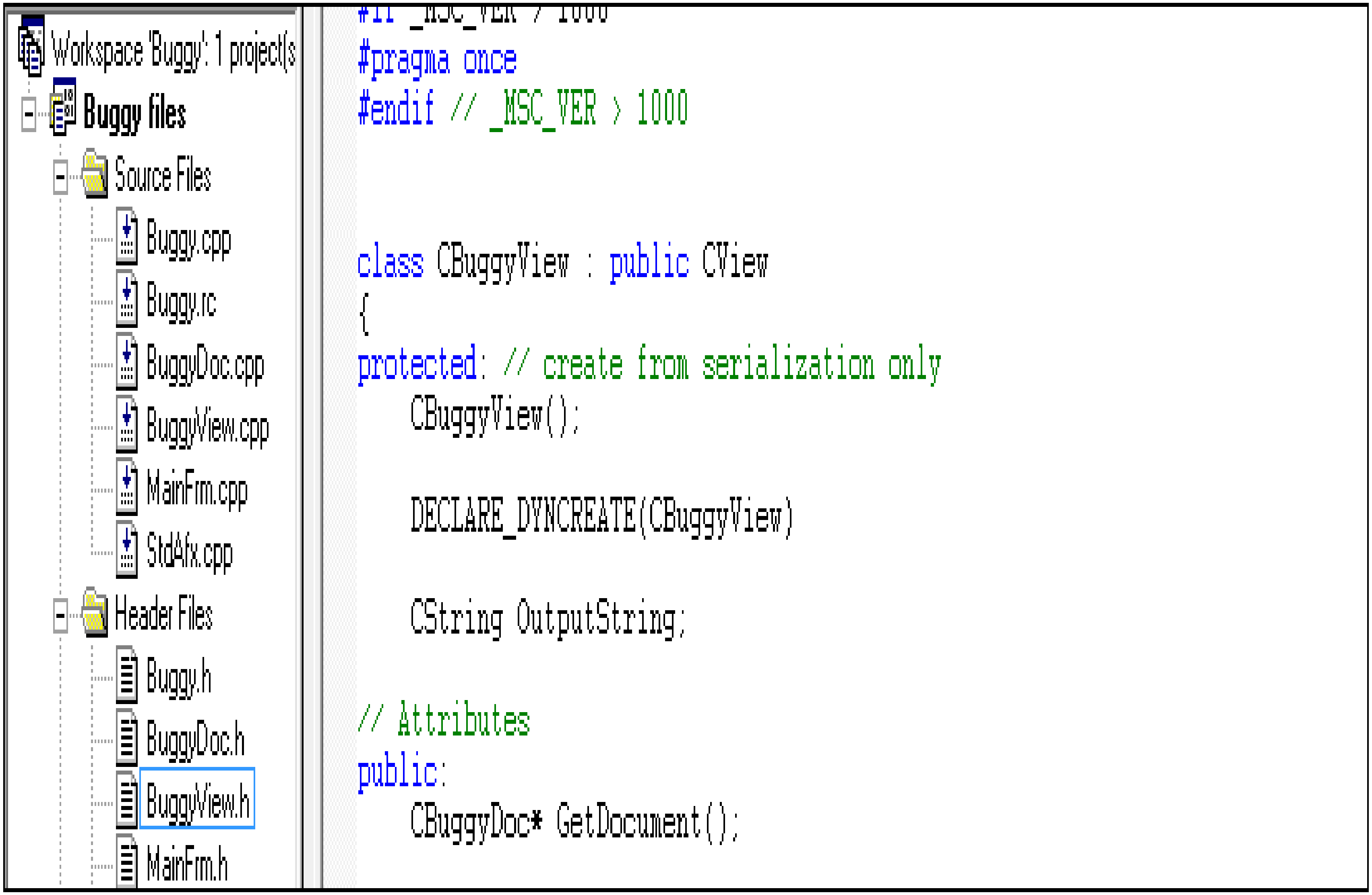
Prompt:

