

Surpass Manual

Ana Nelson

March 21, 2009

Contents

To compile this documentation requires L^AT_EX, Idiopidae, and my branch of webby, which is available from a bzr repository at .

This documentation refers to Surpass version 0.0.4.

Chapter 1

Installation and Hello World

1.1 Dependencies

Surpass only needs basic Ruby. It has been tested using Ruby 1.8.6 and JRuby 1.1.5.

For development, you will want to have access to something that can open Microsoft Excel files. This could be Microsoft Excel, Open Office, Google Docs or even a gmail account.

1.2 Gem Installation

```
sudo gem install surpass
```

1.3 Source Installation

```
bzr branch http://ananelson.com/code/surpass
cd surpass
sudo rake gem:install
```

1.4 Hello World

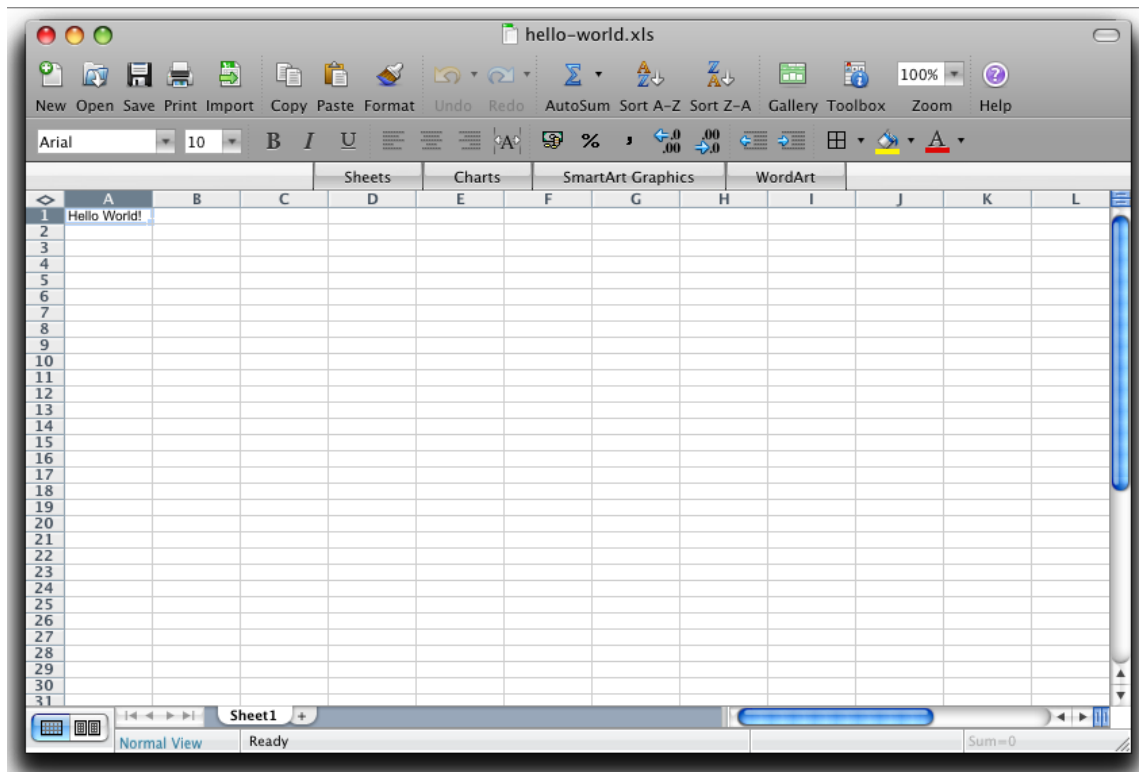
Let's do a minimal "Hello World" script. We'll need to take care of any imports, initialize a Workbook object, create a Worksheet within the workbook, then write some text. Here's how.

1.4.1 Surpass

```
1 require 'rubygems'
2 require 'surpass'
3
4 book = Workbook.new
5 sheet = book.add_sheet
6
7 sheet.write(0, 0, "Hello World!")
8
9 book.save("content/examples/hello-world.xls")
10
```

1.4.2 Result

And, here's how it looks.



Chapter 2

Writing Data

2.1 Autoformatting

Autoformats are number formats which are automatically applied to Dates, Floats and similar classes. To have autoformats applied, then pass true as the style parameter to the write function.

