WorkingWithExcel

November 17, 2019

1 Working With CSV and Exel

Examples are adopted from * Automate the Boring Stuff with Python, 2nd ed. * RealPython

1.1 Working with `csv` files

[1]:
```
# using with statement
f = open("employee_birthday.txt" )
data = f.read()
print(data)
f.close()

print()

with open("employee_birthday.txt") as f:
    data = f.read()
    print(data)
    f.close()
```

```
name,department,birthday month
John Smith,Accounting,November
Erica Meyers,IT,March

name,department,birthday month
John Smith,Accounting,November
Erica Meyers,IT,March
```

[9]:
```
# reading
import csv

with open("employee_birthday.txt") as csv_file:
    csv_reader = csv.reader(csv_file,
                            delimiter=",", quotechar='"')
    line_count = 0
    for row in csv_reader:
        if line_count == 0:
```

```
            print("Column name: " + ",".join(row))
            line_count+=1
        else:
            print("{0} Works for {1} and was born on {2}".format(
                row[0], row[1], row[2]))
            line_count+=1
```

```
Column name: name,department,birthday month
John Smith Works for Accounting and was born on November
Erica Meyers Works for IT and was born on March
```

[12]:
```
# writing
with open("employee_birthday.txt", "a") as csv_file:
    csv_writer = csv.writer(csv_file,
                            delimiter=",", quotechar='"')

    csv_writer.writerow(['John Doe', 'HR', 'December'])
    csv_writer.writerow(['Juma Al Sabti', 'Admin', 'March'])
```

1.2 Using openpyxl

[13]:
```
import openpyxl as xl
wb = xl.load_workbook("example.xlsx") # create workbook object
type(wb)
```

[13]:
```
openpyxl.workbook.workbook.Workbook
```

[14]:
```
wb.sheetnames  # get a list of the workbook's sheets
```

[14]:
```
['Sheet1', 'Sheet2', 'Sheet3']
```

[15]:
```
sheet = wb["Sheet1"] # sheet now points to Sheet1 in the excel file
type(sheet)
print(sheet.title)
```

```
Sheet1
```

[16]:
```
sheet["A1"] # get the cell from the sheet
print(sheet["A1"].value)
```

```
2015-04-05 13:34:02
```

[17]:
```
type(sheet["A1"].value) # type is recognized automatically
```

[17]:
```
datetime.datetime
```

[18]:
```
c = sheet["B1"] # get another cell
print(c.value)
```

```
Apples
```

[19]:
```
# Get the row, column and value
print("Row {0}, Column {1} is {2}".format(c.row, c.column, c.value))
```

```
Row 1, Column B is Apples
```

[20]:
```
print("Cell {0} is {1}".format(c.coordinate, c.value))
```

```
Cell B1 is Apples
```

[21]:
```
# cell(row, column) # 1 indexed
print(sheet.cell(row=1, column=2).value)
```

```
Apples
```

[22]:
```
for i in range(1, 8, 2): #  go through every other row
    print(i, sheet.cell(row=i, column=2).value)
```

```
1 Apples
3 Pears
5 Apples
7 Strawberries
```

[24]:
```
print("Heighest row:", sheet.max_row) # get the highest row number
print("Heighest column:", sheet.max_column) # get the  highest colum number
```

```
Heighest row: 7
Heighest column: 3
```

1.3 Creating and Saving Excel Dcoument

[43]:
```
wb = xl.Workbook() # create a blank workbook
print(wb.sheetnames) # it starts with one sheet
```

```
['Sheet']
```

[44]:
```
sheet = wb.active # get the active worksheet
print(sheet.title)
sheet.title = "My Favorite Foods" # change the sheet title
print(sheet.title)
```

```
Sheet
My Favorite Foods
```

[45]:
```
column_names = ["Food", "Likeness"]
foods = {"Pizza": 6, "Pasta": 6, "Greek Salad": 7, "Burger": 9}

# print the columns
for col, value in enumerate(column_names, 1):
    c = sheet.cell(row=1, column=col)
    c.value = value

maxr = sheet.max_row
print(maxr)

# print the data rows
for r, f in enumerate(foods.items(), maxr + 1):
    c1 = sheet.cell(row=r, column=1)
    c1.value = f[0]

    c2 = sheet.cell(row=r, column=2)
    c2.value = f[1]
```

```
1
```

[46]:
```
wb.save("foods.xlsx")
```

[ ]:
```

```