IDS Lecture 12: Aggregation with Grouping

For table `Account` with columns `Number, Branch, CustID, Balance, Spend`

1. *How much money does each customer have in total across all of their accounts?*

```
SELECT A.custID, SUM(A.balance)
FROM Account A
GROUP BY A.custID ;
```

2. *How much money is there total in each branch?*

```
SELECT A.branch SUM(A.balance)
FROM Account A
GROUP BY A.branch ;
```

3. *How much money does each customer have in each branch?*

```
SELECT A.custID, A.branch, SUM(A.balance)
FROM Account A
GROUP BY A.custID, A.branch ;
```

4. *Branches with a total balance (across accounts) of at least 500?*

```
SELECT A.branch SUM(A.balance)
FROM Account A
GROUP BY A.branch
HAVING SUM(A.balance) >= 500 ;
```

- can't use `WHERE` as its has evaluation precedence over `GROUP BY`

Order of Evaluation Precedence

1. `FROM` – taking rows from (joined) tables listed

2. `WHERE` – discard rows not satisfying the condition

3. `GROUP BY` – partition rows according to attributes

4. **Compute Aggregates**

5. `HAVING` – discard rows not satisfying

6. `SELECT` – output the value of expressions listed

7. *Money available in total to each customer across their accounts?*

```
SELECT custID, SUM(A.balance - A.spend)
FROM Account A
GROUP BY A.custID ;
```