Some comments on Assignment 1

The average of 79.5 is an excellent result. So congratulations to all students who have submitted. Despite the excellent overall result, there were also a number of issues, with quiet a number of students not answering questions to the point. I am going to bring to your attention five most frequently made mistakes in the following text.

Wrong `data_point` Table Key

Each data point is generated by a service. Several services may produce the same sequence value on a day. A service is identified by a (`line_name, service_no`) value. So, the proper `data_point` table `primary key` is `((line_name, service_no, day), sequence)`. Note, `(line_name, service_no, day)` is the partition key, and `sequence` is the clustering key.

Missing to Use `counter` Data Type

Many people did not use `counter` data type for `days_worked`, `dayly_distance`, and `total_distance` columns. If so, one has to read the old column value, manually add the increment, and to write the new value. If using the `counter` data type, all what is needed is to issue a single update command:

```
update table_name set <column_name> = <column_name> +
increment where <condition>;
```

Missing to Define Non Default Table Properties

This issue applies to any non-default table property, but most frequently to: not defining

```
WITH COMPACTION = ('class': 'LeveledCompactionStrategy')
```

for frequently updated tables: `user, ehicle, user_days_at_work, vehicle_distances`.

Missing to Separate the Partition Key from the Clustering Key

In a composite key, the partition key part of the primary key should be included in a separate pair of parenthesis. Otherwise, only the first primary key column is considered to be the partition key and all the following ones form the clustering key. A proper structuring of a composite primary key is given above for the case of the `data_point` table.

Consistency Levels

Generally, it seemed to me that a number of students did not get familiar with Cassandra Consistency Levels. Some missed to declare any consistency level for reads and writes, some declared wrong ones, and some declared consistency levels for table definitions that are not harmful, but not asked for.