# Lab: Indices and Data Aggregation

Problems for exercises and homework for the "Databases and SQL" course from the official "Applied Programmer" curriculum.

You can check your solutions here: <https://judge.softuni.bg/Contests/3108/Indices-and-Data-Aggregation-Lab>

Use the **SoftUni** database.

## Departments Total Salaries

Create a query that shows the **total sum** of **salaries** for **each department**. **Order** by **DepartmentID**.  
Your query should return:

* **DepartmentID**
* **TotalSalary**

### Example

|  |  |
| --- | --- |
| **DepartmentID** | **TotalSalary** |
| 1 | 241000.00 |
| … | … |

## Count Salaries

Create a query that shows how **many (as count)** **salaries** are given in **each** **department**. Your query should return two columns: **DepartmentID** and **SalaryCount.**

Ignores NULL values in Salary table.

### Example

|  |  |
| --- | --- |
| **DepartmentID** | **SalaryCount** |
| 1 | 6 |
| 2 | 4 |
| 3 | 18 |
| … |  |

## Sum Salaries

Create a query that gives the **sum** of the **salaries** in **each** **department**. Your query should return two columns: **DepartmentID** and **TotalSalary.**

### Example

|  |  |
| --- | --- |
| **DepartmentID** | **TotalSalary** |
| 1 | 241000.00 |
| 2 | 108600.00 |
| 3 | 539800.00 |
| … |  |

## Max Salary

Create a query that gives the **biggest** **salary** in **each** **department**. Your query should return two columns: **DepartmentID** and **MaxSalary.**

### Example

|  |  |
| --- | --- |
| **DepartmentID** | **MaxSalary** |
| 1 | 63500.00 |
| 2 | 29800.00 |
| 3 | 72100.00 |
| … |  |

## Min Salary

Create a query that gives the **smallest** **salary** in **each** **department**. Your query should return two columns: **DepartmentID** and **MinSalary.**

### Example

|  |  |
| --- | --- |
| **DepartmentID** | **MinSalary** |
| 1 | 32700.00 |
| 2 | 25000.00 |
| 3 | 23100.00 |
| … |  |

## Average Salary

Create a query that gives the **average** **salary** for **each** **department**. Your query should return two columns: **DepartmentID** and **AvgSalary.**

### Example

|  |  |
| --- | --- |
| **DepartmentID** | **AvgSalary** |
| 1 | 40166.6666 |
| 2 | 27150.00 |
| 3 | 29988.8888 |
| … |  |

## Salary More Than

Create a query that filters departments with a **total** **salary** **above** **or** **equal** to 150,000. Your query should return in two columns: **DepartmentID** and **TotalSalary.**

### Example

|  |  |
| --- | --- |
| **DepartmentID** | **TotalSalary** |
| 1 | 241000.00 |
| 3 | 539800.00 |
| 5 | 227800.00 |
| … | … |