Demo-Datasource

Read data from from textfile (in ini format) and enter it into web form.

VERSION BUILD=7500718 RECORDER=FX

'Uses a Windows script to submit several datasets to a website, e. g. for filling an online database

TAB CLOSEALLOTHERS

TAB T=1

' Specify input file (if !COL variables are used, IIM automatically assume a CSV format of the input file

'CSV = Comma Separated Values in each line of the file

SET !DATASOURCE Address.csv

'There is no need to inform the number of columns in the CSV file

'SET !DATASOURCE\_COLUMNS 8

'Start at line 2 to skip the header in the file

SET !LOOP 2

'Increase the current position in the file with each loop

SET !DATASOURCE\_LINE {{!LOOP}}

' Fill web form

URL GOTO=http://demo.imacros.net/Automate/AutoDataEntry

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:fname CONTENT={{!COL1}}

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:lname CONTENT={{!COL2}}

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:address CONTENT={{!COL3}}

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:city CONTENT={{!COL4}}

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:zip CONTENT={{!COL5}}

'

'Note \* is used to ignore leading and trailing blanks that could be in the input data

'

'The precent (%) symbol is used to select the stateid by VALUE as defined in the website select statement and not by its index.

TAG POS=1 TYPE=SELECT FORM=ID:demo ATTR=NAME:state CONTENT=$\*{{!COL6}}\*

'

'The string ($) symbol is used to select the country by TEXT, not by its index.

'Index would be the position of an entry in the combo box list, e. g. 161 for United States

TAG POS=1 TYPE=SELECT FORM=ID:demo ATTR=NAME:country CONTENT=$\*{{!COL7}}\*

'

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:email CONTENT={{!COL8}}

TAG POS=1 TYPE=BUTTON:submit FORM=ID:demo ATTR=TXT:Submit

TAG POS=1 TYPE=A ATTR=TXT:\*Back\*

# Demo-Download

Download files automatically

Macro Code

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/Downloads

'

'You can use the FOLDER=\* part of the ONDOWNLOAD command to define another download directory

'And you can overwrite the automatic file name generation by replacing

'FILE=+\_{{!NOW:yyyymmdd\_hhnnss}}

'with

'FILE=yourname (The correct file extension is added automatically)

'For more information visit http://wiki.imacros.net/ONDOWNLOAD

'

'For IE9/IE10 users, one has to change a setting not to prompt to open attached/downloaded zip files.

'One has to first download by hand such a file, then open the downloads view (Ctrl+J),

'right-click on the zip file to retrieve its context menu and

'disable "Always ask before opening this type of file"

'

'Here starts the regular download macro

'

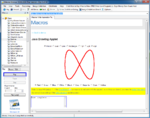
ONDOWNLOAD FOLDER=\* FILE=\* WAIT=YES

TAG POS=2 TYPE=A ATTR=TXT:\*Download\*

WAIT SECONDS=6

URL GOTO=http://demo.imacros.net/Automate/OK

Demo-Draw

[](http://wiki.imacros.net/File%3ADraw.png)

[http://wiki.imacros.net/skins/common/images/magnify-clip.png](http://wiki.imacros.net/File%3ADraw.png)

iMacros drawing a curve in a Java applet

It's not only mouse clicks, but also mouse movements that may be recorded by the DS (DirectScreen) technology.

(You might have to increase the wait statements, or set the [!REPLAYSPEED](http://wiki.imacros.net/!REPLAYSPEED) variable, if macro is played too fast for the applet.)

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/JavaDraw

SIZE X=800 Y=640

WAIT SECONDS=2

'

'one click to activate control

'

DS CMD=CLICK X=286 Y=321

'

'Select red color

'

DS CMD=CLICK X=75 Y=552

'

'Select 4pt pencil width

'

DS CMD=CLICK X=440 Y=284

'

'Mouse down to start drawing

'

DS CMD=LDOWN X=450 Y=410

DS CMD=MOVETO X=450 Y=410

DS CMD=MOVETO X=449 Y=435

DS CMD=MOVETO X=447 Y=458

DS CMD=MOVETO X=443 Y=478

DS CMD=MOVETO X=438 Y=494

DS CMD=MOVETO X=431 Y=505

DS CMD=MOVETO X=423 Y=510

DS CMD=MOVETO X=414 Y=508

DS CMD=MOVETO X=404 Y=501

DS CMD=MOVETO X=393 Y=487

DS CMD=MOVETO X=381 Y=469

DS CMD=MOVETO X=369 Y=447

DS CMD=MOVETO X=356 Y=423

DS CMD=MOVETO X=344 Y=398

DS CMD=MOVETO X=331 Y=373

DS CMD=MOVETO X=319 Y=351

DS CMD=MOVETO X=308 Y=333

DS CMD=MOVETO X=297 Y=320

DS CMD=MOVETO X=286 Y=312

DS CMD=MOVETO X=277 Y=310

DS CMD=MOVETO X=269 Y=315

DS CMD=MOVETO X=262 Y=325

DS CMD=MOVETO X=257 Y=341

DS CMD=MOVETO X=253 Y=362

DS CMD=MOVETO X=251 Y=385

DS CMD=MOVETO X=250 Y=410

DS CMD=MOVETO X=251 Y=435

DS CMD=MOVETO X=253 Y=458

DS CMD=MOVETO X=257 Y=478

DS CMD=MOVETO X=262 Y=494

DS CMD=MOVETO X=269 Y=505

DS CMD=MOVETO X=277 Y=510

DS CMD=MOVETO X=286 Y=508

DS CMD=MOVETO X=296 Y=501

DS CMD=MOVETO X=307 Y=487

DS CMD=MOVETO X=319 Y=469

DS CMD=MOVETO X=331 Y=447

DS CMD=MOVETO X=343 Y=423

DS CMD=MOVETO X=356 Y=398

DS CMD=MOVETO X=368 Y=374

DS CMD=MOVETO X=381 Y=352

DS CMD=MOVETO X=392 Y=333

DS CMD=MOVETO X=403 Y=320

DS CMD=MOVETO X=414 Y=312

DS CMD=MOVETO X=423 Y=310

DS CMD=MOVETO X=431 Y=315

DS CMD=MOVETO X=437 Y=325

DS CMD=MOVETO X=443 Y=341

DS CMD=MOVETO X=447 Y=361

DS CMD=MOVETO X=449 Y=385

DS CMD=MOVETO X=450 Y=409

WAIT SECONDS=0.2

'

'Mouse up => circle complete

'

DS CMD=LUP X=450 Y=410

WAIT SECONDS=1

TAG POS=1 TYPE=TEXTAREA FORM=NAME:NoFormName ATTR=NAME:S1 CONTENT=Draw<SP>complete...

WAIT SECONDS=2

# Demo-Extract

This demo shows the use of tag's extract parameter ([The EXTRACT Parameter](http://wiki.imacros.net/TAG#The_EXTRACT_Parameter)).

Macro Code

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/Extract2

TAG POS=1 TYPE=TD ATTR=CLASS:bdytxt&&TXT:\* EXTRACT=TXT

TAG POS=1 TYPE=A ATTR=TXT:H\*links\* EXTRACT=TITLE

TAG POS=1 TYPE=SPAN ATTR=CLASS:bdytxt&&TXT:\* EXTRACT=HTM

TAG POS=1 TYPE=A ATTR=TXT:HREF<SP>extracts<SP>links EXTRACT=HREF

TAG POS=1 TYPE=IMG ATTR=SRC:\*shark\_thumbnail.jpg EXTRACT=ALT

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:form1 ATTR=NAME:abc EXTRACT=TXT

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:form1 ATTR=ID:TF2 EXTRACT=TXT

TAG POS=2 TYPE=TABLE ATTR=TXT:\*My\* EXTRACT=TXT

TAG POS=1 TYPE=TD ATTR=CLASS:bdytxt&&TXT:\* EXTRACT=TXT

'

'Relative extraction

'

'1. Mark reference (anchor) element

TAG POS=1 TYPE=TH ATTR=TXT:MyTable

'2. POS value is RELATIVE to the anchor element

TAG POS=R3 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

# Demo-ExtractAndFill

Save extracted data to internal variables and use them to directly fill the fresh data into a web form.

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/ExtractDemo

TAG POS=39 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

SET !VAR1 {{!EXTRACT}}

SET !EXTRACT NULL

TAG POS=40 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

SET !VAR2 {{!EXTRACT}}

SET !EXTRACT NULL

TAG POS=41 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

SET !VAR3 {{!EXTRACT}}

SET !EXTRACT NULL

'Now fill them in a form. This is only one example. You could use it also as part of link

URL GOTO=http://demo.imacros.net/Automate/TestForm1

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:name CONTENT=\*\*\*Extract<SP>and<SP>Fill<SP>Demo\*\*\*

'

'The variables are part of the CONTENT tag. You could use them as part of link

TAG POS=1 TYPE=TEXTAREA FORM=ID:demo ATTR=NAME:Remarks CONTENT=Extraction<SP>results:<BR><BR>One<SP>dollar<SP>costs<SP>{{!VAR1}}<SP>EURO,<SP>{{!VAR2}}<SP>Pounds<SP>or<SP>{{!VAR3}}<SP>Yen.

