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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:  Random file access enables quick access to specific records or other elements within the file  Sequential file accesses in a predetermined, ordered sequence of the elements within the file. |

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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? | public class InputStream {  public static void main(String []args) throws IOException  {  FileReader in = null;  }  } |
| What is the syntax writing to a file? | import java.io.\*;  public class ThoughtQuestions {  public static void main(String []args) throws IOException  {  byte data[] = new byte[10];  FileOutputStream out = new FileOutputStream("the-file-name");  out.write(data);  }  } |
| What is the proper syntax for closing a file stream? | import java.io.\*;  public class ThoughtQuestions {  public static void main(String []args) throws IOException  {  byte data[] = new byte[10];  FileOutputStream out = new FileOutputStream("the-file-name");  out.write(data);  out.close();  }  } |
| Where must the file reside in relation to your source code? | Working directory |
| List and describe three modes or methods specific to your language that deal with writing or reading info to a file. | Write() writes to a file  Close() closes a file  FileOutputStream() creates a file |

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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