**SQL - Rel. Algebra Mapping**

Non-procedural vs. Procedural Language.

**Retrieval Query**

SQL Execution Seq:
1. `SELECT` target column
2. `FROM` list of tables
3. `WHERE` row search condition
4. `GROUP BY` grouping attributes
5. `HAVING` group selection condition
6. `ORDER BY` sorting order of target columns.

**Rel. Algebra**

List the majors and student count with descending count values such that each student has GPA > 3.5 and the major has at least 100 bright students.

```
SELECT major, Count(*) as StdCount
FROM Student
WHERE GPA > 3.5
GROUP BY major
HAVING Count(*) >= 100
ORDER BY StdCount DESC
```
Post order (Postfix/Polish)

Visit left branch
Visit right branch
Process node value

Executable code:

\[
\text{product}(\text{table1, table2}) \rightarrow \text{select}(\text{condition}) \rightarrow \text{project}(\text{cols}) \rightarrow \text{result}
\]