The Center for Advanced Computer Studies University of Louisiana at Lafayette CMPS 566 Term Test

Date: March 23, 2005 Instructor: Dr. V. Raghavan

Time: 3:30 - 4:45 p.m. Total Marks: 75

PART A (20 Marks)

NOTE: There are **five** parts. Answer any 4.

Q1. Outlier Analysis vs. Clustering.

Q2. Subjective measures of pattern interestingness.

Q3. Starnet Query Model

Q4. Operation-derived hierarchies.

Q5. Meta patterns.

PART B (55 marks)

Answer all questions.

Q6.

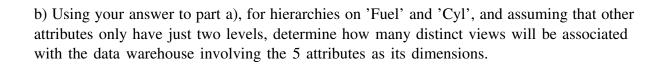
ID	Fuel	Cyl	Power	Tran	Mileage
T1	efi	4	high	manu	med
T2	efi	6	high	manu	med
Т3	2-bbl	6	high	auto	low
T4	efi	6	med	manu	med
T5	efi	4	high	manu	high
Т6	2-bbl	4	med	manu	high
T7	efi	6	high	auto	low
T8	efi	6	med	manu	low
Т9	efi	4	med	auto	med
T10	2-bbl	4	high	manu	high
T11	efi	4	med	manu	med
T12	efi	4	high	auto	high
T13	2-bbl	4	low	manu	high
T14	efi	6	high	auto	med

Table 1

a) Write a DMQL query to find the comparisons of cars according to 'mileage.'

The class of "low mileage" is to be compared to the class of "high mileage."

b) Write a DMQL query to predict if a car's mileage class is "low", based on the car attributes of 'cyl' and 'Tran'.
Q7. Use data from A6.
a) Propose a concept hierarchy and specify its type for
(i) attribute 'Fuel', and
(ii) attribute 'Cyl'
Note:
Don't restrict your thinking to just the domain of values that are given for these two attributes in the table of Q6.



c) Write an SQL query, assuming the data are stored in a relational DBMS and the fact table is named 'car-types', that lists number of cars produced, by 'mileage', for the generalized tuple cyl = "6" and Trans = "manu".

d) With respect to the generalized tuple Cyl = "4" and Trans = "manu", determine the d weights to compare the 'mileage' classes "med" and "high".