# Create Menu Item

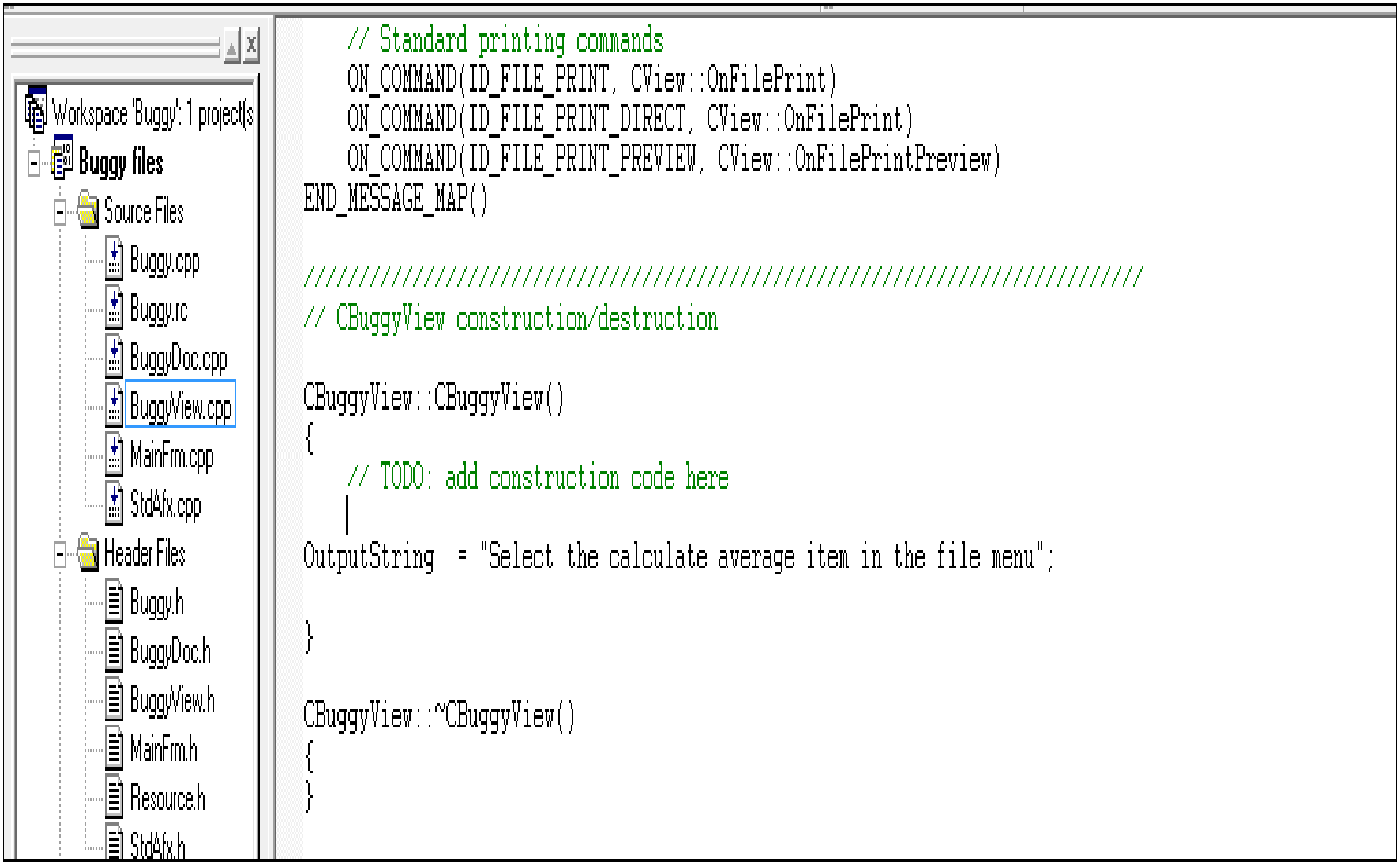




```
/////////////////////////////////////////////////////////////////////////////
// CBuggyView message handlers

void CBuggyView::OnFileCalculateaverage()
{


    CBuggyDoc* pDoc = GetDocument();

    ASSERT_VALID(pDoc);

    float Sum;

    float Average;

for(int loop_index =1 ; loop_index <5 ; loop_index++)
{
    Sum += pDoc->data[loop_index];
}

Average = Sum/(float) 5.0;

OutputString.Format("The average of the first five integers is : %.3f", Average);

Invalidate();

    // TODO: Add your command handler code here

}
```

