1. **Problem Statement**
   1. Compare entries of customer ID’s given two input files. Common entries between files should be written to a new file that contains only unique entries.
2. **Assumptions**
   1. Customer ID’s are integer digits only
   2. Daily log files are not sorted
3. **Conceptual Model**
   1. Concepts
      1. Daily log file 1
      2. Daily log file 2
      3. Returning customer file
      4. Customer ID from log file 1
      5. Customer ID from log file 2
   2. Actions
      1. Sort daily log file 1
      2. Sort daily log file 2
      3. Read customer ID from daily log file 1 and store
      4. Read customer ID from daily log file 2 and store
      5. Compare daily log file 1 customer ID and daily log file 2 customer ID
      6. Write matched customer ID to unique returning customer file
4. **Pictures/Diagrams**
   1. General Diagrams



* 1. Sort Diagrams



* 1. Read Diagram



* 1. Compare and Write Diagram



1. **Pseudocode**

* Main
  + Start attempt to process daily log files
* Process daily log files
  + If the daily log files exist
    - Function: Sort the daily log files (Makes matching easier, also helps with duplicates)
      * Sort customer ID’s in ascending order
    - Function: Get customer ID given input file (Gets customer ID to compare)
      * Create variables to hold current customer ID and previous customer ID
      * If not end of file
        + Read line of daily log file, and store customer ID into variable
        + If current customer ID is same as previous customer ID and not EOF

Get next customer ID

* + - * + Else

Store customer ID

* + - * + Return customer ID
    - Function: Compare customer ID’s (Determines if customer visits both days)
      * Create variable to hold customer ID 1 and customer ID 2
      * Get customer ID from daily log file 1 and daily log file 2
      * If customer ID’s are equal
        + Return customer ID
      * Else if customer ID 1 is greater than customer ID 2
        + Get next customer ID 2
      * Else if customer ID 1 is less than customer ID 2
        + Get next customer ID 1
      * If EOF on one daily log file
        + No more comparisons, quit
  + Return success
  + Else
    - Files do not exist, and program should not continue
    - Return error