**Report CSCI262**

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**Initial Input**

How are we storing vehicle types and statistics in our program?

There are three different types of information we are storing in the program.

* Each different type of vehicle is stored in a struct. To store all vehicles, a vector is used to make access and a Vehicle efficiently.
* Original statistics for the simulation are stored in a map to identify the type of vehicle. Reducing the number of iterations made instead of using a vector.
* Activity statistics (simulation statistics) for every vehicle is stored as a vector for easy accessibility.

Potential inconsistencies within and between Vehicles.txt and Stats.txt. You should attempt

to detect (at least some of) those inconsistencies. If there are inconsistencies you are aware of but haven't attempted to detect them, note this in your report.

Inconsistencies in both files:

* A variable in the simulation may be higher than expected, leading to multiple digits. Ensuring that the whole number/name is read from the file is important.
* The number of vehicle types should be the exact same for both files. This is the first variable on vehicles.txt and stats.txt

**Activity Engine**

The process used to generate events approximately consistent with the particular distribution. While

the vehicle arrivals are discrete events, the speed of the vehicle is effectively continuous so the way

you generate something in accordance with the distribution will likely differ.

The name and format of the log file, with justification for the format. You will need to be able to

read the log entries for subsequent parts of the program. The log file needs to be human readable.

The activity engine statistics are stored in a logfile called logfile.txt. We decided to call the file “logfile” so the user is able to easily locate where the logging information is for the program. The filetype used is .txt (text file). We used this file type since it is the most generic file type for a human to read. The logfile will produce the statistics of the vehicle types every day. These stats will be separated by a newline.

Any alarms that may be raised during the activity, so an immediate detection of a problem.

**Analysis Engine**

Specify the \_le containing the daily totals for the events.

Possible anomalies in reading the logs.

Possible anomalies in determining the statistics.

**Alert Engine**

Lots of stuff