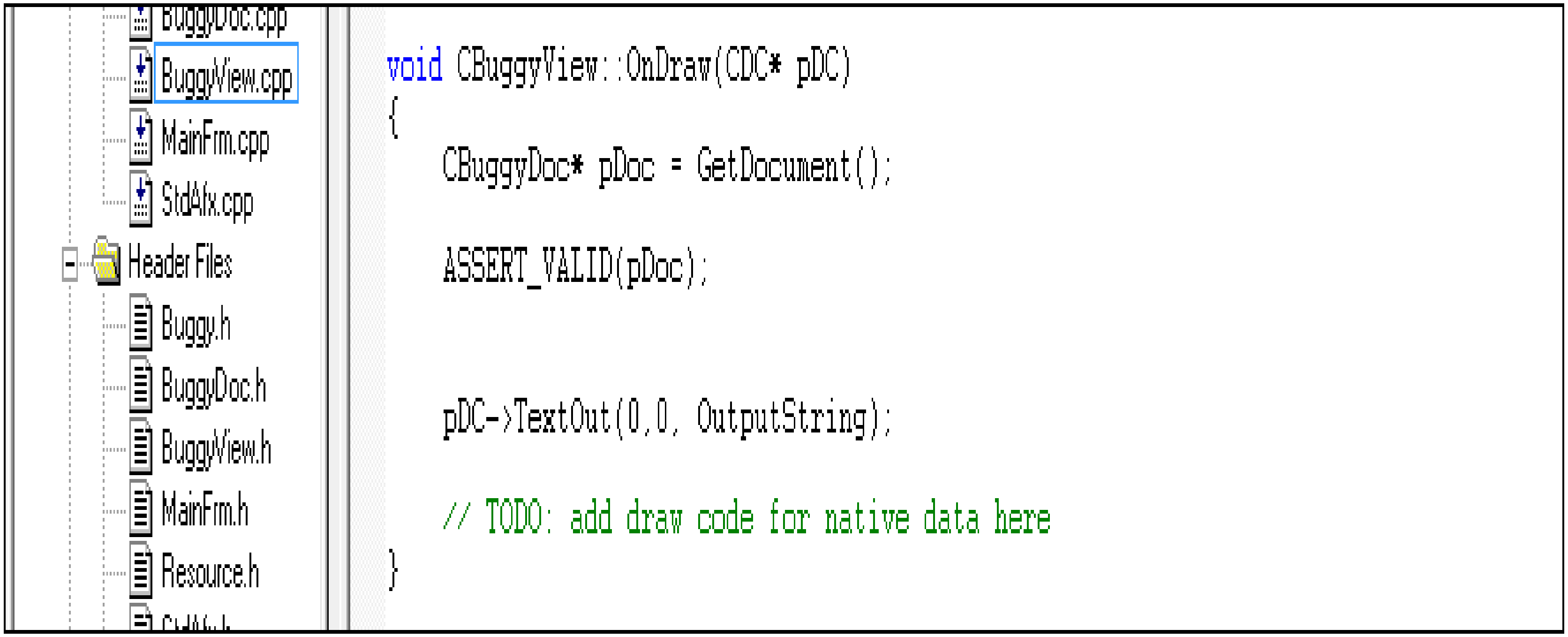


```
#if _MSC_VER > 1000
#pragma once
#endif // _MSC_VER > 1000


class CBuggyView : public CView
{
protected: // create from serialization only
    CBuggyView();

    DECLARE_DYNCREATE(CBuggyView)

    CString OutputString;

// Attributes
public:
    CBuggyDoc* GetDocument();
```



```
	// Standard printing commands
	ON_COMMAND(ID_FILE_PRINT, CView::OnFilePrint)
	ON_COMMAND(ID_FILE_PRINT_DIRECT, CView::OnFilePrint)
	ON_COMMAND(ID_FILE_PRINT_PREVIEW, CView::OnFilePrintPreview)
END_MESSAGE_MAP()

/////////////////////////////////////////////////////////////////////////////
// CBuggyView construction/destruction

CBuggyView::CBuggyView()
{
	// TODO: add construction code here
	
OutputString  = "Select the calculate average item in the file menu";

}

CBuggyView::~CBuggyView()
{
}
```

# BuggyView.cpp



```
void CBuggyView::OnDraw(CDC* pDC)
{
    CBuggyDoc* pDoc = GetDocument();

    ASSERT_VALID(pDoc);


    pDC->TextOut(0,0, OutputString);

    // TODO: add draw code for native data here
}
```

# Setting the Breakpoint

- Start the single step one line at a time by pressing the f10 key; pressing the key once moves us to the next line of code.
- To set the breakpoint at the beginning of the for loop ,place the insertion point caret at that line and press f9.
- Click the button in the toolbar with an upraised hand icon.

# Running to a Breakpoint

- Build -> Start -> Debug ->Go
- Select -> File -> Calculate Average.
- Single – Stepping through Code.
- If you do want to execute the code in called methods use the F11 key to step into that code.
- If you don’t want to debug a block of code press Shift + F11 bkey