# Lab: Data Aggregation

This document defines the **lab** **exercise assignments** for the [MySQL course @ Software University.](https://softuni.bg/opencourses/databases-basics-mysql)

Download and get familiar with the **restaurant** database. You will use it in the assignments bellow.

## Departments Info

Write a query to **count** the number of employees **in each department by** id. Order the information by deparment\_id, then by **Number of employees**. Submit your queries with the **MySQL prepare DB & run queries** strategy.

**select department\_id,count(id) as `number\_of\_employees` from employees**

**group by department\_id;**

### Example

|  |  |
| --- | --- |
| **department\_id** | **Number of employees** |
| **1** | **2** |
| **2** | **4** |
| **3** | **3** |

## Average Salary

Write a query to calculate the **average salary** in each department. Order the information by department\_id. **Round** the salary result to **two digits after the decimal point**. Submit your queries with the **MySQL prepare DB & run queries** strategy.

**select department\_id,round(avg(salary),2) as `avg\_salary` from employees**

**group by department\_id;**

### Example

|  |  |
| --- | --- |
| **department\_id** | **Average Salary** |
| **1** | **2050** |
| **2** | **1090** |
| **3** | **736.67** |

## Min Salary

Write a query to retrieve information about the departments grouped by department\_id with **minimum salary** **higher than 800**. **Round** the salary result to **two digits after the decimal point**. Submit your queries with the **MySQL prepare DB & run queries** strategy.

**select department\_id,round(min(salary),2) as `min\_salary` from employees**

**group by department\_id**

**having `min\_salary`>800;**

### Example

|  |  |
| --- | --- |
| **department\_id** | **Min Salary** |
| **1** | **1700** |

## Appetizers Count

Write a query to retrieve the count of all **appetizers** (**category id = 2**) with price **higher than 8**. Submit your queries with the **MySQL prepare DB & run queries** strategy.

**select count(id) as count from products where `category\_id`=2 and `price`>8;**

## Menu Prices

Write a query to retrieve information about the prices of each category. The output should consist of:

* **Category\_id**
* **Average Price**
* **Cheapest Product**
* **Most Expensive Product**

See the **examples** for more information. **Round** the results to **2 digits after the decimal point**. Submit your queries with the **MySQL prepare DB & run queries** strategy.

**select category\_id,**

**round(avg(`price`),2) as `Average price`,**

**round(min(`price`),2) as `Cheapest product`,**

**round(max(`price`),2) as `Most expensive product` from products**

**group by category\_id;**

### Example

|  |  |  |  |
| --- | --- | --- | --- |
| **category\_id** | **Average Price** | **Cheapest Product** | **Most Expensive Product** |
| **1** | **7.49** | **6.79** | **8.79** |
| **2** | **10.93** | **7.99** | **14.89** |
| **3** | **7.90** | **6.90** | **8.89** |
| **4** | **12.79** | **11.69** | **13.69** |
| **5** | **5.37** | **4.90** | **5.60** |