Here is the relevant code from row.rb:

```
111     when TrueClass # Automatically apply a nice numeric format.
112       case label
113       when DateTime, Time
114         style = @parent_wb.styles.default_datetime_style
115       when Date
116         style = @parent_wb.styles.default_date_style
117       when Float
118         style = @parent_wb.styles.default_float_style
119       else
120         style = @parent_wb.styles.default_style
121       end
122
```

And here are the default formats being defined in style.rb:

```
100 def default_date_style
101   @default_date_style ||= StyleFormat.new(:number_format_string => 'dd-mmm-yyyy')
102 end
103
104 def default_datetime_style
105   @default_datetime_style ||= StyleFormat.new(:number_format_string => 'dd-mmm-yyyy hh:mm:ss')
106 end
107
108 def default_float_style
109   @default_float_style ||= StyleFormat.new(:number_format_string => '#,##0.00')
110 end
111
```

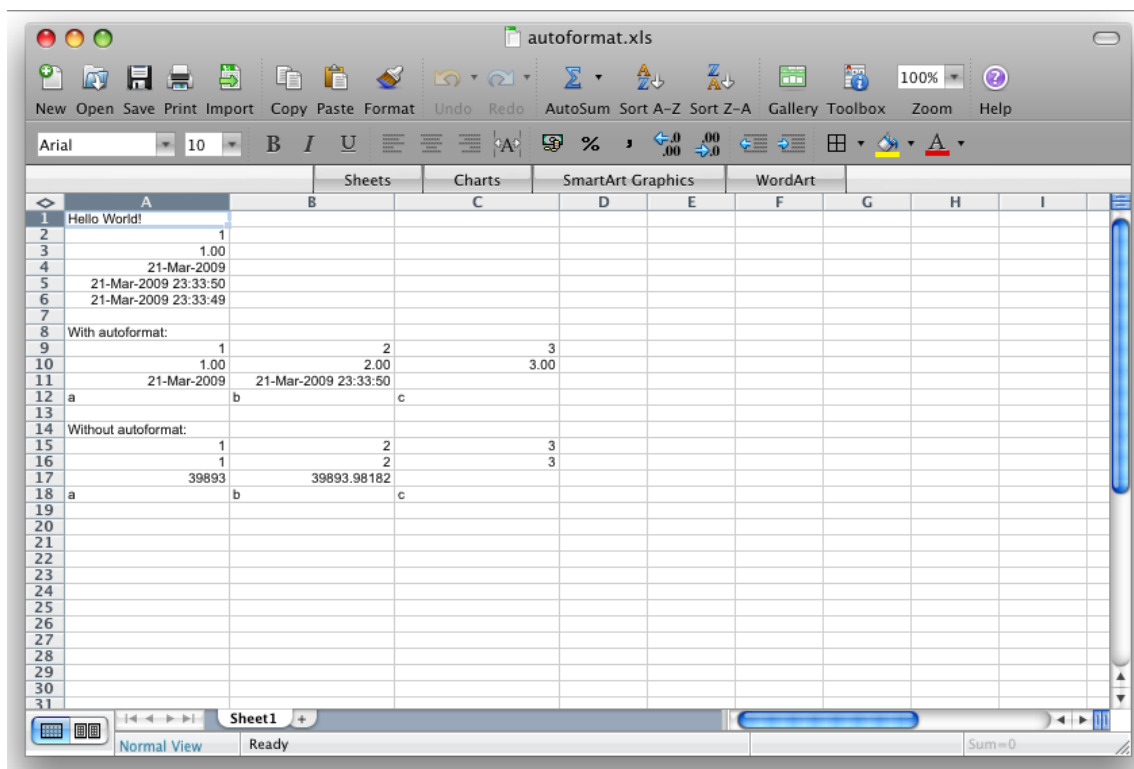
If you use any of the array-writing methods, then autoformatting will be applied by default. To override this behaviour you can pass your own StyleFormat or nil to use the generic default format.

```
1 require 'rubygems'
2 require 'surpass'
3
4 book = Workbook.new(__FILE__.gsub(/rb$/, "xls"))
5 sheet = book.add_sheet
```

```

6
7 # Passing true for the style parameter to write will invoke autoformatting.
8 sheet.write(0, 0, "Hello World!", true)
9 sheet.write(1, 0, 1, true)
10 sheet.write(2, 0, 1.0, true)
11 sheet.write(3, 0, Date.today, true)
12 sheet.write(4, 0, DateTime.now, true)
13 sheet.write(5, 0, Time.now, true)
14
15 array_of_arrays = [
16     [1, 2, 3],
17     [1.0, 2.0, 3.0],
18     [Date.today, DateTime.now],
19     %w{a b c}
20 ]
21
22 # Writing arrays will automatically autoformat.
23 sheet.write(7, 0, "With autoformat:")
24 sheet.write_arrays(8, 0, array_of_arrays)
25
26 # Unless you specify your own format, or nil for a generic default.
27 sheet.write(13, 0, "Without autoformat:")
28 sheet.write_arrays(14, 0, array_of_arrays, nil)
29
30 sheet.set_column_widths(0..2, 20)
31
32 book.save
33

