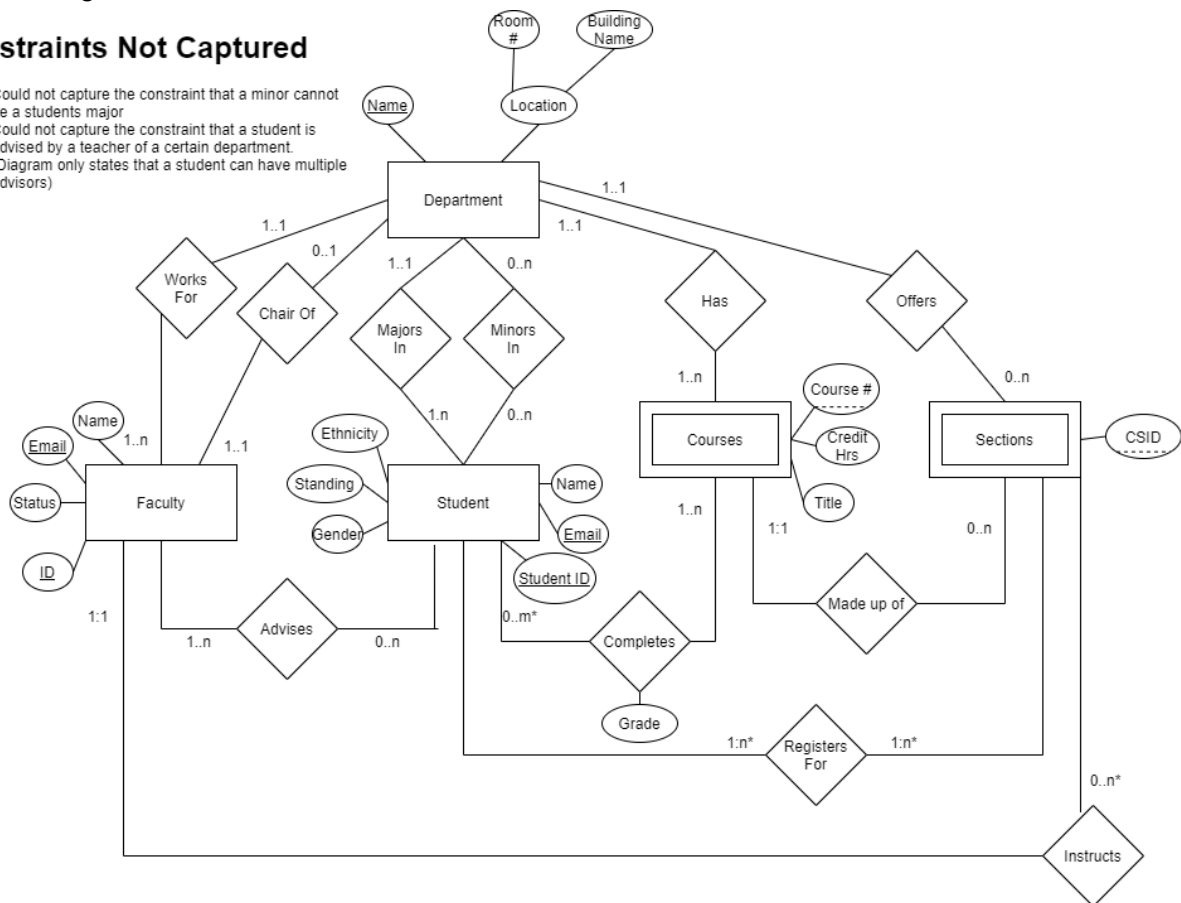Julian Garcia
Hw7: Part 1

I certify that every answer in this assignment is the result of my own work and I have not shared my answers or attempts at answers with anyone else.

-Julian Garcia

1.1: ER Diagram

Constraints Not Captured

- Could not capture the constraint that a minor cannot be a students major
- Could not capture the constraint that a student is advised by a teacher of a certain department. (Diagram only states that a student can have multiple advisors)

1.2
Conversion to Relational Schema:

Department(<u>name</u>, location)

Dept_Location(<u>room#, building_name</u>, Dept_Name)
FK: Dept_name refers to Department.name

Faculty(<u>Email</u>, <u>ID</u>, name, Status)

Student(Ethnicity, Standing, Gender, Name, <u>Email</u>, <u>ID</u>)

Courses(<u>C_Num, Dept_Name</u>, Cr_Hours, Title)
FK: Dept_Name refers to Department.name
IC: Department.name < Courses.Dept_name

Sections(<u>CSID, Dept_Name</u>, Course#, F_name)
FK: Dept_Name refers to Department.name
FK: Course# refers to Courses.Course#
FK: F_name refers to Faculty.name

Advises(<u>F_Email, F_ID, S_ID, S_Email</u>)
FK: F_Email refers to Faculty.Email
FK: F_ID refers to Faculty.ID
FK: S_ID refers to Student.ID
IC: Student.(ID, Email) < Advises.(S_ID, S_Email)

Works_For(<u>F_Email, F_ID, Dept_Name</u>)
FK: F_Email refers to Faculty.Email
FK: F_ID refers to Faculty.ID
FK: Dept_Name refers to Department.Name
IC: Department.name < Works_For.Dept_name

Register(<u>S_ID, S_Email, CSID, Dept_Name</u>)
FK: S_Email refers to Student.Email
FK: S_ID refers to Student.ID
FK: CSID refers to Sections.CSID
FK: Dept_Name refers to Department.Name
IC: Student.(ID, Email) < Register.(S_ID, S_Email)
IC: Sections.CSID < Register.CSID
IC: Department.name < Register.Dept_Name

Completes(<u>S_ID, S_Email, C_num, Dept_Name</u>, Grade)
FK: S_Email refers to Student.Email
FK: S_ID refers to Student.ID
FK: Dept_Name refers to Department.Name
IC: Student.(ID, Email) < Completes.(S_ID, S_Email)

Minor_or_Major(<u>S_Email, S_ID, Dept_Name</u>)
FK: S_Email refers to Student.Email
FK: S_ID refers to Student.ID
FK: Dept_Name refers to Department.Name

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