# Demo-ExtractRelative

Preceding TAG commands may be used for [relative positioning](http://wiki.imacros.net/Data_Extraction#Extract_with_relative_Positioning) of the following TAG or extraction.

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/Extract2

'Classic extraction will count the number of cells from the TOP of the page

'extract 2

TAG POS=13 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

'

'Better to use positioning relative to the TAG command that

'appears just before the TAG/EXTRACT command

'

TAG POS=1 TYPE=TH ATTR=TXT:MyTable

'Postion is now R3, the 3rd cell after the text "Mytable"

TAG POS=R3 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

'Also extract the following numbers 4 and 5

TAG POS=R1 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

TAG POS=R1 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

'

'Alternative solution

'

TAG POS=1 TYPE=TH ATTR=TXT:MyTable

TAG POS=R3 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

TAG POS=1 TYPE=TH ATTR=TXT:MyTable

TAG POS=R4 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

TAG POS=1 TYPE=TH ATTR=TXT:MyTable

TAG POS=R5 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

'

'Negative positioning => move to the LEFT and/or TOP of the anchor

TAG POS=1 TYPE=TD ATTR=TXT:3

'Move two cells left => extract the number "1"

TAG POS=R-2 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

# Demo-FillForm

This macro shows how to fill forms automatically using iMacros.

Macro Code

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/TestForm1

'We use quotation marks for a content with spaces

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=ID:name CONTENT="Suman Tester"

'We manually changed the TAG command from using the postion of a value (e. g. "2")

'to using its real name, e. g. "Pizza"

TAG POS=1 TYPE=SELECT FORM=ID:demo ATTR=ID:food CONTENT=%Pizza

TAG POS=1 TYPE=SELECT FORM=ID:demo ATTR=ID:drink CONTENT=%Coke

TAG POS=1 TYPE=INPUT:RADIO FORM=ID:demo ATTR=ID:medium&&VALUE:medium CONTENT=YES

'If you want to select more than one, use a colon (:)

TAG POS=1 TYPE=SELECT FORM=ID:demo ATTR=ID:dessert CONTENT=%ice<SP>cream:%Apple<SP>Pie

TAG POS=1 TYPE=INPUT:RADIO FORM=ID:demo ATTR=NAME:Customer CONTENT=YES

SET !ENCRYPTION NO

TAG POS=1 TYPE=INPUT:PASSWORD FORM=ID:demo ATTR=NAME:Reg\_code CONTENT=tester

'In a quoted content, we can use \n for a new line, \t for tab and \" for literal quotes

TAG POS=1 TYPE=TEXTAREA FORM=ID:demo ATTR=NAME:Remarks CONTENT=iMacros<SP>can<SP>fill<SP>forms.

TAG POS=1 TYPE=BUTTON:SUBMIT FORM=ID:demo ATTR=TXT:Click<SP>to<SP>order<SP>now

# Demo-Extract-Table

Extract complete table with one command and save data to text file.

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

'The name of file to store the extracted information is specified with the FILE= attribute of the SAVEAS command

'The FOLDER=\* attribute indicates that the default folder is used. You can specify another folder with FOLDER=c:\yourfolder

URL GOTO=http://demo.imacros.net/Automate/ExtractDemo

'

'Note: This macro can run the iMacros Browser, Firefox and the IE-Plugin

'But the EXTRACT button to start the extraction wizard is only in the IM Browser

'

'

'The first table is the list of currencies

'=> Extract data of \*\*2nd\*\* table (POS=2) on page

TAG POS=2 TYPE=TABLE ATTR=TXT:\* EXTRACT=TXT

'The SAVEAS statement was added manually to write the extracted table to a file

'(The alternative way to get the extracted data is the Scripting Interface)

SAVEAS TYPE=EXTRACT FOLDER=\* FILE=mytable\_{{!NOW:yymmdd\_hhnnss}}.csv

WAIT SECONDS=3

URL GOTO=http://demo.imacros.net/Automate/OK

# Demo-Filter

This macro demonstrates the use of the [FILTER](http://wiki.imacros.net/FILTER) command.

Macro Code

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

'

' loads a normal page, but without the images (for higher loading speed)

FILTER TYPE=IMAGES STATUS=ON

URL GOTO=http://demo.imacros.net/Automate/Filter

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:form1 ATTR=NAME:textfield CONTENT=Image<SP>Filter<SP>ON<SP>(No<SP>images<SP>downloaded<SP>from<SP>server)

WAIT SECONDS=3

'

'

' loads same page as above, but now with images

FILTER TYPE=IMAGES STATUS=OFF

'

URL GOTO=http://demo.imacros.net/Automate/Filter

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:form1 ATTR=NAME:textfield CONTENT=Image<SP>Filter<SP>OFF<SP>(Web<SP>page<SP>not<SP>filtered)

WAIT SECONDS=3

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:form1 ATTR=NAME:textfield CONTENT=Image<SP>Filter<SP>Test<SP>completed

# Demo-Flash

This macro demonstrates the use of the [DS](http://wiki.imacros.net/DS) commands to handle interactions on a Flash application.

Macro Code

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/FlashDemo

SIZE X=800 Y=600

'Replay at lower speed so one can "see" the clicks better

SET !REPLAYSPEED MEDIUM

'99

DS CMD=CLICK X=153 Y=488

DS CMD=CLICK X=154 Y=488

'enter

DS CMD=CLICK X=43 Y=489

'24

DS CMD=CLICK X=123 Y=553

DS CMD=CLICK X=86 Y=532

'enter

DS CMD=CLICK X=43 Y=489

' +

DS CMD=CLICK X=192 Y=584

# Demo-Frames

iMacros works well with framed pages.

Macro Code

VERSION BUILD=7500718 RECORDER=FX

TAB T=1

URL GOTO=http://demo.imacros.net/Automate/Frames

FRAME F=2

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:2 ATTR=\* CONTENT=F2

FRAME F=3

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:3 ATTR=\* CONTENT=F3

FRAME F=4

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:4 ATTR=\* CONTENT=F4

FRAME F=5

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:5 ATTR=\* CONTENT=F5

FRAME F=6

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:6 ATTR=\* CONTENT=F6

FRAME F=7

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:7 ATTR=\* CONTENT=F7

FRAME F=8

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:8 ATTR=\* CONTENT=F8

FRAME F=7

TAG POS=1 TYPE=A ATTR=TXT:Navigate<SP>to<SP>another<SP>frame<SP>page

FRAME F=8

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:SubFrame1 ATTR=\* CONTENT=Sub<SP>Frame<SP>1

FRAME F=9

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:SubFrame2 ATTR=\* CONTENT=Sub<SP>Frame<SP>2

FRAME F=10

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:SubFrame3 ATTR=\* CONTENT=Sub<SP>Frame<SP>3

FRAME F=6

TAG POS=1 TYPE=A ATTR=TXT:Display<SP>iOpus<SP>iMacros<SP>Product<SP>Homepage

# Demo-JavascriptDialog

Click and fill Javascript dialogs

Macro Code

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/Dialogs

ONDIALOG POS=1 BUTTON=OK CONTENT=

TAG POS=1 TYPE=INPUT:BUTTON FORM=NAME:NoFormName ATTR=VALUE:Popup<SP>1

ONDIALOG POS=1 BUTTON=OK CONTENT=

TAG POS=1 TYPE=INPUT:BUTTON FORM=NAME:NoFormName ATTR=VALUE:Ask<SP>me<SP>a<SP>question

ONDIALOG POS=1 BUTTON=OK CONTENT=green

TAG POS=1 TYPE=INPUT:BUTTON FORM=NAME:NoFormName ATTR=NAME:btnPrompt&&VALUE:Enter<SP>background<SP>color

ONDIALOG POS=1 BUTTON=OK CONTENT=

ONDIALOG POS=2 BUTTON=OK CONTENT=aqua

ONDIALOG POS=3 BUTTON=OK CONTENT=

TAG POS=1 TYPE=INPUT:BUTTON FORM=NAME:NoFormName ATTR=NAME:btnThreeStep&&VALUE:Three-step<SP>background<SP>color<SP>change

WAIT SECONDS=3

TAG POS=1 TYPE=INPUT:BUTTON FORM=NAME:NoFormName ATTR=VALUE:Change<SP>background<SP>back\*

# Demo-Loop-Csv-2-Web

Demonstrates automatic data entry with the LOOP button: Reads data from a simple text file in [CSV](http://wiki.imacros.net/csv) format and submits it to a web site.

Please note that you need to use the **"Play (Loop)"** button instead of the regular "Play" button if you want to loop through a CSV file. Also don't forget to set the "Max" text box value to the number of the last line you want to reach in your CSV file.

**Related Screencast Tutorial:** [Read/import values to a website from a file (Amazon.com)](http://www.iopus.com/shared/flash/iim-amazon-csv-file-input.htm)

See also the [Table-Driven Testing](http://wiki.imacros.net/Web_Testing#Table-Driven_Testing) chapter, it shows how to use this feature for quick and easy web testing.

