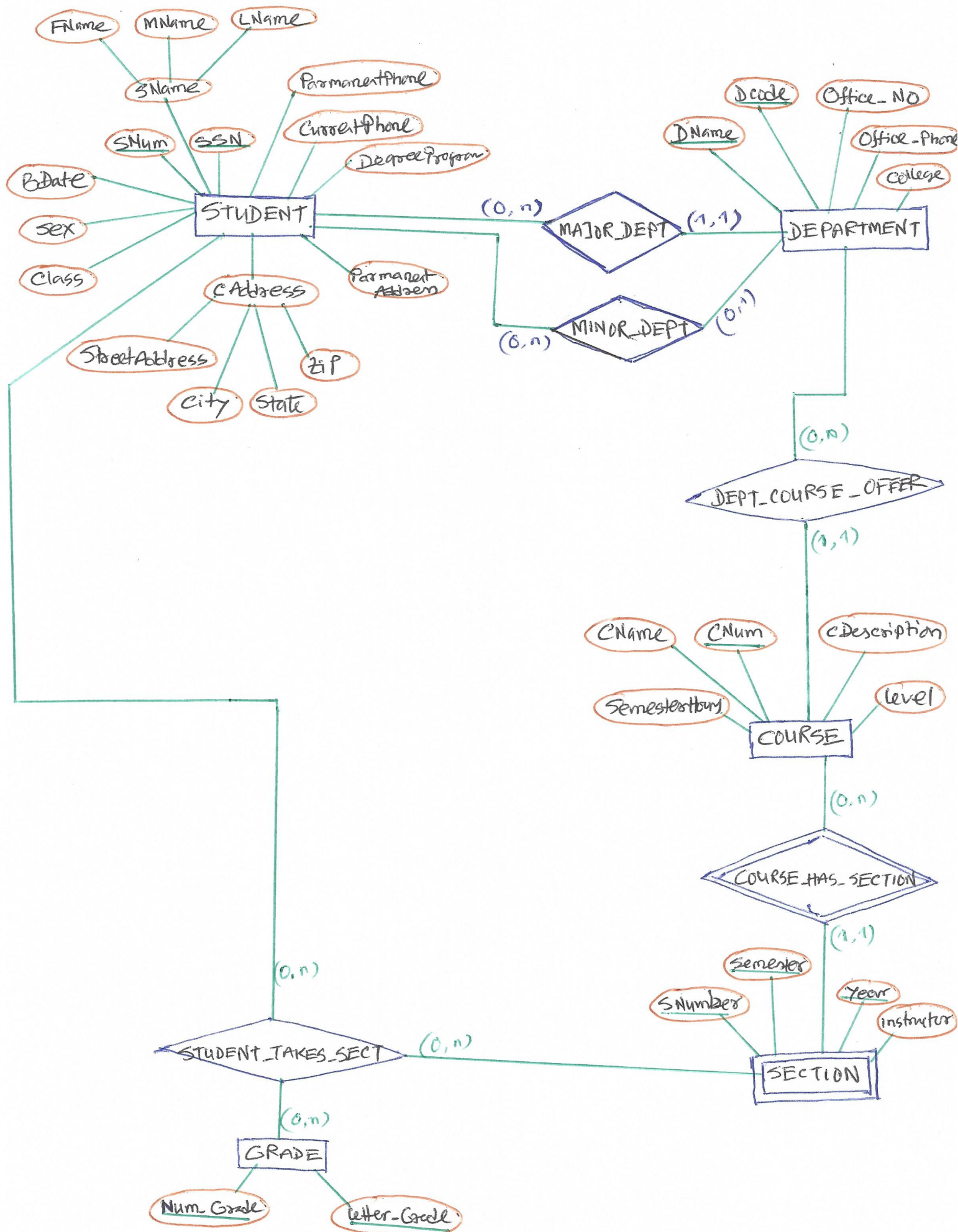


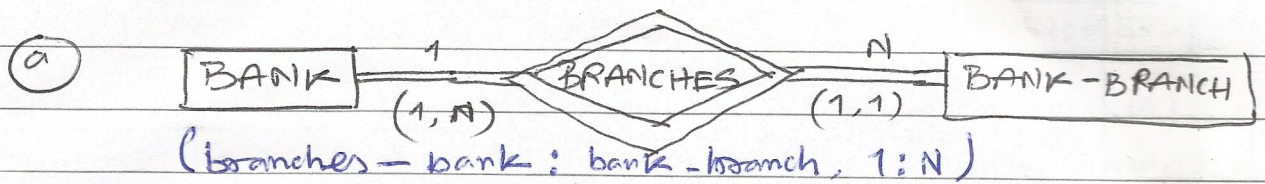
Q. NO.1. ANS :



