

Self Exercise for Week 2

Due March 11th at 3:00 p.m.

A. Log in pd2.imslab.org, and execute the following commands:

```
$ script test.script
```

```
$ whoami
```

```
$ pwd
```

Then press Ctrl-D. At this time, a file “test.script” is created. You can use the cat command to show the contents of the file:

```
$ cat test.script
```

B. Consider the following algorithm:

1. input n
2. print n
3. if $n = 1$ then STOP
4. if n is odd then $n \leftarrow 3n + 1$
5. else $n \leftarrow n/2$
6. GOTO 2

Given the input 22, the following sequence of numbers will be printed:

22 11 34 17 52 26 13 40 20 10 5 16 8 4 2 1

Write a C++ program to read in an integer and print out the corresponding sequence of numbers. You do not need to worry about the overflow problem.

Deliverables

Your .zip file should include the following things:

1. The file *test.script* you obtained in question A.
2. A *.cpp* and a *.h* (if any) file(s) for question B.
3. A *README* file showing how to compile your program for question B.
4. A running script file showing how to run your program for question B. (Use the script command to create it.)