ch.13_files

December 3, 2020

0.0.1 Ch. 13: Files

1. Write a program that reads a file and writes out a new file with the lines in reversed orde
(i.e. the first line in the old file becomes the last one in the new file.)

[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
```

2. Write a program that reads a file and prints only those lines that contain the substring snake.

[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")
```

3. Write a program that reads a text file and produces an output file which is a copy of the file, except the first five columns of each line contain a four digit line number, followed by a space. Start numbering the first line in the output file at 1. Ensure that every line number is formatted to the same width in the output file. Use one of your Python programs as test data for this exercise: your output should be a printed and numbered listing of the Python program.

[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']
```

4. 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

[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']
```