Macro Code

VERSION BUILD=8031994

'Uses a Windows script to submit several datasets to a website, e. g. for filling an online database

TAB T=1

TAB CLOSEALLOTHERS

' Specify input file (if !COL variables are used, IIM automatically assume a CSV format of the input file

'CSV = Comma Separated Values in each line of the file

SET !DATASOURCE Address.csv

'Start at line 2 to skip the header in the file

SET !LOOP 2

'Increase the current position in the file with each loop

SET !DATASOURCE\_LINE {{!LOOP}}

' Fill web form

URL GOTO=http://demo.imacros.net/Automate/AutoDataEntry

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:fname CONTENT={{!COL1}}

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:lname CONTENT={{!COL2}}

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:address CONTENT={{!COL3}}

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:city CONTENT={{!COL4}}

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:zip CONTENT={{!COL5}}

'

'Note \* is used to ignore leading and trailing blanks that could be in the input data

'

'The precent (%) symbol is used to select the stateid by VALUE as defined in the website select statement and not by its index.

TAG POS=1 TYPE=SELECT FORM=ID:demo ATTR=NAME:state CONTENT=$\*{{!COL6}}\*

'

'The string ($) symbol is used to select the country by TEXT, not by its index.

'Index would be the position of an entry in the combo box list, e. g. 161 for United States

TAG POS=1 TYPE=SELECT FORM=ID:demo ATTR=NAME:country CONTENT=$\*{{!COL7}}\*

'

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:email CONTENT={{!COL8}}

TAG POS=1 TYPE=BUTTON:submit FORM=ID:demo ATTR=TXT:Submit

TAG POS=1 TYPE=A ATTR=TXT:\*Back\*

# Demo-OfflineExtract

Extract data from local HTML code

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=file:///{{!FOLDER\_DATASOURCE}}/offline/extract\_local.htm

TAG POS=29 TYPE=TD ATTR=TXT:\*.\* EXTRACT=TXT

TAG POS=30 TYPE=TD ATTR=TXT:\*.\* EXTRACT=TXT

SAVEAS TYPE=EXTRACT FOLDER=\* FILE=mytest\_{{!NOW:yymmdd\_hhmmss}}.csv

# Demo-SaveAs

Save the page in different formats.

Macro Code

VERSION BUILD=8031994

TAB T=1

SET !REPLAYSPEED MEDIUM

TAB CLOSEALLOTHERS

TAB T=1

URL GOTO=http://demo.imacros.net/Automate/SaveAs

WAIT SECONDS=3

URL GOTO=http://www.iopus.com/imacros/

'Save the page in all three different formats

SAVEAS TYPE=CPL FOLDER=\* FILE=+\_{{!NOW:yyyymmdd\_hhnnss}}

'Chrome does not support CPL format, use MHT istead

'SAVEAS TYPE=MHT FOLDER=\* FILE=+\_{{!NOW:yyyymmdd\_hhnnss}}

SAVEAS TYPE=HTM FOLDER=\* FILE=+\_{{!NOW:yyyymmdd\_hhnnss}}

SAVEAS TYPE=TXT FOLDER=\* FILE=+\_{{!NOW:yyyymmdd\_hhnnss}}

'Wait a few seconds

WAIT SECONDS=3

URL GOTO=http://demo.imacros.net/Automate/SaveAs

# Demo-SaveTargetAs

Download files and save them using custom paths and file names. See also [Save Target As](http://wiki.imacros.net/TAG#Triggering_events)

VERSION BUILD=7500718 RECORDER=FX

TAB CLOSEALLOTHERS

TAB T=1

URL GOTO=http://demo.imacros.net/Automate/SaveTargetAs

'

'Note: The SAVETARGETAS event is only available in the IM Browser, not the IE-Plugin

'

'Download 1

'

'Define download folder and file

ONDOWNLOAD FOLDER=\* FILE=+\_pdf-file\_{{!NOW:yyyymmdd\_hhnnss}}

'TAG statement, the CONTENT=EVENT:SAVETARGETAS part was added manually after recording

TAG POS=1 TYPE=A ATTR=TXT:"Open PDF Document" CONTENT=EVENT:SAVETARGETAS

'

'Download 2

'

ONDOWNLOAD FOLDER=\* FILE=+\_video-file\_{{!NOW:yyyymmdd\_hhnnss}}

TAG POS=1 TYPE=A ATTR=TXT:"Play Video" CONTENT=EVENT:SAVETARGETAS

# Demo-Slideshow

View thumbnails automatically

This demo works with the following page: <http://www.iopus.com/imacros/demo/v4/images/index.htm>

Macro Code

VERSION BUILD=7500718 RECORDER=FX

TAB CLOSEALLOTHERS

'

'Press LOOP to start this macro

'

'Remove the URL command to make this

' an UNIVERSAL Slide Show Macro!

TAB T=1

URL GOTO=http://demo.imacros.net/Automate/Images

'You can \*start\* the loop at another value with SET !LOOP. The default start value is 1.

'Since the SET !LOOP command sets a START value, it works only at the first loop.

'SET !LOOP 2

TAG POS={{!loop}} TYPE=A ATTR=HREF:http://\*.jpg

'Enable the SAVEAS command if you want to save the pictures

'SAVEAS TYPE=CPL

'Give the user time to press PAUSE

WAIT SECONDS=3

'Go back to start page

'Use !urlstart if you removed the URL GOTO= command at the top of the macro

'URL GOTO={{!urlstart}}

# Demo-Stopwatch

Measure detailed website response times with the STOPWATCH command.

For more information on performance testing please see also the [performance testing demo video](http://forum.iopus.com/_uploads/Stopwatch.htm)

**Live Demo:** AlertFox [Website Monitoring](http://www.alertfox.com/) runs a macro similar to the one below every 15 min to monitor iOpus services: [Click here to view iOpus services performance measurement](http://status.iopus.com/).

In the macro below, the performance data is written to a [CSV](http://wiki.imacros.net/csv) file which is written the the location specified in [!FILESTOPWATCH](http://wiki.imacros.net/!FILESTOPWATCH).

The data can also be retrieved from within a calling script with [iimGetStopwatch](http://wiki.imacros.net/iimGetStopwatch" \o "iimGetStopwatch). Macro Code

VERSION BUILD=7500718 RECORDER=FX

TAB CLOSEALLOTHERS

TAB T=1

'Change the default stopwatch file name:

'The file is saved to iMacros DOWNLOAD folder

'

'SET !FILESTOPWATCH C:\Temp\demo-stopwatch.csv

'Note: Use SET !FILESTOPWATCH NO if you do NOT need a response time log file

'(for example, if you return the values to the Scripting Interface via iimGetStopwatch)

'

'Start reponse time measurement

'Measure total macro runtime

STOPWATCH ID=Total

'Measure load time for first page

STOPWATCH ID=Firstpage

URL GOTO=http://demo.imacros.net/Automate/StopWatchDemo

STOPWATCH ID=Firstpage

'

'

TAG POS=1 TYPE=A ATTR=HREF:http://demo.imacros.net/Automate/AutoDataEntry

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:fname CONTENT=Tom

TAG POS=1 TYPE=INPUT:TEXT FORM=ID:demo ATTR=NAME:lname CONTENT=Tester

'Measure server reaction on submit

STOPWATCH ID=SubmitData

TAG POS=1 TYPE=BUTTON:SUBMIT FORM=ID:demo ATTR=TXT:Submit

STOPWATCH ID=SubmitData

STOPWATCH ID=Store1

'Measure time for secure Online store to open

'go to store

URL GOTO=http://www.iopus.com/imacros/

TAG POS=1 TYPE=A ATTR=TXT:\*Buy\*

'open store => start timer

TAG POS=1 TYPE=IMG ATTR=ALT:Buy<SP>Now

STOPWATCH ID=Store1

'Measure time for second page

STOPWATCH ID=Total

'

WAIT SECONDS=2

URL GOTO=http://demo.imacros.net/Automate/StopWatchReport

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:form1 ATTR=ID:path CONTENT="In iMacros Downloads folder"

# Demo-Tabs

Control the tabbed browser interface

Macro Code

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/PopupDemo

TAG POS=1 TYPE=A ATTR=HREF:\*Popup

TAB T=4

TAG POS=1 TYPE=INPUT:TEXT FORM=NAME:f3 ATTR=NAME:txtPopup CONTENT=Popup<SP>3

WAIT SECONDS=1

TAB T=1

# Demo-Tagposition

Use the [TAG](http://wiki.imacros.net/TAG) position parameter to handle HTML elements that have an identical code

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/TagPosition

'

'All links have the same name, so we use the POS= parameter to distinguish

'between the 1st, 2nd and 3rd link.

'

TAG POS={{!LOOP}} TYPE=A ATTR=TXT:Click<SP>to<SP>open<SP>this<SP>page

WAIT SECONDS=1

BACK

Parse Twitter Tweets

We eat our own dogfood. The following iMacros macro helped us to create the [Twitter testimonials page](http://www.iopus.com/imacros/success/twitter.htm). The macro copies all information of a certain tweet to the clipboard, and then we could simply copy & paste it into our website.

