CS-6963 - Digital Forensics
Module 8 - Programming Assignment
Google Chrome History Parser

For this assignment, you will be writing a script in Python which performs analysis on a Google Chrome History database. The script will be submitted to Gradescope, where it will be autograded. **It is extremely important you follow the criteria exactly.**

Requirements:
- Your script must be named 'historyParse.py' (case sensitive)
- It must take exactly one argument, which will be a Google Chrome History SQLite database file
- Your script must properly handle no argument being provided
- It must also handle an argument where the file doesn't actually exist or is unable to be opened
- Your script must display the following criteria to stdout:
  - The name of the provided source file (SQLite DB argument)
  - The total number of downloads
  - The name of the file which took the longest time to download (only the filename & extension - not the full path)
  - The size of that file (in bytes, no comma)
  - The number of unique search terms
  - The most recent search term
  - The date & time of the most recent search
- You must not modify the database file - the file being passed as an argument will be hashed by the autograder before and after your script runs to ensure you don't modify it.

Your script will be graded using Python3, and pysqlite3 will be installed and ready for use. When executed, your program should produce output like this:

```
root@kali:/mnt/hgfs/SHARED# python3 historyParse.py History
Source File: History
Total Downloads: 8
File Name: flightbookings.PNG
File Size: 52971
Unique Search Terms: 25
Most Recent Search: eastbourne library
Most Recent Search Date/Time: 2019-Feb-02 01:05:11
root@kali:/mnt/hgfs/SHARED#
```

If no argument is supplied, your program should display the message
"Error! - No History File Specified!" as follows:

```
root@kali:/mnt/hgfs/SHARED# python3 historyParse.py
Error! - No History File Specified!
root@kali:/mnt/hgfs/SHARED#
```

If an argument is supplied, but the program is not able to open it, it should
display the message "Error! - File Not Found!" as follows:

```
root@kali:/mnt/hgfs/SHARED# python3 historyParse.py History12345
Error! - File Not Found!
root@kali:/mnt/hgfs/SHARED#
```

Each different requirement will be tested and scored independently. You
are being provided with a single 'History' file to test with. The autograder
will use a different History file. Both are from Windows 10 systems.

Once you submit your script, it will show you the results almost
immediately, and let you know how each component was scored. STDOUT
& STDERR will also be displayed for any instance of a wrong answer

Like the previous programming assignment, you may re-submit your script
as many times as you like up until the deadline, with the system grading
and providing feedback each time. Only your last submission will count, so
you are welcome to (and encouraged to) keep trying until you have a
submission which scores 100.