```



Chapter 3

Formatting

3.1 Reference

There is a command line tool included with Surpass which provides some useful reference data:

```
1 surpass-info -h
2
Usage: surpass-info [options]
      -c, --colors          List available colors
      -h, --help            Show this message
```

And since you are running this on the command line, you can save or pipe the output to other commands:

```
1 surpass-info -c | grep green
2
bright-green
dark-green
green
light-green
olive-green
sea-green
```

3.2 Formatting

The StyleFormat class is a wrapper for the various types of formatting you can apply to a cell. StyleFormat has attributes:

- number_format_string
- font
- alignment
- borders
- pattern
- protection

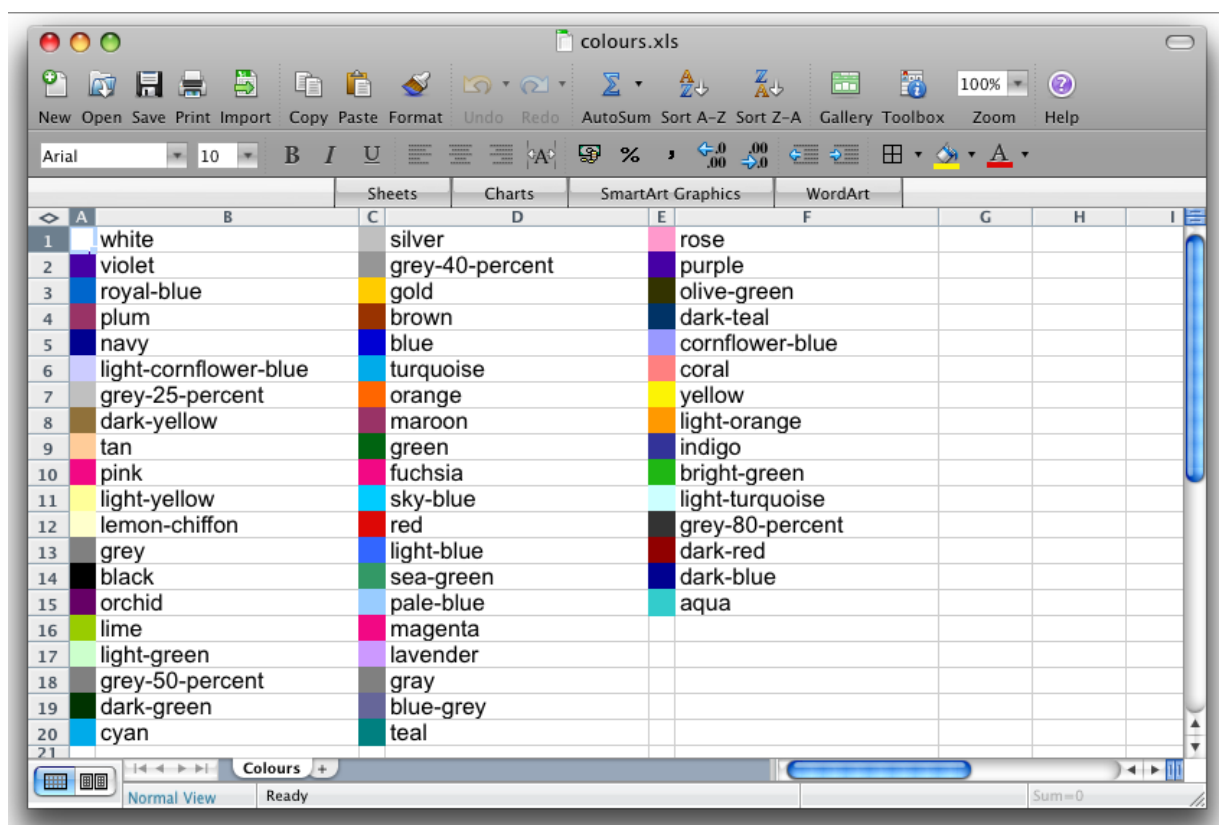
Each of these attributes has a corresponding class, and you can look in lib/formatting.rb for the source.