VERSION BUILD=7300701 RECORDER=FX

TAB T=1

'No test dialog

SET !EXTRACT\_TEST\_POPUP NO

'Extract tweet link

SET !EXTRACT {{!URLCURRENT}}

'extract profile image link

TAG POS=1 TYPE=IMG ATTR=SRC:[http://a0.twimg.com/profile\_images\*](http://a0.twimg.com/profile_images*) EXTRACT=HREF

'extract user name

TAG POS=1 TYPE=A ATTR=TXT:@\* EXTRACT=TXT

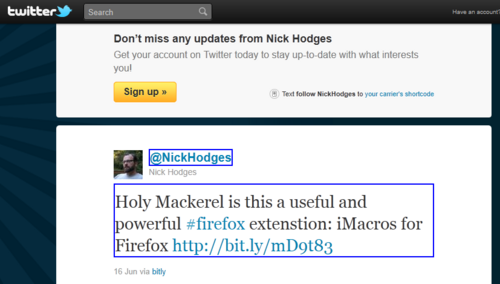
'extract tweet text

TAG POS=1 TYPE=DIV ATTR=CLASS:tweet-text<SP>tweet-text-large EXTRACT=TXT

'done! - now copy to clipboard

SET !CLIPBOARD {{!EXTRACT}}

The macro in action:

[](http://wiki.imacros.net/File%3AExtract_twitter_tweet.png)

# Demo-AJAX-Tree

This script automates an AJAX tree view, using drag & drop. Note that this solution does **not** require fixed coordinates, rather it uses the position of certain HTML page element, as returned by the[!TAGX](http://wiki.imacros.net/!TAGX) and [!TAGY](http://wiki.imacros.net/!TAGY) variables. With this method, iMacros can **locate (and move) tree elements anywhere on the page**. The only requirement is that the tree elements are visible in the web browser, so the [DirectScreen](http://wiki.imacros.net/DirectScreen" \o "DirectScreen) command can grab and move them.

VERSION BUILD=8031994

TAB T=1

TAB CLOSEALLOTHERS

URL GOTO=http://demo.imacros.net/Automate/DragDropDemo

SIZE X=750 Y=600

SET !EXTRACT\_TEST\_POPUP NO

SET !REPLAYSPEED MEDIUM

'select Germany node from treeview and move it to the first position

'Use EXTRACT to avoid to "click" on the element

TAG POS=1 TYPE=A ATTR=TXT:Germany EXTRACT=TXT

DS CMD=LDOWN X={{!TAGX}} Y={{!TAGY}}

WAIT SECONDS=1

'find Europe node and move Germany here

TAG POS=1 TYPE=A ATTR=TXT:Europe EXTRACT=TXT

DS CMD=MOVETO X={{!TAGX}} Y={{!TAGY}}

DS CMD=LUP X={{!TAGX}} Y={{!TAGY}}

# Demo-ArchivePage

Simple but effective macro to save the current page

This demo works with the following page: Any

Macro Code

VERSION BUILD=7500718 RECORDER=FX

'Simple but effective macro to saves the current page

'

'Ask for a name

PROMPT Enter<SP>a<SP>Page<SP>Name !VAR1 NoName\_Time\_{{!NOW:yyyymmdd\_hhnnss}}

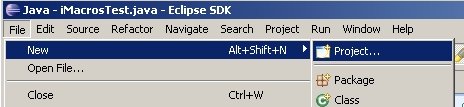
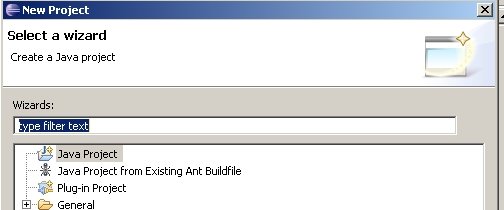
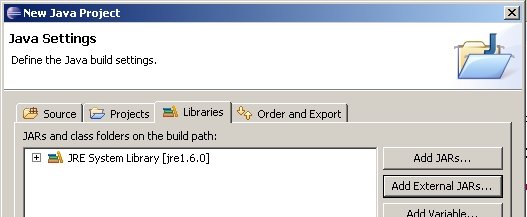
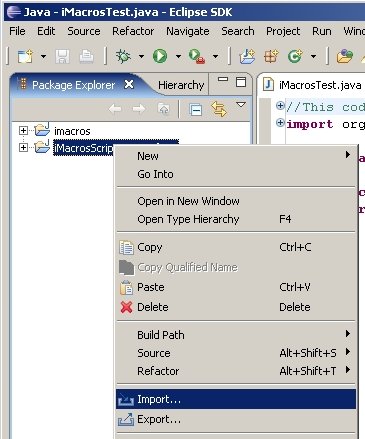
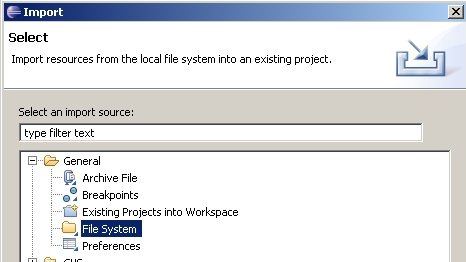
'

'Save the page

SAVEAS TYPE=CPL FOLDER=\* FILE={{!VAR1}}

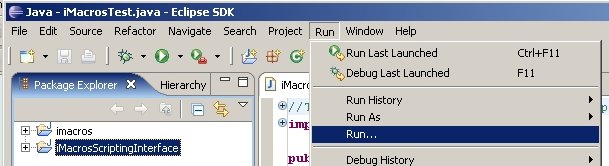
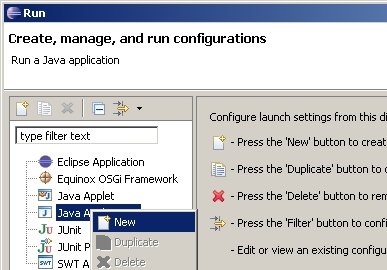
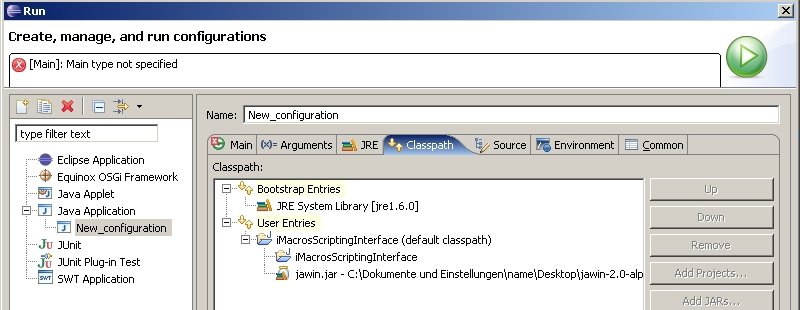
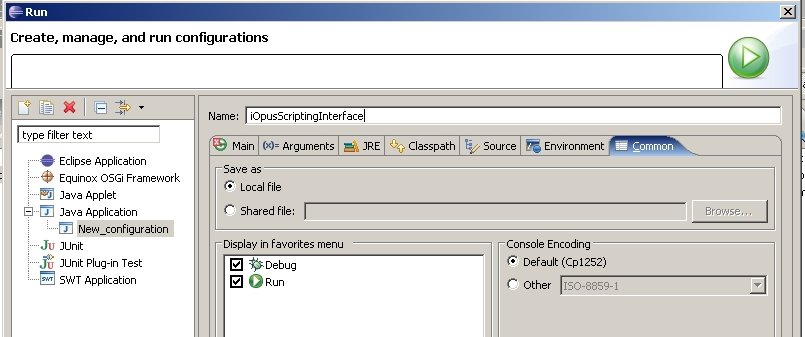
### [Using iMacros with JAVA (via the Jawin package) in Eclipse](http://forum.imacros.net/viewtopic.php?t=2703#p6942)

by **[Hannes, Tech Support](http://forum.imacros.net/memberlist.php?mode=viewprofile&u=2157&sid=bcc9bd1635b16099fa43b178b090bdc9)** on Tue Feb 13, 2007 6:46 am

**[Update 2010-08-23]**  
The Jawin library does not support 64bit. However, there's a replacement called JACOB (<http://sourceforge.net/projects/jacob-project/>). It's pretty easy to use and the main steps given below still hold. Just replace any reference to jawin with the appropriate JACOB one. Additionally, I have posted a small HowTo [here](http://forum.iopus.com/viewtopic.php?f=6&t=10899).  
**[End of update]**  
  
**[Update]**  
When running iMacros from Java, you may also be interested in using the iMacros Java wrapper class: <http://forum.iopus.com/viewtopic.php?f=14&t=1147>  
**[End of update]**  
  
**[update]**  
A tutorial for using **NetBeans** instead of Eclipse can be found here: <http://forum.iopus.com/viewtopic.php?f=6&t=7183>  
**[End of update]**  
  
  
  
**Preliminaries:**  
  
1) Download Jawin (<http://jawinproject.sourceforge.net/>, version 1.0.19, released under this license:<http://jawinproject.sourceforge.net/LICENSE.txt>), extract to local folder   
**[Update]** Version 2.0-alpha1 also works fine.**[End of update]**  
  
2) Start Eclipse  
  
**Start new project (usign jawin) in Eclipse:**  
  
1) File --> New --> Project  
  
  
  
2) Java --> Java Project --> Next  
  
  
  
