

CSC261 Milestone 3

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1 Task A

Database is already in BCNF.

Students: $R(\text{id}, \text{name}, \text{email}, \text{address}, \text{major})$
 $\text{id} \rightarrow \text{name}, \text{email}, \text{address}, \text{major}$
And student_id is the Super-Key, hence Students is in BCNF.

Employers: $R(\text{id}, \text{name}, \text{email}, \text{address}, \text{phone})$
 $\text{id} \rightarrow \text{name}, \text{email}, \text{address}, \text{phone}$
And employer_id is the Super-Key, hence Students is in BCNF.

Jobs: $R(\text{id}, \text{empl_id}, \text{description}, \text{majors})$
 $\text{id} \rightarrow \text{empl_id}, \text{description}, \text{majors}$
And job_id is the Super-Key, hence Jobs is in BCNF.

Faculty: $R(\text{id}, \text{name}, \text{department}, \text{email})$
 $\text{id} \rightarrow \text{name}, \text{department}, \text{email}$
And faculty_id is the Super-Key, hence Jobs is in BCNF.

Referrals: $R(\text{id}, \text{student_id}, \text{faculty_id}, \text{job_id})$
 $\text{id} \rightarrow \text{student_id}, \text{faculty_id}, \text{job_id}$
Our system allows for the same faculty to refer the same student to the same job, therefore the id is the super key in $R(\text{Referrals})$