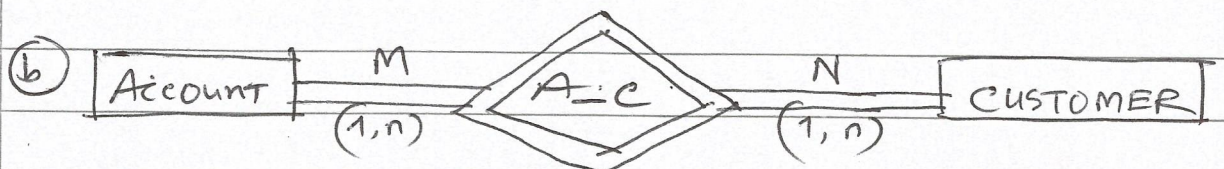
Assumptions

- Every dept. must have at least one student enrolled in it as a major.
- Student must specify major when join the uni.
- Dept must offer at least one course.
- Course must belong to one dept. exactly.
- Not all course will have sections.
- Section may not have any students enrolled it.
- Student may not sign up for any section

Q. NO. 2 ANS:



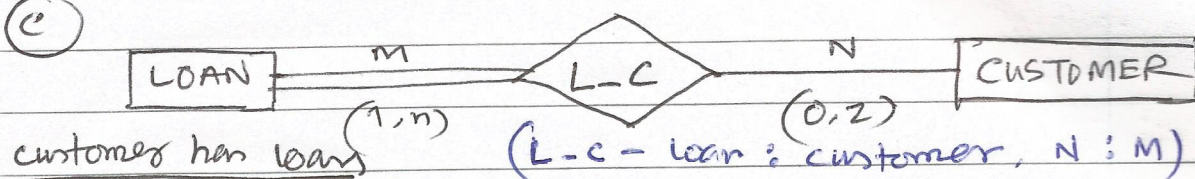
Bank has Branches. A bank has a certain amount of bank-branches, but a bank-branch may only have one bank. So the relationship is 1 to (1- finite number). Also this relationship is an existence dependency because without the bank, the branch cannot exist, and vice versa.



customer has account (a-c - account : customer, N:M)

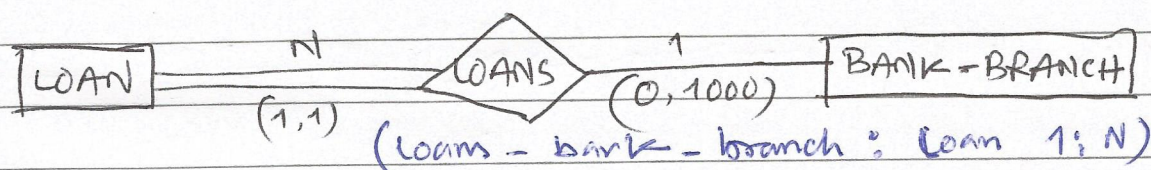
A customer may have many accounts, as many as they like. The customer may exist alone, but an account's existence depends on the customer, where the customer may be related elsewhere to exist (loan). This does not limit the accounts to one customer. There may be businesses, families on the account. An account may have a finite number of customers related to it, but not an infinite amount. Here the relationship is a many (0- infinity) to a certain number (1- finite number).

c)



A customer may have many loans, as many as they like. The customer may exist alone, but a loan's existence depends on the customer. This does not limit the loans to one customer. There may be businesses, families or a ~~one~~ taking out the loan. Thus a loan may have a finite number of customers related to it, but not an infinite amount. Here the relationship is many (0-infinity) to a certain number (1-finite number.)

d)



Bank-Branch has loans. One Bank-Branch will have a certain amount of loans, but those loans will be only part of that one branch though the information may be transferred through the different branches, it is still related to that one branch specifically. The relationship here is a 1 to (0-finite number), the loan must be allocated, cannot have infinite space, and cannot exist without the branch creating it.