# Supplementary Notes #2
COMP 578 Data Mining and Data Warehousing
MScECT, Semester 1, 03-04

Classification Rule Mining Exercise

1. Without much experience in approving car loans, a junior Loan Officer of a bank decided to ask a senior Loan Officer for the record that he keeps for the recent cases he looked at. Given the data he obtained and using the k-NN approach where k=3, should the junior Loan Officer approve the car loan application of someone whose normalized age is 0.3 and normalized salary is 0.8? If so, how much should he approve?

Customer No.	Normalized Salary	Normalized Age	Approved? Yes/No	Loan Amount ('000)
1231	0.5	0.2	Y	12
1448	0.7	0.5	Y	15
4567	0.9	0.7	N	23
7659	1.0	0.5	Y	44
5355	0.8	0.4	N	37
8800	0.7	0.4	Y	31

2. Find a classifier for the following data sets.
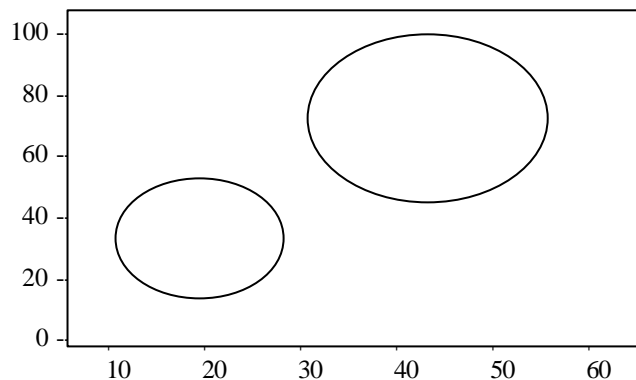
3. The following is a customer database for training.

Record No.	Income level	payment method	Frequency of Call	any Late Payment	Credit Rating
1	Low	Visa	Frequent	Yes	Bad
2	Low	Cheque	Frequent	No	Bad
3	High	Cheque	Not Frequent	No	Good
4	Low	AMEX	Frequent	Yes	Good
5	Medium	Visa	Not Frequent	No	Good
6	Medium	Cheque	Not Frequent	No	Good
7	Low	Visa	Frequent	Yes	Bad
8	High	Visa	Not Frequent	No	Good
9	High	Cheque	Not Frequent	Yes	Bad
10	Medium	AMEX	Frequent	Yes	Good

Using the Baysian approach for classification, what credit rating do you expect the person with Low income level, pays by Cheque, call Frequently and has Late Payment record to have?

4. Repeat 3 using the ID3 approach to first build a decision tree.