COSC2429 Intro to Programming

Lab 9: Files

Objective: At the end of this lab, you will be able to read data from file, manipulate them in some way, and then write some data to another file effectively.

1. Write a program that asks user for the name of a text file and then creates a new text file in which all the lines from the original file are numbered from 1 to n (where n is the number of lines in the original file). The name of the new text file must be the same as the name of the original file but it has a prefix **new_** in front of the original name.

   To receive the full mark for this question, you must apply the divide-and-conquer strategy by creating relevant functions and using them effectively. You can assume that both files reside in the same folder with your program.

   As an example, if you have a text file **simple.py** with the following lines:

```
# This is a very short program

for i in range(100):
    print "Hello World!"
```

   And you run the program as follow.

```
Enter the name of your text file: simple.py
new_simple.py was created successfully.
```

   Then a new text file **new_simple.py** is created with the following lines:

```
1 # This is a very short program
2
3 for i in range(100):
4    print "Hello World!"
```

2. Attached with this tutorial is a very long text file called **mystery.txt**. The lines of this file contain either the word **UP** or **DOWN** or a pair of numbers. **UP** and **DOWN** are instructions for a turtle to lift up or put down its tail. The pairs of numbers are some x, y coordinates. Write a program that reads the file **mystery.txt** and uses a turtle to draw the picture described by the commands and the set of points.