

## Lab 5: JOIN Operators

Using the University Admissions database, write the following queries:

1. Using the **inner join on** construct generate a list of student names and the degrees they have applied for. (Aside: Since inner join is the default join, we can drop the keyword **inner**.)
2. Using the **inner join on** construct generate a list of student names, score and decision of the students from schools with less than or equal to 600 student that applied to take computer science (CS) from DCU.
3. Using the **inner join on** construct generate a list of ID, name, score, university and enrollment of all the students that have applied for a degree.
4. Using the **natural join** construct generate a list of student names and the degrees they have applied for.
5. A natural join of the Student and Apply tables displaying all attributes.
6. Using the **join using** construct display all the attributes of students from schools with less than or equal to 600 student that applied to take computer science (CS) from DCU. (Aside: How would this differ if we used the **inner join on** construct?)
7. Using the **join using** construct generate a list of all pairs of students that have the same score.
8. A list of ID, name, university and degree of all the students including the students who have not applied for any degree. (Hint: It does not use a natural join or inner join.)

Aside: Joins add no additional expressivity to SQL. Anything you write using joins operators can be rewritten without using join operators. How would you write a query using a **left outer join** without using the **left outer join** operator?