Database queries

```
SELECT ___ FROM ___

UPDATE ___

DELETE FROM ___

INSERT INTO ___ VALUES ___
```

Add a purchase

```
INSERT INTO purchases (customer_id, cookie_id, quantity) VALUES (1, 2, 1)
```

Get purchases that Damien has made

```
SELECT * FROM purchases WHERE customer_id = 4
```

... but I also want the name of the cookie

**Bad way**

1. SELECT * FROM purchases WHERE customer_id = 4

```
2. for each one: SELECT * FROM cookies WHERE id = <cookie ID>
```

**Combined way**

```
SELECT * FROM purchases JOIN cookies ON purchases.cookie_id = cookies.id
```
ON purchases.cookie_id = cookies.id
WHERE customer_id = 4.

GROUP BY

Bad way
1. Get all of someone's purchases (SELECT * ...)
2. Add them up one by one

Good way is by collecting the data
Summarizing it in a way that reduces it

```
SELECT customer_id, SUM(quantity) FROM purchases
GROUP BY customer_id
```

Sub-exercise

```
SELECT customers.name, customers.age, customers.cash, sum(purchases.quantity) AS sum
FROM purchases
JOIN customers ON customer_id = purchases.customer_id
GROUP BY purchases.customer_id
```

<table>
<thead>
<tr>
<th>name</th>
<th>age</th>
<th>cash</th>
<th>sum(purchases.quantity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ann</td>
<td>19</td>
<td>12.41</td>
<td>1</td>
</tr>
</tbody>
</table>