



Design for: readTripData

Responsibilities:

- open/close trip data file
- count number of trips for which data is given
- read data for each trip and store in data array (of structs)

- I. Initialization and setup:
 - A. Set trip counter to zero.
 - B. Open trip data file.
 - C. If trip data file not found, exit.
 - D. Skip trip data file header lines.
- II. Priming read:
 - A. Call readOneTrip to read and return a Trip record.
 - B. Store returned Trip record in a temporary variable.
- III. While the last read succeeded and the data array isn't full:
 - A. Store the returned Trip record in data array.
 - B. Increment the trip counter.
 - C. Repeat priming read:
 - i. Call readOneTrip to read and return a Trip record.
 - ii. Store returned Trip record in a temporary variable.
- IV. Close the trip data file.
- V. Return the number of trips read.

Design for: readOneTrip

Responsibilities:

- read all the fields of a single trip record
- store those into a trip variable
- return the trip variable

- I. Read the trip origin and destination:
 - A. Read the origin, which is terminated by a tab.
 - B. Read the destination, which is terminated by a tab.
- II. Read the trip mileage.
- III. Read the trip time:
 - A. Read the number of hours.
 - B. Get rid of the ":".
 - C. Read the number of minutes:
 - D. Compute the total time in minutes and store it.

- IV. Get rid of the '\n' following the minutes field.
- V. Return the trip variable holding the values read and stored.

Design for: handleMileageCmd

Responsibilities:

- read origin and destination for target trip
- call reportMileage to locate matching trip, if any.
- log the search results

- I. Read target trip data:
 - A. Read the origin, terminated by a tab.
 - B. Read the destination, terminated by a newline.
- II. If the input stream has failed:
 - A. Log an error message.
 - B. Return.
- III. Search for matching trip:
 - A. Call reportMileage to get index of trip corresponding to target.
 - B. Save returned index.
- IV. Report results:
 - A. If returned index indicates no match log error message.
 - B. Otherwise, log trip origin, destination and mileage.