There are two basic ways to set formatting options. You can pass a hash with formatting options when you initialize a new StyleFormat instance, or you can set individual attributes of the formatting classes. You can combine both approaches. Both of these are demonstrated in the examples in this section.

3.2.1 Specifying Colours

Here is a list of available colours:

aqua	grey-25-percent	orchid
black	grey-40-percent	pale-blue
blue	grey-50-percent	pink
blue-grey	grey-80-percent	plum
bright-green	indigo	purple
brown	lavender	red
coral	lemon-chiffon	rose
cornflower-blue	light-blue	royal-blue
cyan	light-cornflower-blue	sea-green
dark-blue	light-green	silver
dark-green	light-orange	sky-blue
dark-red	light-turquoise	tan
dark-teal	light-yellow	teal
dark-yellow	lime	turquoise
fuchsia	magenta	violet
gold	maroon	white
gray	navy	yellow
green	olive-green	
grey	orange	



You can refer to any of these colours by name.

3.2.2 Border Formats

Here is a list of available border line types:

none

```

thin
medium
dashed
dotted
thick
double
hair
medium-dashed
thin-dash-dotted
medium-dash-dotted
thin-dash-dot-dotted
medium-dash-dot-dotted
slanted-medium-dash-dotted

```

3.2.3 Surpass

```

1  require 'rubygems'
2  require 'surpass'
3
4  book = Workbook.new(__FILE__.gsub(/rb$/, "xls"))
5  sheet = book.add_sheet("Demo Worksheet") # You can name your worksheets.
6
7  # Let's set up some formatting.
8
9  # Remember to use Excel-style formatting directives, not sprintf.
10 date_format = StyleFormat.new(:number_format_string => "DDDD DD MMM YYYY")
11
12 fancy_format = StyleFormat.new(
13   :font_name => 'Times New Roman',
14   :font_colour => 'green',
15   :font_italic => true
16 )
17
18 sheet.write(0, 0, "Hello World!", fancy_format)
19 sheet.write(0, 1, Date.today, date_format)
20
21 # You can also set up formatting by passing attributes directly to the constituents of StyleFormat
22
23 # Font colours.
24 Formatting::COLOURS.keys.each_with_index do |c, i|
25   format = StyleFormat.new
26   format.font.name = 'Verdana'
27   format.font.color = c
28   format.font.size = i + 5
29   sheet.write(i, 5, c, format)
30 end
31
32 # Font underlining.
33
34 [:none, :single, :single_accounting, :double, :double_accounting, nil, true, false].each_with_index
35   format = StyleFormat.new
