ch.13_files

October 12, 2020

[1]:
```
#Ch. 13: Files
```

[2]:
```
#create file with "name" and "w" for write.
```

[3]:
```
myfile = open("test.txt", "w")
myfile.write("My first file written from Python\n")
myfile.write("---------------------------------\n")
myfile.write("Hello, world!\n")
myfile.close()
```

[4]:
```
#Read on line at a time
```

[5]:
```
mynewhandle = open("test.txt", "r")
while True: # Keep reading forever
    theline = mynewhandle.readline() # Try to read next line
    if len(theline) == 0: # If there are no more lines
        break # leave the loop

    # Now process the line we've just read
    print(theline, end="")

mynewhandle.close()
```

```
My first file written from Python
---------------------------------
Hello, world!
```

[24]:
```
#Read all lines and return a list of strings
#text file not available
```

[6]:
```
# f = open("friends.txt", "r")
# xs = f.readlines()
# f.close()

# xs.sort()
#
# g = open("sortedfriends.txt", "w")
# for u in xs:
```

```
#     g.write(v)
# g.close()
```

#A good example of a “Filter”-Programm on page 183

#Ch. 13: Exercises

#Ex. 1

[10]:
```
#write file

myfile = open("test.txt", "w")
myfile.write("My first file written from Python\n")
myfile.write("---------------------------------\n")
myfile.write("Hello, world!\n")
myfile.close()
```

[25]:
```
#write filter program

def filter(oldfile, newfile):
    infile = open(oldfile, "r")
    outfile = open(newfile, "w")
    text = infile.readlines()
    text.reverse()       #reverse is modifier
    for everyline in text:
        outfile.write(everyline)
    infile.close()
    outfile.close()

filter("test.txt", "upper.txt")
```

[12]:
```
#write print program

def drucken(name):
    mynewhandle = open(name, "r")
    while True:
        theline = mynewhandle.readline()
        if len(theline) == 0:
            break

        # Now process the line we've just read
        print(theline, end="")

    mynewhandle.close()
```

[13]:
```
#use print program
```

```
drucken("test.txt")
drucken("upper.txt")
```

```
My first file written from Python
---------------------------------
Hello, world!
Hello, world!
---------------------------------
My first file written from Python
```

#Ex. 2

[16]:
```
#write file

myfile = open("test.txt", "w")
myfile.write("dog, [snake, dog], cat\n")
myfile.write("cat\n")
myfile.write("dog\n")
myfile.write("snake\n")
myfile.close()
```

#write filter program

[18]:
```
def read_sub_snake(file):
    infile = open(file, "r")
    while True:
        theline = infile.readline()
        if len(theline) == 0: # If there are no more lines
            break # leave the loop
        if "snake" in theline:
            print(theline)
    infile.close()

#read_sub_snake("test.txt")
```

#Ex. 3

[19]:
```
#write file

myfile = open("list.txt", "w")
myfile.write("dog, [snake, dog], cat\n")
myfile.write("cat\n")
myfile.write("dog\n")
myfile.write("snake\n")
myfile.close()
```

#write addnumber program, which also prints the outputfile

[20]:
```
def addnumber(oldfile, newfile):
    infile = open(oldfile, "r")
    outfile = open(newfile, "w")
    text = infile.readlines()
    count = 1
    for line in text:
        if count < 6:
            outfile.write(str(count) + " ")
        count += 1
        outfile.write(line)
    infile.close()
    outfile.close()
    outfile = open(newfile, "r")
    newtext = outfile.readlines()
    for i in newtext:
        print(i)
    outfile.close()
    return newtext
```

[21]:
```
addnumber("list.txt", "numbered_list.txt")
```

```
1 dog, [snake, dog], cat

2 cat

3 dog

4 snake
```

[21]:
```
['1 dog, [snake, dog], cat\n', '2 cat\n', '3 dog\n', '4 snake\n']
```

#Ex. 4

[22]:
```
#write remove_number program (with print file statement inside)

def remove_number(oldfile, newfile):
    """Write a program that undoes the numbering of the previous exercise: it␣
 ↪should read a file
    with numbered lines and produce another file without line numbers."""
    infile = open(oldfile, "r")
    outfile = open(newfile, "w")
    text = infile.readlines()
    #print(text)
    for line in text:
        outfile.write(line[1:])
    infile.close()
    outfile.close()
```

```
    outfile = open(newfile, "r")
    newtext = outfile.readlines()
    for i in newtext:
        print(i)
    outfile.close()
    return newtext
```

[23]:
```
remove_number("numbered_list.txt", "unnumbered_list.txt")
```

```
dog, [snake, dog], cat

cat

dog

snake
```

[23]:
```
[' dog, [snake, dog], cat\n', ' cat\n', ' dog\n', ' snake\n']
```