```
>>> from openpyxl import Workbook
>>> from openpyxl.compat import range
>>> from openpyxl.utils import get column letter
>>> wb = Workbook()
>>>
>>> dest filename = 'empty book.xlsx'
>>> ws1 = wb.active
>>> ws1.title = "range names"
                                                1-39行。用1-600填充列
>>> for row in range(1, 40): <
       ws1.append(range(600))
>>>
>>> ws2 = wb.create sheet(title="Pi")
>>> ws2['F5'] = 3.14
>>>
>>> ws3 = wb.create sheet(title="Data")
>>> for row in range(10, 20):
                                                                                获取列字母
     for col in range(27, 54):
     _ = ws3.cell(column=col, row=row, value="{0}".format(get_column_letter(col)))
>>> print(ws3['AA10'].value)
>>> wb.save(filename = dest filename)
                              ?如何用wb.save("D:||test.xlsx")使用变量?
```

# Read an existing workbook

```
>>> from openpyxl import load_workbook
>>> wb = load_workbook(filename = 'empty_book.xlsx')
>>> sheet_ranges = wb['range names']
>>> print(sheet_ranges['D18'].value)
3
```

#### Note

There are several flags that can be used in load\_workbook.

- guess\_types will enable or disable (default) type inference when reading cells.
- *data\_only* controls whether cells with formulae have either the formula (default) or the value stored the last time Excel read the sheet.
- *keep\_vba* controls whether any Visual Basic elements are preserved or not (default). If they are preserved they are still not editable.

#### Warning

openpyxl does currently not read all possible items in an Excel file so images and charts will be lost from existing files if they are opened and saved with the same name.

### **Using number formats**

```
>>> import datetime
>>> from openpyxl import Workbook
>>> wb = Workbook()
>>> ws = wb.active
>>> # set date using a Python datetime
>>> ws['A1'] = datetime.datetime(2010, 7, 21)
>>> ws['A1'].number format
'yyyy-mm-dd h:mm:ss'
>>> # You can enable type inference on a case-by-case basis
>>> wb.guess types = True
>>> # set percentage using a string followed by the percent sign
>>> ws['B1'] = '3.14%'
>>> wb.guess types = False
>>> ws['B1'].value
0.0314000000000000004
>>> ws['B1'].number format
'0%'
```

## **Using formulae**

```
>>> from openpyxl import Workbook
>>> wb = Workbook()
>>> ws = wb.active
>>> # add a simple formula
>>> ws["A1"] = "=SUM(1, 1)"
>>> wb.save("formula.xlsx")
```

#### Warning

NB you must use the English name for a function and function arguments *must* be separated by commas and not other punctuation such as semi-colons.

openpyxl never evaluates formula but it is possible to check the name of a formula:

```
>>> from openpyxl.utils import FORMULAE
>>> "HEX2DEC" in FORMULAE
True
```

If you're trying to use a formula that isn't known this could be because you're using a formula that was not included in the initial specification. Such formulae must be prefixed with *xlfn*. to work.

#### Merge / Unmerge cells

When you merge cells all cells but the top-left one are **removed** from the worksheet. See Styling Merged Cells for information on formatting merged cells.

```
>>> from openpyxl.workbook import Workbook
>>>
>>> wb = Workbook()
>>> ws = wb.active
>>>
>>> ws.merge_cells('A1:B1')
>>> ws.unmerge_cells('A1:B1')
>>>
>>> ws.unmerge_cells('A1:B1')
>>>
>>> # or
>>> ws.merge_cells(start_row=2,start_column=1,end_row=2,end_column=4)
>>> ws.unmerge_cells(start_row=2,start_column=1,end_row=2,end_column=4)
```

### Inserting an image

```
>>> from openpyxl import Workbook
>>> from openpyxl.drawing.image import Image
>>>
>>> wb = Workbook()
>>> ws = wb.active
>>> ws['A1'] = 'You should see three logos below'
```

```
>>> # create an image
>>> img = Image('logo.png')
?来源于某个文件夹?
```

```
>>> # add to worksheet and anchor next to cells
>>> ws.add_image(img, 'A1')
>>> wb.save('logo.xlsx')
```

# Fold columns (outline)

```
>>> import openpyxl
>>> wb = openpyxl.Workbook()
>>> ws = wb.create_sheet()
>>> ws.column_dimensions.group('A','D', hidden=True)
>>> wb.save('group.xlsx')
```