3) Enter name: "iMacrosScriptingInterface" --> Next  
  
4) Libraries --> Add External Jars" --> select jawin.jar from the Jawin\lib directory --> Finish  
  
  
  
5) Right-click iMacrosScriptingInterface in Package Explorer tab  
  
  
  
6) Import --> General --> File System --> Next  
  
  
  
7) Browse --> jawin-dir\bin\jawin.dll --> Finish  
  
**New Class in project**  
  
1) Select iMacrosScriptingInterface in the Package Explorer tab  
  
2) File --> New --> Class  
  
  
  
3) Name: iMacrosTest --> Finish  
  
**Writing/Runnign an example**  
  
1) Open iMacrosTest.java  
  
2) Copy the following code to iMacrosTest.java:

**CODE:**[**SELECT ALL**](http://forum.imacros.net/viewtopic.php?t=2703)

//This code makes use of jawin from http://jawinproject.sourceforge.net/  
//jawin license: http://jawinproject.sourceforge.net/LICENSE.txt  
  
//two imports from jawin.jar  
import org.jawin.DispatchPtr;  
import org.jawin.win32.Ole32;  
  
public class iMacrosTest {  
  
   public static void main(String[] args) {  
      try {  
         Ole32.CoInitialize();  
  
         DispatchPtr app = new DispatchPtr("imacros");  
  
         //Calling iMacros methods  
         app.invoke("iimInit", null);  
         app.invoke("iimPlay", "CODE:URL GOTO=http://www.iopus.com");  
         app.invoke("iimPlay", "CODE:TAG POS=1 TYPE=A ATTR=TXT:iMacros EXTRACT=TXT");  
  
         //manually cast return values to correct type  
         String iret = app.invoke("iimGetLastExtract").toString();  
  
         app.invoke("iimExit");  
                        System.out.println(iret);  
                         
         Ole32.CoUninitialize();  
      }  
  
      catch (Exception e){  
         e.printStackTrace();  
      }  
  
   }  
}

[Edit: changed "URL GOTO=www.iopus.com" to "URL GOTO=http://www.iopus.com]  
**[Update]**Changed TAG command to comply with web page layout.**[End of update]**  
  
3) You might want to select the full code and have it automatically be indented with "CTRL-i"  
  
4) Menu: Run --> Run...  
  
  
  
5) Rightclick Java-Application --> New  
  
  
  
6) Under "Classpath" you should find the jawin.jar  
  
  
  
7) Under "Common" check both Debug and Run  
  
  
  
8) Click Run   
this can later be accessed by the Run-Button:  
  
  
  
The Java class will now be compiled and started. It will open an iMacros browser window that visits [http://www.iopus.com](http://www.iopus.com/)

# Python

The iMacros Scripting Interface can be used from any programming or script language that can use the standard Windows COM object interfaces. The following example shows you how to call this interface from Python. The script initializes the Scripting Interface and calls the demo macro "FillForm".

import win32com.client

def Hello():

import win32com.client

w=win32com.client.Dispatch("imacros")

w.iimInit("", 1)

w.iimPlay("Demo\\FillForm")

if \_\_name\_\_=='\_\_main\_\_':

Hello()

Note: You need to install the [Python Extensions for Windows](http://www.python.org/getit/windows/) for Windows COM support (module win32com.client).

# Perl

The iMacros Scripting Interface can be used from any programming or script language that can use the standard Windows COM object interfaces. The following example shows you how to call this interface from Perl. The script initializes the Scripting Interface and calls a macro with name "Yahoo". It also contains a subroutine that prints out messages returned by the iMacros Scripting Interface.

use Win32::OLE;

$b = Win32::OLE->new('imacros') or die "iMacros Browser could not be started by Win32:OLE\n";

$b->{Visible} = 1;

#Start the iMacros Browser - Use iimInit("-ie"/"-fx") to start iMacros for IE/Firefox instead.

$b->iimInit();

#Calling an iMacros macro ie;yahoo.iim . Write a Simple iim script to goto www.yahoo.com

my $macro = "yahoo";

# PLEASE NOTE: if you want to pass iMacros a path to a macro, rather than the name of a macro that resides in default folder,

# the path should be passed in this format:

# 'C:\\Documents and Settings\\username\\My Documents\\Client scripts\\Perl\\iim.iim';

# I.e. "\\" should be used as a path delimeter

$b->iimPlay($macro);

&err ();

$b->iimExit();

########################################################################

# Get the last message reported from iMacros upon macro completion status#

########################################################################

sub err {

$lastMessage = $b->iimGetLastErrorMessage();

if ($lastMessage =~ /Macro completed/) {

print("Success <$macro> $lastMessage\n");

#write a logger here for Success $lastMessage

}

else{

print("Failure <$macro> $lastMessage\n");

#write a logger here for Failure $lastMessage

}

}

PLEASE NOTE: if you want to pass iMacros a path to a macro, rather than the name of a macro that resides in default folder, the path should be passed in this format:

'C:\\Documents and Settings\\username\\My Documents\\Client scripts\\Perl\\iim.iim';

I.e. "\\" should be used as a path delimeter

*This tutorial was initially provided by Mark Swank of Nokia Internet Communications.*

# CPP

This page lists sample code for using iMacros with C++. The basic structure is the same as for other languages.

(1) [Download](http://www.iopus.com/download/iMacrosCxxSample.zip) a complete C++ Visual Studio 2005 iMacros sample project.

(2) [Download](http://www.iopus.com/download/cppexpress2008.zip) a complete Visual C++ 2008 Express Edition iMacros sample project.

(3) C++ version of the [Get-Exchange-Rate.vbs](http://wiki.imacros.net/Get-Exchange-Rate.vbs) example:

void Examples::GetExchangeRate()

{

IAppPtr app = IAppPtr(\_\_uuidof(App));

Status s = app->iimInit("", true, "", "", "", cTimeout);

s = app->iimDisplay("Extract Example", cTimeout);

s = app->iimPlay("wsh-extract-rate", cTimeout);

s = app->iimExit(cTimeout);

\_bstr\_t EURO = app->iimGetLastExtract(1);

\_bstr\_t GBP = app->iimGetLastExtract(2);

CString message = CString(\_T("One US$ costs ")) + EURO.GetBSTR() + \_T(" EURO or ") + GBP.GetBSTR() + \_T(" British Pounds (GBP)");

}

# CPP Tutorial

Here's how to use the [Scripting Interface](http://wiki.imacros.net/Web_Scripting) with Visual C++ 2008.

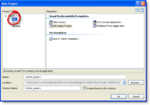
## Contents

 [[hide](http://wiki.imacros.net/CPP_Tutorial)]

* [1 Create Project](http://wiki.imacros.net/CPP_Tutorial#Create_Project)
* [2 Add a reference to iMacros Scripting Interface](http://wiki.imacros.net/CPP_Tutorial#Add_a_reference_to_iMacros_Scripting_Interface)
* [3 Input some code](http://wiki.imacros.net/CPP_Tutorial#Input_some_code)
* [4 Done](http://wiki.imacros.net/CPP_Tutorial#Done)

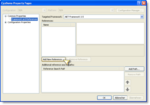
## Create Project

* Create a new CLR project (it can be a CLR Empty Project)

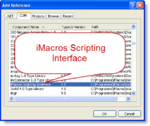
[](http://wiki.imacros.net/File%3ANewProject.png)

## Add a reference to iMacros Scripting Interface

* Open the Project Property Pages
* Choose Framework and References. Click the button Add New Reference...

[](http://wiki.imacros.net/File%3AAddNewReference.png)

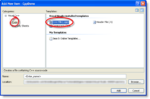
* In the Add Reference window, click on the COM tab and scroll down until you find iMacros Scripting Interface.

[](http://wiki.imacros.net/File%3AAddReference.png)

* Click the OK button. And OK again to leave the Property Pages window.

## Input some code

* Now you can add a source code file,

[](http://wiki.imacros.net/File%3AAddSource.png)

* where, as usual you type your code in, for instance:

using namespace System;

int main(array<System::String ^> ^args)

{

int timeout = 60;

iMacros::AppClass^ app = gcnew iMacros::AppClass();

Console::WriteLine("Hello iMacros world!");

Console::Write("iMacros version ");

Console::WriteLine(Convert::ToString(app->iimGetInterfaceVersion()));

app->iimInit("",true,"","","",timeout);

app->iimDisplay("C++ test",timeout);

app->iimPlay("CODE:URL GOTO=[http://www.iopus.com](http://www.iopus.com/)",timeout);

app->iimPlay("CODE:WAIT SECONDS=5",timeout);

app->iimExit(timeout);

return 0;

}

## Done

* Notice that the intellisense for iMacros class and methods is now activated.

**[](http://wiki.imacros.net/File%3AIntellisense.png)**

* Now you can build and run the program as usual.

