

Section 14

Excel, Word, and PDF Documents

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1 Reading Excel Spreadsheets

The `openpyxl` module lets us modify Excel files using Python. It is a third party module that we'll need to install ourselves.

```
pip install openpyxl
```

The Excel document is called a workbook that is saved by `.xlsx` file extension. Each workbook contains sheets/worksheets. Inside each sheet there are columns (letters) and rows (numbers). The intersection of a column and row is called a cell.

```
import openpyxl,os

workbook=openpyxl.load_workbook("example.xlsx")

print(type(workbook))

print(workbook.get_sheet_names())

sheet=workbook.get_sheet_by_name("Sheet1")
```

```

print(type(sheet))

cell=sheet["A1"]

print(type(cell))
print(cell.value)

cell=sheet["B1"]

print(type(cell))
print(cell.value)

cell=sheet["C1"]

print(type(cell))
print(cell.value)

print(type(cell))
print(cell.value)

for i in range(1,8):
    print(i, sheet.cell(row=i, column=2).value)

<class 'openpyxl.workbook.workbook.Workbook'>
['Sheet1', 'Sheet2', 'Sheet3']
<class 'openpyxl.worksheet.worksheet.Worksheet'>
<class 'openpyxl.cell.cell.Cell'>
2015-04-05 13:34:02
<class 'openpyxl.cell.cell.Cell'>
Apples
<class 'openpyxl.cell.cell.Cell'>
73
<class 'openpyxl.cell.cell.Cell'>
73
1 Apples
2 Cherries
3 Pears
4 Oranges

```

```
5 Apples
6 Bananas
7 Strawberries
```

2 Editing Excel Spreadsheets

In the last lesson, we learned how to read .xlsx files. Now we will learn to create and modify them.

```
import openpyxl,os

wb=openpyxl.Workbook()

print(type(wb))

print(wb.get_sheet_names())

sheet=wb.get_sheet_by_name("Sheet")

print(sheet)
print(sheet["A1"].value)
sheet["A1"]=42
sheet["A2"]="Hello"
print(sheet["A1"].value)

wb.save("example1.xlsx")

sheet2=wb.create_sheet()

print(wb.get_sheet_names())

sheet2.title="My New Sheet Name"

print(wb.get_sheet_names())

wb.save("example2.xlsx")

wb.create_sheet(index=0, title="My Other Sheet")
# This changes the position of the new sheet
```

```
wb.save("example3.xlsx")
```

```
<class 'openpyxl.workbook.workbook.Workbook'>  
['Sheet']  
<Worksheet "Sheet">  
None  
42  
['Sheet', 'Sheet1']  
['Sheet', 'My New Sheet Name']
```