

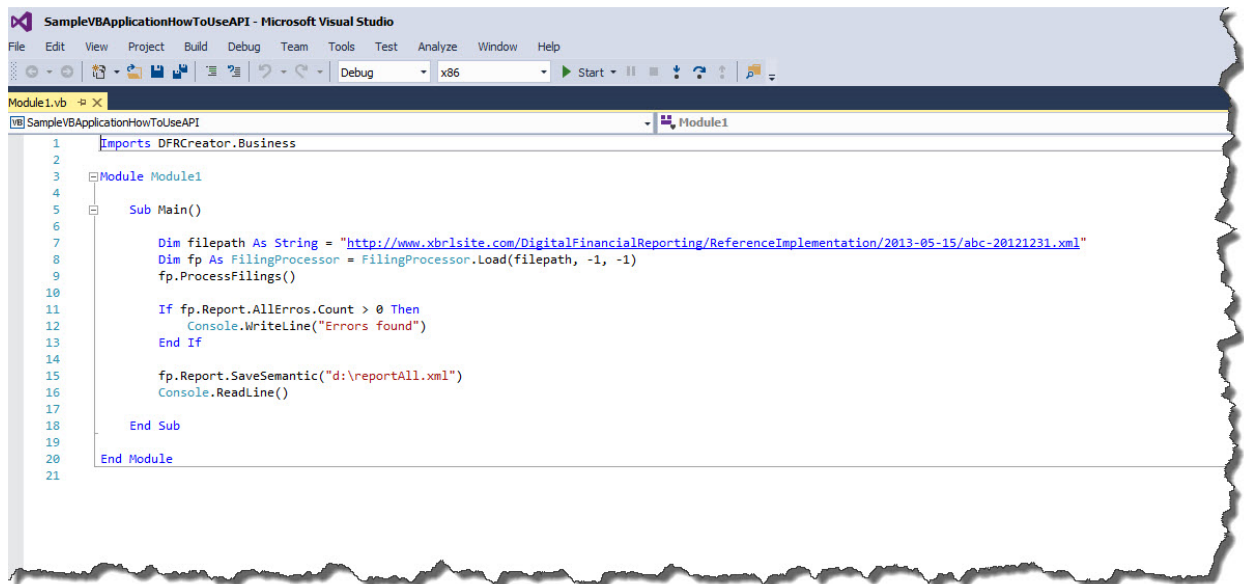
API, Batch Processing, Plugins

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This document makes you aware of and provides you with information related to using the Pesseract API to create software applications, to run batch processes, or to create an application plugin.

STEP 1: *Pesseract is a platform.*

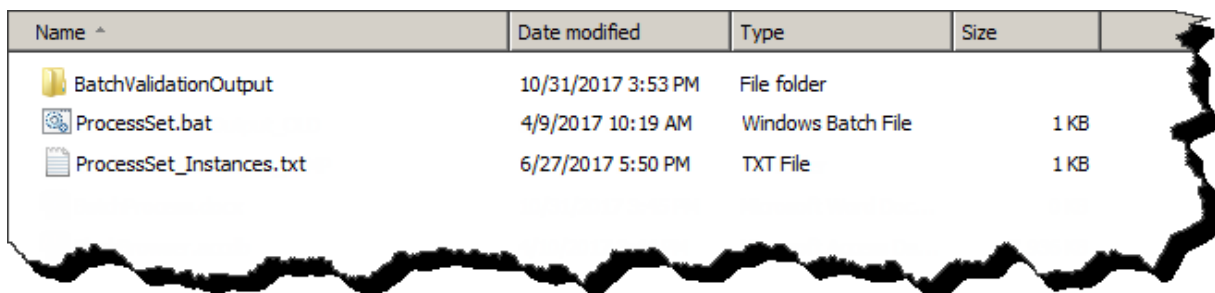
While Pesseract is a software application which provides a graphical user interface (GUI); it also provides an application programming interface (API) that you can use to build your own applications.



```
1 Imports DFRCreator.Business
2
3 Module Module1
4
5     Sub Main()
6
7         Dim filepath As String = "http://www.xbrlsite.com/DigitalFinancialReporting/ReferenceImplementation/2013-05-15/abc-20121231.xml"
8         Dim fp As FilingProcessor = FilingProcessor.Load(filepath, -1, -1)
9         fp.ProcessFilings()
10
11         If fp.Report.AllErrors.Count > 0 Then
12             Console.WriteLine("Errors found")
13         End If
14
15         fp.Report.SaveSemantic("d:\reportAll.xml")
16         Console.ReadLine()
17
18     End Sub
19
20 End Module
21
```

STEP 2: *Batch processing.*

Here is a basic example related to using Pesseract at the command line or using a BATCH file to process multiple XBRL instance documents and generate machine-readable output:



