

NOBLE DESKTOP

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**SQL BOOTCAMP**

# GROUPING

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# GROUP BY STATEMENTS

```
SELECT key, SUM(data)  
FROM table GROUP BY key;
```

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## 2 STEP PROCESS

- Gather rows with same value in GROUP BY column
- Combine each collection of rows with an AGGREGATION function

Input	
<i>key</i>	<i>data</i>
A	1
B	2
C	3
A	4
B	5
C	6

**Split**

<i>key</i>	<i>data</i>
A	1
A	4

**Apply (sum)**

<i>key</i>	<i>data</i>
A	5
A	5

**Combine**

<i>key</i>	<i>data</i>
A	5
B	7
C	9

<i>key</i>	<i>data</i>
B	2
B	5

<i>key</i>	<i>data</i>
B	7
B	7

<i>key</i>	<i>data</i>
C	3
C	6

<i>key</i>	<i>data</i>
C	9
C	9

---

# GROUP BY STATEMENTS

```
SELECT user_id, COUNT(*)  
FROM purchases GROUP BY user_id;
```

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# GROUP BY STATEMENTS

```
SELECT state, AVG(*)  
FROM purchases GROUP BY state;
```

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# RULES FOR GROUP BY

1. `SELECT` must include column you're grouping by
2. All other columns must be aggregated



# EXERCISES