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**CS 348 Project 3**

Introduction

In this project, you will design and implement a database system that provides data updates with enforcing integrity constraints.

Set of the functional dependencies defined on TA relation:

Email  $\rightarrow$  FirstName, LastName, Standing

Course  $\rightarrow$  Enrollment

Email, Course  $\rightarrow$  Salary

Question 1. (15 pts). Given functional dependencies and the schema for relation TA, do a 3NF-normalization. Create schema for normalized relations that preserves the given functional dependencies. Explain it.

Email	First	Last	Standing
dave@abcd.edu	Dave	Smith	Excellent
...	...	...	...

Email will return the First and Last name, and the standing, therefore satisfying the fd.

Course	Enrollment
CS240	50
...	...

Course will return enrollment for this table.

Email	Course	Salary
dave@abcd.edu	CS240	1000
...	...	...

Email and Course are both foreign keys. The TA must exist in order for them to have a salary, and the course must also exist for the salary to exist. This makes sure that email + course  $\rightarrow$  salary.

Every result of the FD is dependent on the key given. All data is reliant on the key to get the information.