University of Ottawa
School of Electrical Engineering and Computer Science
CSI4142 Project Phase 2 2019

Ottawa Accidents Data Mart – Marking Schema

1. **(10 marks) Physical Design:** Create the physical schema of the data mart using the DBMS of your choice.

Fact Table created		**5**
Dimension Tables created		**5**

2. **(30 marks) Data staging**: Extract and transform the data and load all rows into the data mart.

High Level Data Staging Plan – 1 pager		**5**
Hour Dimension - data staged for 4 years - mapped to correct "exact" accident time in Accident dimension		 **2** **3**
Weather Dimension - data staged for Ottawa stations - contains hourly data from all relevant Ottawa stations, handling NULLs		 **3** **2**
Location dimension - parsing of collision location - neighborhoods added - linked to nearest weather station, with relevant climate data		 **2** **1** **2**
Accident dimension - data staged for all accidents - integrity: road surface and environment checked against hourly weather for anomalies (e.g. dry versus rain)		 **3** **2**
Fact table - include measure(s): IsFatal - use of surrogate keys and ensuring referential integrity		 **2** **3**
Comments of TA		

3. **(30 marks) OLAP queries**: Implement the following five types of queries by traversing the concept hierarchies. (Refer to Example 4.4 on page. 146 of the Data Mining textbook (3rd edition) by Han et. al. for a description of these operations.)

- Roll up - Drill Down - Slice - Dice - Top N - Bottom N		5 5 5 5 5 5
Comments of TA		

4. (20 marks) Additional Work

Events dimension Toronto data Calgary data Toronto + Calgary data Other:		20
Comments of TA		
TOTAL		70
(The highest mark would be 90/70)		