36   format.font.underline = u
37   sheet.write(i, 7, u.to_s, format)
38 end
39
40 # Font bold, italic, strikethrough, outline are simple booleans.

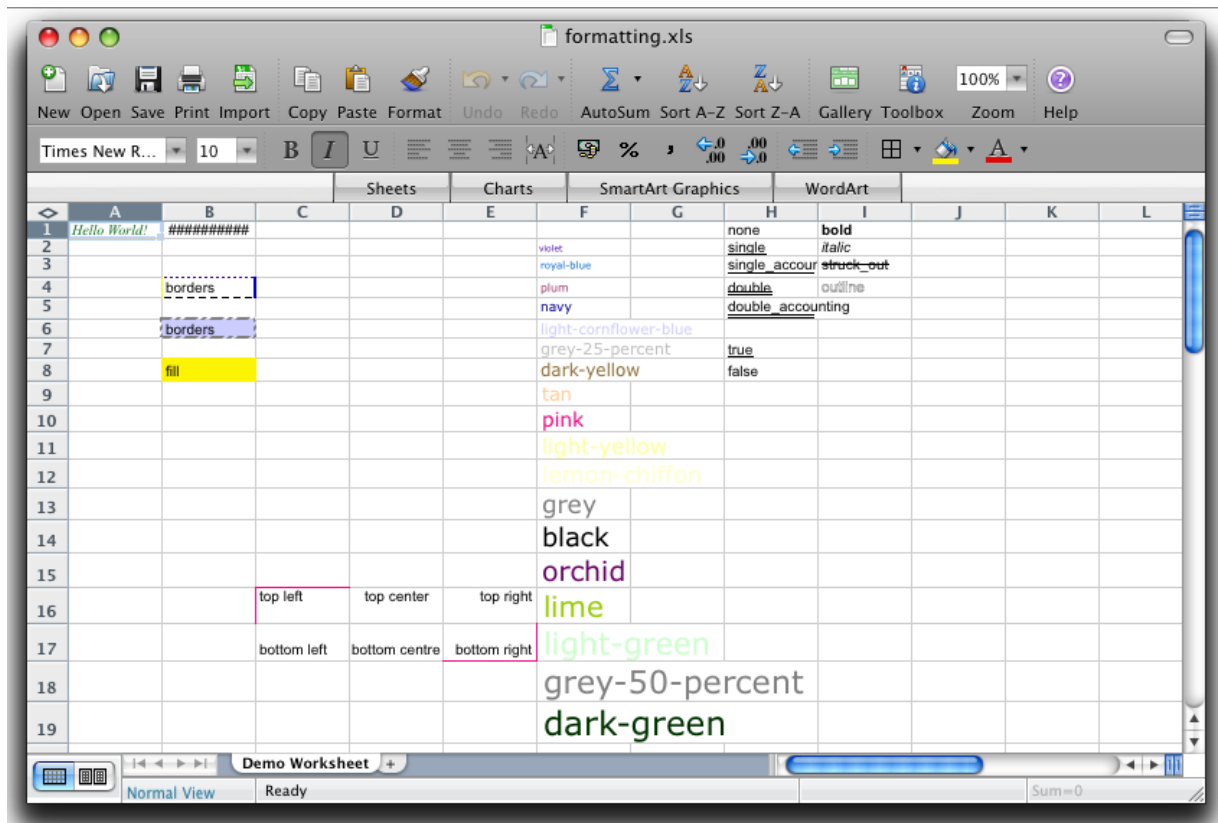
```

```

41  [:bold, :italic, :struck_out, :outline].each_with_index do |s, i|
42    attribute = ("font_" + s.to_s).to_sym
43    sheet.write(i, 8, s.to_s, StyleFormat.new(attribute => true))
44  end
45
46  # Cell alignment.
47  sheet.write(15, 2, "top left", :text_align => 'top left',
48    :border_top => 'pink',
49    :border_left => 'pink'
50  )
51  sheet.write(15, 3, "top center", :text_align => 'top center')
52  sheet.write(15, 4, "top right", :text_align => 'top right')
53  sheet.write(16, 2, "bottom left", :text_align => 'bottom left')
54  sheet.write(16, 3, "bottom centre", :text_align => 'bottom centre')
55  sheet.write(16, 4, "bottom right", :text_align => 'bottom right',
56    :border_bottom => 'pink',
57    :border_right => 'pink'
58  )
59
60
61  # Borders
62  sheet.write(3, 1, "borders",
63    :border_right => 'medium blue',
64    :border_left => 'yellow', # thin by default
65    :border_top => 'dotted purple',
66    :border_bottom => 'dashed' # black by default
67  )
68
69  # Or the hash-free option.
70  crazy_border_format = StyleFormat.new
71  crazy_border_format.borders.all = 'slanted-medium-dash-dotted grey'
72  crazy_border_format.pattern.fill = 'light-cornflower-blue'
73
74  sheet.write(5, 1, "borders", crazy_border_format)
75
76  sheet.write(7, 1, "fill", :fill_color => 'yellow')
77
78  book.save
79

```

And, here's how it looks.



Chapter 4

Saving

Typically, you will call the workbook's `save()` method to write that workbook to a file. You can pass the filename as an argument to `save()`, or as an argument to `new()` when you first instantiate a workbook object.

However, you can also call a workbook's `data()` method, which gives you direct access to a workbook's binary data. You can write this to a file manually, as in this example:

```
1  require 'rubygems'
2  require 'surpass'
3
4  book = Workbook.new
5  sheet = book.add_sheet
6
7  sheet.write(0, 0, "Hello World!")
8
9  File.open(__FILE__.gsub(/rb$/, "xls"), "w") do |f|
10    f.write book.data
11  end
12
```

Or, you could use this data as an argument to Rails' `send_data` method.