# Data Extraction

*"At the Independent Evaluation Unit of the World Bank, we are using iMacros... to streamline our information gathering and research tasks."*

Alex McKenzie, The World Bank

*"I run ~900 Script against 1500 websites daily. If it wasn't for iMacros I would have to have 3 or 4 people sit around all day and download data."*

Josh Miller, Dataflowservices, Inc.,

## Data Extraction and Web Scraping [iMacros Browser](http://wiki.imacros.net/File%3AIMacros-icon.png) [IE Plug-in](http://wiki.imacros.net/File%3AIe-icon.png) [Firefox](http://wiki.imacros.net/File%3AFf-icon.png)

A key activity in web automation is the extraction of data from websites, also known as web scraping or screen scraping. Whether it is price lists, stock information, financial data or any other type of data, iMacros can extract this data for you and either re-use the data or store it in a file or database.

iMacros can write extracted data to standard text files, including the comma separated value (.csv) format, readable by spreadsheet processing packages. Also, iMacros can make use of the powerful scripting interface to save data directly to databases.

## Contents

 [[hide](http://wiki.imacros.net/Data_Extraction)]

* [1 Data Extraction and Web Scraping](http://wiki.imacros.net/Data_Extraction#Data_Extraction_and_Web_Scraping)
  + [1.1 The Extract command](http://wiki.imacros.net/Data_Extraction#The_Extract_command)
* [2 Creation of Extraction Tags](http://wiki.imacros.net/Data_Extraction#Creation_of_Extraction_Tags)
  + [2.1 Extraction Wizard](http://wiki.imacros.net/Data_Extraction#Extraction_Wizard)
  + [2.2 Extraction from Framed Websites](http://wiki.imacros.net/Data_Extraction#Extraction_from_Framed_Websites)
  + [2.3 Manual Creation](http://wiki.imacros.net/Data_Extraction#Manual_Creation)
  + [2.4 Extract Complete Website](http://wiki.imacros.net/Data_Extraction#Extract_Complete_Website)
  + [2.5 Extract Table](http://wiki.imacros.net/Data_Extraction#Extract_Table)
  + [2.6 Extract Page Title](http://wiki.imacros.net/Data_Extraction#Extract_Page_Title)
  + [2.7 Extract Page URL](http://wiki.imacros.net/Data_Extraction#Extract_Page_URL)
  + [2.8 Test Popup](http://wiki.imacros.net/Data_Extraction#Test_Popup)
* [3 Handling Extraction Results](http://wiki.imacros.net/Data_Extraction#Handling_Extraction_Results)
  + [3.1 SAVEAS](http://wiki.imacros.net/Data_Extraction#SAVEAS)
  + [3.2 Extraction & the Scripting Interface](http://wiki.imacros.net/Data_Extraction#Extraction_.26_the_Scripting_Interface)
    - [3.2.1 Example 1 - Transfer extracted values to calling program](http://wiki.imacros.net/Data_Extraction#Example_1_-_Transfer_extracted_values_to_calling_program)
  + [3.3 Unsuccessful Extraction](http://wiki.imacros.net/Data_Extraction#Unsuccessful_Extraction)
* [4 Image Extraction](http://wiki.imacros.net/Data_Extraction#Image_Extraction)
* [5 Extraction of Dialog Text](http://wiki.imacros.net/Data_Extraction#Extraction_of_Dialog_Text)
* [6 Extracting From SELECT Elements](http://wiki.imacros.net/Data_Extraction#Extracting_From_SELECT_Elements)
* [7 Extraction and the PRE Tag](http://wiki.imacros.net/Data_Extraction#Extraction_and_the_PRE_Tag)
* [8 Extract with relative Positioning](http://wiki.imacros.net/Data_Extraction#Extract_with_relative_Positioning)
  + [8.1 How to limit the extraction search range](http://wiki.imacros.net/Data_Extraction#How_to_limit_the_extraction_search_range)
  + [8.2 How to skip a missing value](http://wiki.imacros.net/Data_Extraction#How_to_skip_a_missing_value)
  + [8.3 Related forum posts](http://wiki.imacros.net/Data_Extraction#Related_forum_posts)
* [9 Asian Language Support](http://wiki.imacros.net/Data_Extraction#Asian_Language_Support)
* [10 See Also](http://wiki.imacros.net/Data_Extraction#See_Also)

### The Extract command

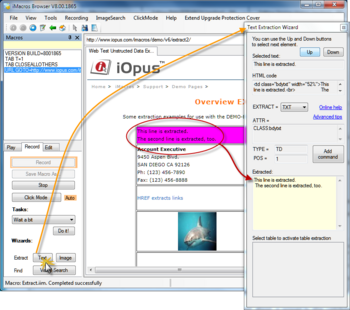
Data extraction is specified by an [EXTRACT](http://wiki.imacros.net/TAG#The_EXTRACT_Parameter) parameter in the [TAG](http://wiki.imacros.net/TAG) command. This parameter *replaces* the usual CONTENT parameter. Please see the updated Demo-Extract for some examples of this, including the following:

TAG POS=1 TYPE=SPAN ATTR=CLASS:bdytxt&&TXT:\* EXTRACT=HTM

This means that the syntax of the command is now the same as for the TAG command, with the type of extraction specified by the additional EXTRACT parameter.

## Creation of Extraction Tags

### Extraction Wizard [iMacros Browser](http://wiki.imacros.net/File%3AIMacros-icon.png) [IE Plug-in](http://wiki.imacros.net/File%3AIe-icon.png)

[](http://wiki.imacros.net/File%3ATextExtract.png)

[http://wiki.imacros.net/skins/common/images/magnify-clip.png](http://wiki.imacros.net/File%3ATextExtract.png)

Text Extraction Wizard

The Extraction Wizard can be used to automatically generate and test extractions.

To define an EXTRACT command proceed as follows:

* Whilst in record mode, open the Text Extraction Wizard ("Text" button on the Rec tab).
* In the browser window or frame select the text that you want to extract.
* Choose what type of extraction you want to perform on that element, like TXT, HTM, HREF, ALT, TXTALL, or TITLE. Not all types are available for all elements.
* The extracted information will be displayed in the wizard. iMacros also creates a suggestion for the tag command attribute and position.
* If the result is #EANF# (Extraction Anchor Not Found) you will need to alter the extraction anchor in order to successfully extract the data.
* If you are satisfied with the result click "Add Command" to add a TAG command with the EXTRACT statement to the macro.

Table extract commands can be easily produced and checked using the Text Extract Wizard. If the element chosen is a table, the table data is properly formatted and displayed in the wizard.

[iMacros Browser](http://wiki.imacros.net/File%3AIMacros-icon.png)**Note:** The extraction wizard is **only available in the iMacros Browser and iMacros for Internet Explorer** But the generated commands can be used in all iMacros versions.

### Extraction from Framed Websites

If the information you want to extract is inside a framed web site you need to have a FRAME command to mark the frame as active for extraction.

When recording a TAG command the FRAME command will automatically be generated.

URL GOTO=<http://www.iopus.com/imacros/demo/v5/frames/index.htm>

FRAME F=5

TAG POS=1 TYPE=P ATTR=TXT:<SP>Frame5

Within the Extraction Wizard, when selecting the data to be extracted the FRAME command will automatically be generated.

URL GOTO=<http://www.iopus.com/imacros/demo/v5/frames/index.htm>

FRAME F=3

TAG POS=1 TYPE=P ATTR=TXT:\* EXTRACT=TXT

### Manual Creation [iMacros Browser](http://wiki.imacros.net/File%3AIMacros-icon.png) [IE Plug-in](http://wiki.imacros.net/File%3AIe-icon.png) [Firefox](http://wiki.imacros.net/File%3AFf-icon.png)

In order to manually create an extraction tag it is necessary to first record a TAG command. In record mode click on the data to be extracted. After stopping the macro recording, open the macro for editing and **replace** the CONTENT= attribute with the [EXTRACT=TXT](http://wiki.imacros.net/TAG#The_EXTRACT_Parameter) parameter (or just simply add the EXTRACT parameter to the end of command if the CONTENT parameter does not exist). If you need to extract other information than text you can use the TXTALL, HTM, HREF, TITLE, ALT or CHECKED attribute instead of TXT.

TAG POS=1 TYPE=TD ATTR=CLASS:NewLatestResultsLotto&&TXT:\* EXTRACT=TXT

### Extract Complete Website [iMacros Browser](http://wiki.imacros.net/File%3AIMacros-icon.png) [IE Plug-in](http://wiki.imacros.net/File%3AIe-icon.png) [Firefox](http://wiki.imacros.net/File%3AFf-icon.png)

To extract a complete web page (or the complete header or body) you need to manually insert the appropriate TAG line. Please see the examples:

URL GOTO=<http://www.iopus.com/>

'Complete Page

TAG POS=1 TYPE=HTML ATTR=\* EXTRACT=HTM

'Complete Page TEXT only

TAG POS=1 TYPE=HTML ATTR=\* EXTRACT=TXT

'Page header only

TAG POS=1 TYPE=HEAD ATTR=\* EXTRACT=HTM

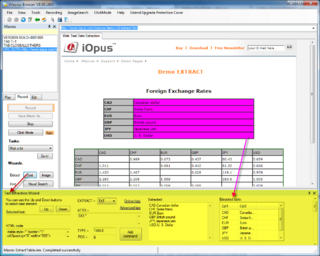
'Page body

TAG POS=1 TYPE=BODY ATTR=\* EXTRACT=HTM

Alternatively you can use the [SAVEAS](http://wiki.imacros.net/SAVEAS) command to save the complete web page.

