

Demonstration of Byte Level Code Conversion of Java Classes to Run in VB as COM objects.

This document describes an example, where a set of Java classes are automatically converted to Win32 Component Object Model (COM) Dynamic Link Libraries (DLL). The COM object is accessible from within Visual Studio.

System Requirements

1. Operating System: Windows 98/Me/NT/2000/XP
2. Microsoft Visual Studio 6.0 (Microsoft Visual Basic 6.0 and Microsoft Visual C++ 6.0)
3. Java Development Kit (JDK) 1.3.1_02 or Java Runtime Environment (JRE) 1.3.1_02

Installation Instructions

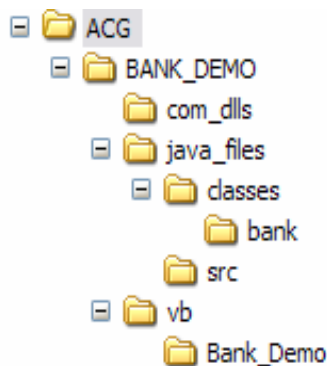


Figure 1

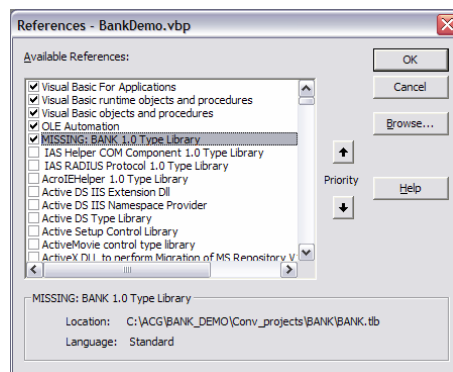
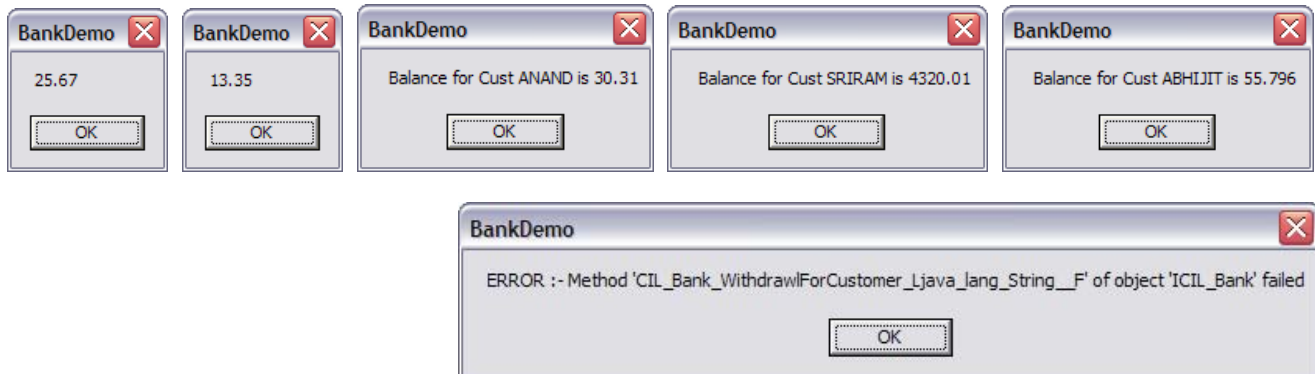


Figure 2

1. (Figure 1) Unzip the zip archive into a directory in your file system so that have the following structure relative to the base directory.
2. Open a command prompt window and go into the com_dlls directory and register BANK.dll, JAVA_LANG.dll and JAVA_UTIL.dll using the regsvr32 utility, e.g. from the Command prompt, type regsvr32 <dllname>
3. (Figure 2) Open the Visual Basic Project file BankDemo.vbp in the ACG\BANK_DEMO\vb\Bank_demo folder and bring up the references dialog (Project->References). Update the path of the BANK 1.0 Type Library to the one found in ACG\BANK_DEMO\com_dlls directory.

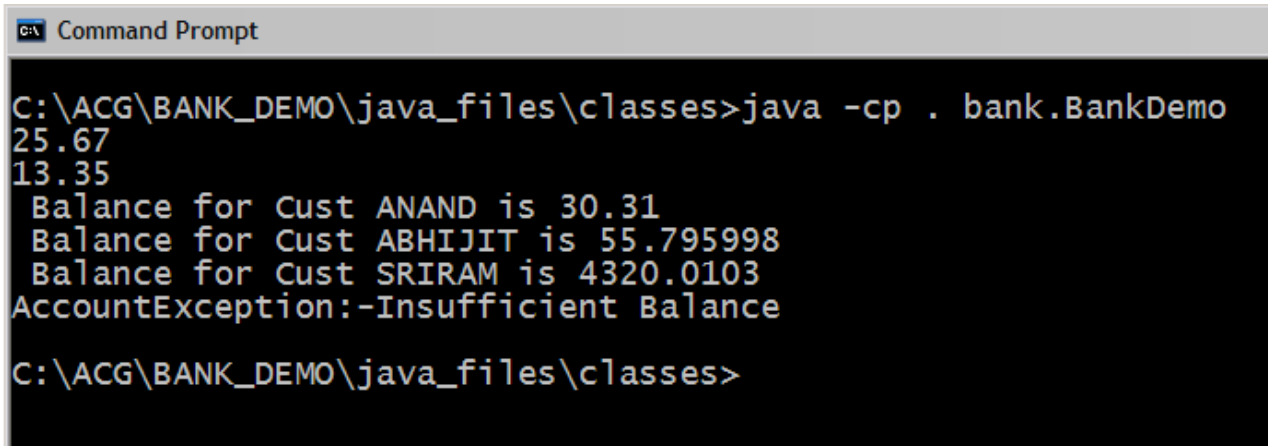
FROM Microsoft’s Visual Studio’s Visual Basic Development Environment:

Open the BankDemo.vbp project press F5 or the Start option from the Run Menu. The following message boxes appear:



RUNNING (Source) JAVA CLASSES IN A JVM

From the command prompt window go into the ACG\BANK_DEMO\java_files\classes directory. Execute the following command: `> java -cp . bank.BankDemo`



```

C:\ACG\BANK_DEMO\java_files\classes>java -cp . bank.BankDemo
25.67
13.35
Balance for Cust ANAND is 30.31
Balance for Cust ABHIJIT is 55.795998
Balance for Cust SRIRAM is 4320.0103
AccountException:-Insufficient Balance

C:\ACG\BANK_DEMO\java_files\classes>
  
```

With the exception of rounding errors, the output of the Java Class has been faithfully reproduced by the byte level conversion system for the COM object called by the VB program.

Source Code Information

All Java methods and properties are shown in Visual Basic as shown below. Notice that the interfaces have been faithfully represented – including all properties and methods of the original Java Class.

```

Public Sub Main()
    ' Variable share the same name as in the java environment
    On Error GoTo err1

    Dim bd As BANK.CIL_Bank
    Dim ic As BANK.SavingAccount
    Dim cs As BANK.Customer
    Dim fv As Single

    Set bd = New BANK.CIL_Bank
    Set ic = New BANK.SavingAccount
    Set cs = New BANK.Customer

    ic.SavingAccount__init__

    ic.SavingAccount_deposit_F 25.67 ' A1

    fv = ic.SavingAccount_getBalance_()
    MsgBox fv

    ic.SavingAccount_withdraw_F 12.32 ' A2

    fv = ic.SavingAccount_getBalance_()
    MsgBox
    Object_wait_J_
    SavingAccount__init__
    SavingAccount_canWithdraw_I
    SavingAccount_deposit_F
    SavingAccount_getAccountInfo_
    SavingAccount_getBalance_
    SavingAccount_withdraw_F
    cs.Cus
    cs.Name_ = "SRIRAM"
    cs.Address_ = "870 Saratoga Ave, San Jose CA 95129"
    ng_Ljava_lang_String_ "ANAND", "1299 Parkmoor Ave, San Jose CA 95126"
    ng_Ljava_lang_String_ "ABHIJIT", "1299 Parkmoor Ave, San Jose CA 95126"
  
```

For more information or a live demonstration please contact: demo@advancedcybernetics.com