Name ^	Date modified	Type	Size
BatchValidationOutput	10/31/2017 3:53 PM	File folder	
ProcessSet.bat	4/9/2017 10:19 AM	Windows Batch File	1 KB
ProcessSet_Instances.txt	6/27/2017 5:50 PM	TXT File	1 KB

Batch File Contents: ProcessSet.bat

```
"C:\Program Files (x86)\DigitalFinancialReporting\Pesseract\DFRCreator\pesseractbatch.exe" -i:"D:\PesseractBatchProcessing\ProcessSet-Instances.txt"
```

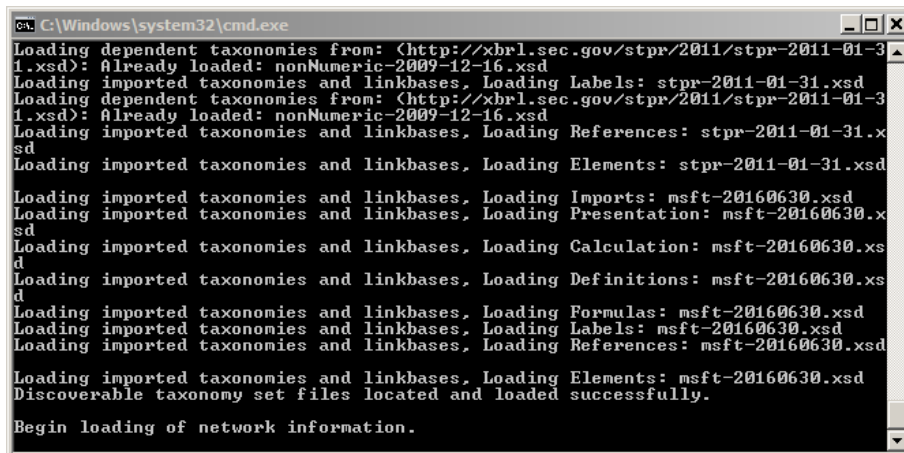
```
echo 0N
```

```
echo Processing completed successfully!
```

Text file contents: ProcessSet_Instances.txt

```
http://www.sec.gov/Archives/edgar/data/789019/000119312516662209/msft-20160630.xml  
http://www.sec.gov/Archives/edgar/data/320193/000162828016020309/aapl-20160924.xml  
http://www.sec.gov/Archives/edgar/data/66740/000155837017000479/mmm-20161231.xml  
http://www.sec.gov/Archives/edgar/data/1652044/000165204417000008/goog-20161231.xml  
http://www.sec.gov/Archives/edgar/data/858877/000085887716000117/cSCO-20160730.xml  
http://www.sec.gov/Archives/edgar/data/1635484/000114420417017430/cnnb-20161231.xml
```

Run the batch file



Output: BatchValidationOutput subdirectory

Name ^	Date modified	Type	Size
aapl-20160924	10/31/2017 3:52 PM	File folder	
cnnb-20161231	10/31/2017 3:53 PM	File folder	
cSCO-20160730	10/31/2017 3:53 PM	File folder	
goog-20161231	10/31/2017 3:52 PM	File folder	
mmm-20161231	10/31/2017 3:52 PM	File folder	
msft-20160630	9/3/2017 9:27 AM	File folder	
Output_Summary.xml	10/31/2017 3:53 PM	XML Document	4 KB

One subdirectory: appl-20160924

Name ^	Date modified	Type	Size
DisclosureDiscoveryTrace.log	10/31/2017 3:52 PM	Text Document	10 KB
DisclosureMechanicsValidationTrace.log	10/31/2017 3:52 PM	Text Document	81 KB
FACValidationTrace.log	10/31/2017 3:51 PM	Text Document	69 KB
Messages.xml	10/31/2017 3:52 PM	XML Document	20 KB
report.xml	10/31/2017 3:52 PM	XML Document	12,559 KB
report_facttable.xml	10/31/2017 3:52 PM	XML Document	11,730 KB
report_modelstructure.xml	10/31/2017 3:52 PM	XML Document	910 KB
SummaryOfSemanticDiscovery.xml	10/31/2017 3:52 PM	XML Document	2 KB
ValidationResult_DisclosureMechanics.xml	10/31/2017 3:52 PM	XML Document	67 KB
ValidationResult_FAC.xml	10/31/2017 3:52 PM	XML Document	13 KB
ValidationResult_ModelStructure.xml	10/31/2017 3:52 PM	XML Document	6 KB
ValidationResult_ReportingChecklist.xml	10/31/2017 3:52 PM	XML Document	23 KB
ValidationResult_TypeOrClassRelations.xml	10/31/2017 3:52 PM	XML Document	1 KB

All the files are machine readable XML or TEXT files.

STEP 3: Plugins.

Using the Pesseract API or other web services or other APIs; add ins or plug ins can be created to extend the functionality of the Pesseract GUI or API:

