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| **Date Assigned: 2/16/16** | **Date Due: 2/18/16** |
| **Unit:** Language Basics | **Turn In List:** **1. This document** |
| *“I will understand and implement sequential file access.”* | |

**Title: Sequential File Access**

**Content Objectives:** Students will become familiar with how to access, read, write and manipulate external data.

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| **Starter Activity** |
| Research the difference between [sequential](http://en.wikipedia.org/wiki/Sequential_access) and [random](http://en.wikipedia.org/wiki/Random_access) file access:  Sequential selects files linearly while random does exactly what it says, it selects them at random. |

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| **Assignment:** |
| Students will use the following websites and internet searches to complete the table below:  Java: <http://www.tutorialspoint.com/java/java_files_io.htm>  C++: <http://www.tutorialspoint.com/cplusplus/cpp_files_streams.htm>  C#: <http://www.tutorialspoint.com/csharp/csharp_file_io.htm>  Python: <http://www.tutorialspoint.com/python/python_files_io.htm> and the final lesson of CodeAcademy |

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| **Include Sample Code or Explanation for the following Concepts Below (copy and paste lines from editor)** | |
| What is the proper syntax for opening a file stream? | void open(const char \*filename, ios::openmode mode); |
| What is the syntax writing to a file? | cout << "Writing to the file" << endl; |
| What is the proper syntax for closing a file stream? | void close(); |
| Where must the file reside in relation to your source code? |  |
| List and describe three modes or methods specific to your language that deal with writing or reading info to a file. | Ios:: in (open for input info)  Ios:: Out (open for output info)  Ios:: binary (open in binary mode)  Ios:: ate (set the initial position at the end of the file.  If this flag is not set, the initial position is the beginning of the file.)  Ios:: app (All output operations are performed at the end of the file, appending the content to the current content of the file)  Ios::trunc (If the file is opened for output operations and it already existed, its previous content is deleted and replaced by the new one.) |

Psuedocode an app that draws randomly from a string array of 10 open-ended thought provoking questions, whose answer is typed to the console by the user and stored in an “output.txt” file with question before it.

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Divide and conquer! Group leads may break the app into code blocks that accomplish small portions of the functionality mentioned above in pseudocode. Group leads will then take submissions through GitHub to piece together the master code for the group!

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