For an example using the [SEARCH](http://wiki.imacros.net/SEARCH) command, please see the following forum post: [Most Efficient Way To Extract Source Code](http://forum.iopus.com/viewtopic.php?f=7&t=11200)

### Extract Table [iMacros Browser](http://wiki.imacros.net/File%3AIMacros-icon.png) [IE Plug-in](http://wiki.imacros.net/File%3AIe-icon.png) [Firefox](http://wiki.imacros.net/File%3AFf-icon.png)

[](http://wiki.imacros.net/File%3AExtractionWizard.png)

[http://wiki.imacros.net/skins/common/images/magnify-clip.png](http://wiki.imacros.net/File%3AExtractionWizard.png)

Table extraction with the Text Extraction Wizard

Use TAG TYPE=TABLE ... to extract the content of a complete table with one command. Example: [Demo-Extract-Table](http://wiki.imacros.net/Demo-Extract-Table).

This method works well with well formatted tables. For more tricky table extractions you always have the option to extract them cell by cell as shown in the [!ENDOFPAGE](http://wiki.imacros.net/!ENDOFPAGE) example.

Table cells in the extracted data are separated by the string #NEXT# and table rows are delimited by the string #NEWLINE#. These tags are automatically translated into commas and newlines when you use the "SAVEAS TYPE=EXTRACT" command, but the delimiters are retained when returning the data to a script via a call to [iimGetExtract](http://wiki.imacros.net/iimGetExtract" \o "iimGetExtract).

If the table you are attempting to extract also contains nested tables, then the inner table data will also be separated by commas and new lines (in CSV format, via SAVEAS), or #NEXT# and #NEWLINE# (via [iimGetExtract](http://wiki.imacros.net/iimGetExtract" \o "iimGetExtract)).

You can use the Text Extraction Wizard to see the resulting extracted table, but in this case, for visual simplicity, the inner tables are shown as plain text, without the delimiters.

### Extract Page Title [iMacros Browser](http://wiki.imacros.net/File%3AIMacros-icon.png) [IE Plug-in](http://wiki.imacros.net/File%3AIe-icon.png) [Firefox](http://wiki.imacros.net/File%3AFf-icon.png)

To extract a title of a website you need to manually insert the appropriate TAG line with **TYPE=TITLE**. This TAG command finds the page's title element. Please see the example:

URL GOTO=<http://www.iopus.com/>

TAG POS=1 TYPE=TITLE ATTR=\* EXTRACT=TXT

### Extract Page URL [iMacros Browser](http://wiki.imacros.net/File%3AIMacros-icon.png) [IE Plug-in](http://wiki.imacros.net/File%3AIe-icon.png) [Firefox](http://wiki.imacros.net/File%3AFf-icon.png)

To extract the URL of a website as shown in the browser address bar please use the built-in [!URLCURRENT](http://wiki.imacros.net/!URLCURRENT) variable and store this value in [!EXTRACT](http://wiki.imacros.net/!EXTRACT) with the [SET](http://wiki.imacros.net/set) or [ADD](http://wiki.imacros.net/ADD) command.

ADD !EXTRACT {{!URLCURRENT}}

### Test Popup

When manually running a macro with an extraction TAG, by default the extraction will be displayed on the screen. This facility can be switched off using the following command:

SET !EXTRACT\_TEST\_POPUP NO

## Handling Extraction Results

If in one macro several EXTRACT commands appear then the results are separated by the string [EXTRACT].

### SAVEAS

You can save extracted data directly to a [CSV](http://wiki.imacros.net/csv) file by adding a "SAVEAS TYPE=EXTRACT" command manually to the macro. All items that were extracted before the [SAVEAS](http://wiki.imacros.net/SAVEAS) command are saved to the specified file in one row like

"item1", "item2", "item 3", ...

As you can see the [EXTRACT] tags, which are inserted to distinguish results from different EXTRACT commands, are substituted by commas. If in the Options dialog you have checked "Use regional settings in CSV files", the "comma" between each extraction is going to be your system list separator (a semi-colon ";" for instance) instead of ",".

The [SAVEAS](http://wiki.imacros.net/SAVEAS) command erases the content of the !EXTRACT variable afterward. With the next start of the macro or the next round of a loop a new line is added to the file.

### Extraction & the Scripting Interface

(Related example scripts: Extract-and-fill.vbs, Extract-2-file.vbs, Get-Exchange-Rate.vbs)

All extracted data can be sent to your code via the Scripting Interface. This gives you all the power of any programming language you choose to process the extracted information further or simply save it to a file.

Use the [iimGetLastExtract](http://wiki.imacros.net/iimGetLastExtract" \o "iimGetLastExtract) command to return the extracted information from the macro.

The extracted text is returned as a string. Extracted information resulting from different extractions are separated by [EXTRACT], e.g.

Text to be extracted[EXTRACT]

Salary: 33,000.00 per year[EXTRACT]...

Remember: Using the "SAVEAS TYPE=EXTRACT" command will reset the contents of the !EXTRACT variable. Thus, using this command in a macro whose extraction result you wish to obtain via the Scripting Interface will result in an empty string in your application!

If you extract a complete table the data from different columns is separated by #NEXT# and each table row ends with #NEWLINE#. You can easily use the separation tags to split the complete dataset. In Visual Basic Script this would, for example, look something like:

s = Replace(s, "#NEWLINE#", """" + vbCrLf + """")

s = Replace(s, "#NEXT#", """"+ "," + """")

Related forum post: [Missing #NEXT# delimiters in .csv from web extraction](http://forum.iopus.com/viewtopic.php?f=7&t=12375&p=36478#p36478)

#### Example 1 - Transfer extracted values to calling program

Use [iimGetLastExtract](http://wiki.imacros.net/iimGetLastExtract" \o "iimGetLastExtract) to retrieve the values.

iplay = iim1.iimPlay("wsh-extract-rate")

If iplay = 1 Then

s = "One US$ costs " + iim1.iimGetLastExtract(1) + " EURO or " + iim1.iimGetLastExtract(2) + " British Pounds (GBP)"

else

s = "The following error occurred: " + iim1.iimGetLastError()

End If

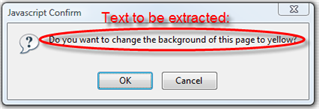
### Unsuccessful Extraction

If the extraction was unsuccessful, i.e. the extraction anchor could not be found on the page, the !EXTRACT variable holds the string #EANF# (Extraction Anchor Not Found). *However, the return value that informs you whether the execution of a macro was successful is still positive (iimPlay = 1)*. The reason for this behavior is that a macro can have many TAG...EXTRACT commands and often only one or a few of them do not find the extraction anchor. If you want to check if a particular EXTRACT command was successful you just need to check if #EANF# is present in the returned string. Often this can be very useful, for example if you use EXTRACT to check if a keyword is present on a page. A returned string containing #EANF# indicates that the keyword is not found. For comparison, if a standard [TAG](http://wiki.imacros.net/TAG) command can not locate the defined element than iMacros returns an error.

## Image Extraction

The Image Extraction Wizard helps you the create the right commands TAG... CONTENT=EVENT:[SAVEITEM](http://wiki.imacros.net/SAVEITEM" \o "SAVEITEM) for image web scraping. Please see the [Save Web Page Elements](http://wiki.imacros.net/Browser_Automation#Save_Website_Elements) chapter for more details.

## Extraction of Dialog Text

[](http://wiki.imacros.net/File%3AExtract-dialog-text.png)  
To get the text of a dialog use

SET !EXTRACTDIALOG YES

in the macro at any position before dialog appears. Now the content of a dialog is added to the extracted text, i.e. to the [!EXTRACT](http://wiki.imacros.net/!EXTRACT) variable.

**Example:**

URL GOTO=<http://www.iopus.com/imacros/demo/v6/dialogs/javascript2.htm>

SET !EXTRACTDIALOG YES

ONDIALOG POS=1 BUTTON=OK CONTENT=

TAG POS=1 TYPE=INPUT:BUTTON FORM=NAME:NoFormName ATTR=VALUE:Popup<SP>1

WAIT SECONDS=3

PROMPT {{!EXTRACT}}

The [PROMPT](http://wiki.imacros.net/PROMPT) command in this example is simply used to show the extracted values. The WAIT statement is not directly required, but there has to be a 1-2 seconds delay between the time you trigger the dialog and *the first time you use the extracted dialog text*. The reason for this is that there is a small delay between the time the TAG command triggers the dialog (e. g. by clicking on a link) and the time the dialog actually appears. iMacros has no way of knowing beforehand that a certain link will trigger a dialog. So it has to "catch" the dialog once it appears and then handle it. Typically this whole process is fast and takes less than a second, but until it is complete the [!EXTRACT](http://wiki.imacros.net/!EXTRACT) variable is not filled with the text from the dialog.

See also [!EXTRACTDIALOG](http://wiki.imacros.net/!EXTRACTDIALOG).

## Extracting From SELECT Elements

In HTML code drop down lists are generated by a SELECT tag.

