Database Homework 2

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2.1

Employee - *person_name*
Works - *person_name*
Company - company_name

2.2

- Inserting: If we insert a tuple like (12345, ABC, Software, 10000) into the table *instructor* , since there isn't Software department in the department relation, the foreign key constraint is corrupted.
- Deleting: Deleting (Comp. Sci., Taylor, 100000) from relation *department* will corrupt the foreign key constraint.

2.3

To be a primary key, the key should be able to identify a unique instance and the key should have no sub sets. The day and start time is already abundant to represent a time slot for a certain class. Because if the start time and the day is fixed, the end time is also fixed. So it don't have to be a part of the primary key.

2.4

No. Because we can't ascertain that the upcoming new teachers won't have the same name as the teachers we have.

2.9

a.

Relation	Primary key
branch	branch_name
customer	customer_name
loan	Loan_number
borrower	customer_name
account	account_number
depositor	customer_name

b.

Relation	Foreign Key
borrower	Customer_name(at customer)
borrower	Loan_number(at loan)
account	Branch_name(at branch)
depositor	account_number(at account)

2.10

No. Now the primary key is s_id together with i_id.

2.11

Relation is relation schema together with relation instances, meaning the data and structure of a database table.

Relation Schema is a set of attributes, or table schema.

2.14

- Sometimes one attribute of a instance might not applicable or unpredictable, this is inorder to maintain the completion of the database.
- The NULL value help represent a more accurate model information