With a simple EXTRACT=TXT, the currently active value is extracted:

TAG POS=1 TYPE=SELECT ATTR=TXT:\*&&NAME:quantity&&VALUE:\* EXTRACT=TXT

In order to extract all options in a drop down list use

TAG POS=1 TYPE=SELECT ATTR=TXT:\*&&NAME:quantity&&VALUE:\* EXTRACT=TXTALL

[!EXTRACT](http://wiki.imacros.net/!EXTRACT) will contain the complete list of entries, separated by the keyword [OPTION]

Related forum posts: [How to extract value from option tag instead of text](http://forum.iopus.com/viewtopic.php?f=13&t=12982)

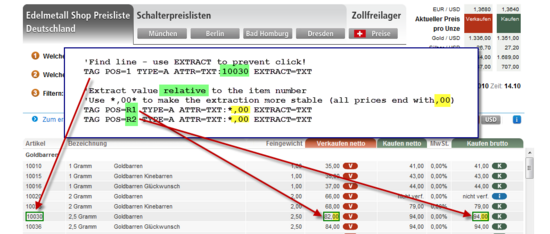
## Extraction and the PRE Tag

Some web pages make use of a <PRE ...> tag in their HTML code. It marks the enclosed text as preformatted -- all the spaces and carriage returns are rendered exactly as you type them. The information enclosed in a <PRE> tag is extracted correctly (including the formatting!) by iMacros. Thus, if you transfer the extracted data via the Scripting Interface all formatting information is retained unchanged. The formatting is only changed on two occasions: line breaks are removed when displaying the result in the test dialog box and when saving the result using the SAVEAS command. This is necessary to ensure proper formatting of the CSV formatted text file because in the CSV format a line break would start a new line.

## Extract with relative Positioning

(Related example macro: [Demo-ExtractRelative](http://wiki.imacros.net/Demo-ExtractRelative) )

Note: For changes in the upcoming [iMacros V7](http://wiki.imacros.net/Upgrading_to_Version_7" \o "Upgrading to Version 7) please see [V7\_Relative\_positioning](http://wiki.imacros.net/V7_Relative_positioning). In a nutshell, the principle stays the same, but the position is now relative to the end (close tag) of the anchor element, so iMacros V7 and iMacros for Firefox extract macros are now compatible.

[](http://wiki.imacros.net/File%3AExtract_gold_price.png)

[http://wiki.imacros.net/skins/common/images/magnify-clip.png](http://wiki.imacros.net/File%3AExtract_gold_price.png)

Extract the current gold price (sell/buy) given the item number. We use relative extraction to get the prices in the line with the correct item number.

When extracting data from a complex website the extraction can be made easier if you can tell iMacros to start the search for the extraction anchor after a specific point on the page (as opposed to start from the top, which is the default).

E.g., assume you want to extract data from a specific cell in a table, in this case the size of the land in the second table.

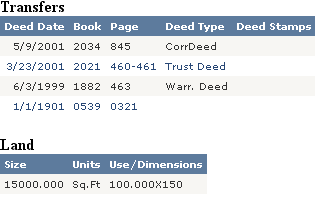
[](http://wiki.imacros.net/File%3AResult1.gif)

Table 1 - Relative Extraction

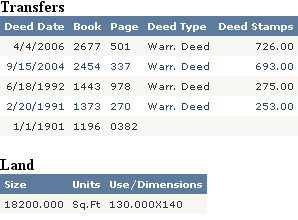
[](http://wiki.imacros.net/File%3AResult2.gif)

Table 2 - Relative Extraction

Without relative positioning you would have to count the cell from the top of the page including cells from other tables that come before the land table. Although the extraction wizard can do this for you, you run into problems as soon as the number of rows in a table are not constant as they are in the above example. The Transfer table of result 1 has four rows, that of result 2 has five rows. Thus, an absolute position parameter like so

TAG POS=1 TYPE=TD ATTR=CLASS:code&&TXT:\* EXTRACT=TXT

will potentially result in the extraction of an unwanted result.

**With relative positioning you tell iMacros to search for the extraction anchor located after the position that is indicated by a TAG command immediately before your TAG...EXTRACT command.** In our case we click on the table title "Land" before starting the extraction wizard to create a TAG command. Note that this TAG command does not click on any link, rather it only marks an element to indicate a position for the following TAG command. Relative positions are indicated with an R before the position number.

TAG POS=1 TYPE=B ATTR=TXT:Land

TAG POS=R1 TYPE=TXT ATTR=CLASS:code&&TXT:\* EXTRACT=TXT

* If you want to use a button or a link as reference, you should tag it with TAG ... EXTRACT=TXT, to avoid following the link or "pushing" the button. In that case, do not forget to use SET !EXTRACT NULL, to clear the extract variable **before** the real extract.

### How to limit the extraction search range

Use [!ENDOFPAGE](http://wiki.imacros.net/!ENDOFPAGE) to limit the extraction to a range **above** a certain trigger word or image.

[](http://wiki.imacros.net/File%3AAmazon_extract.png)

[http://wiki.imacros.net/skins/common/images/magnify-clip.png](http://wiki.imacros.net/File%3AAmazon_extract.png)

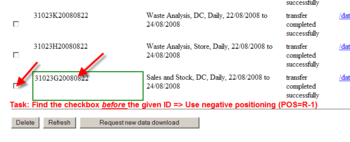
Extracting data from Amazon.com with Relative Positioning. In this example we use the word "Price" to find the book price. This creates very stable web-scraping macros.

**Backwards relative positions:** Since iMacros V6.20 you can also indicate backward positions (= to the left and/or top of an selected element). This **negative** relative extractions supports up to 10 backwards steps (POS=R-10).

'Negative positioning => move to the LEFT and/or TOP of the anchor

TAG POS=1 TYPE=TD ATTR=TXT:31023G20080822

TAG POS=R-1 TYPE=INPUT:CHECKBOX FORM=NAME:DataDownloadActionForm ATTR=NAME:\* CONTENT=YES

[](http://wiki.imacros.net/File%3ACheckbox.with.negative.position.png)

[http://wiki.imacros.net/skins/common/images/magnify-clip.png](http://wiki.imacros.net/File%3ACheckbox.with.negative.position.png)

Negative (backward) Positioning. The task is to select the checkbox to the left of a given order-ID. Since the select box itself has no name, we use the ID in the second column to find the checkbox.

### How to skip a missing value

If you use relative extraction and a certain data record (e. g. a phone number) is missing on a page, then the macro would normally stop with a TAG error as the TAG for the anchor fails. But that is not what you want during an extraction: You simply want the macro to continue and extract all other values that exist. => Solution: **Add *SET !ERRORIGNORE YES***.

Note that when the anchor TAG immediately before a **relative** extraction fails, then the extraction itself also fails (= returns #eanf#). This is by design to make sure that iMacros extracts only the intended value (if the extraction anchor exists) or no value ("#eanf#") if the extraction anchor is not found.

Example:

URL GOTO=<http://www.iopus.com/imacros/demo/v6/extract2/>

SET !ERRORIGNORE YES

'Correct: TAG POS=1 TYPE=DIV ATTR=TXT:MyTable

TAG POS=1 TYPE=DIV ATTR=TXT:MyTableOTHERNAME

TAG POS=R3 TYPE=TD ATTR=TXT:\* EXTRACT=TXT

OTHERNAME was added to the *TXT:MyTable* attribute to trigger the extraction anchor failure for demo purposes.

### Related forum posts

* [**Video Tutorial Relative Extraction**](http://forum.iopus.com/viewtopic.php?t=2219)
* [Three fundamental techniques of extracting a table's data](http://forum.iopus.com/viewtopic.php?t=3615)
* [Extract Number of Google Search Results](http://forum.iopus.com/viewtopic.php?f=13&t=6324)
* [More Robust Extraction Tags](http://forum.iopus.com/viewtopic.php?t=287)
* [Extract a table line by line](http://forum.iopus.com/viewtopic.php?t=153)
* [Extracting flight prices from Expedia](http://forum.iopus.com/viewtopic.php?f=7&t=5661&p=15799#p15799)
* [Extract and parse HTML if elements are separated by   
  only](http://forum.iopus.com/viewtopic.php?f=2&t=5793)
* [Nested elements: When does the search start?](http://forum.iopus.com/viewtopic.php?f=11&t=5881&p=16530#p16530)
* [Extracting data from Amazon.com](http://forum.iopus.com/viewtopic.php?f=11&t=5474)
* [Finding anchors](http://forum.iopus.com/viewtopic.php?f=7&t=5987)
* [How to mark and remove SPAM from web helpdesk](http://forum.iopus.com/viewtopic.php?f=15&t=6078)
* [How to extract a certain word in paragraph?](http://forum.iopus.com/viewtopic.php?f=7&t=6223)
* [How to click on the last element on a page?](http://forum.iopus.com/viewtopic.php?f=11&t=6774&p=19323#p19323)
* [Extracting nested tables](http://forum.iopus.com/viewtopic.php?f=13&t=15565)
* [Yellow Pages example](http://forum.iopus.com/viewtopic.php?f=7&t=10390&start=15#p33539)

## Asian Language Support

iMacros runs on all language version of Windows, including the so-called "double-byte" languages like Chinese, Japanese or Korean.

**Asian Languages Text Extraction:**

iMacros and the Scripting Interface include full Unicode support, so you can extract Asian language characters (e.g. Japanese) even on Western Windows versions (e.g. English).

For more details please see these forum posts: