



## Lab 2 – MongoDB Course

**Note: use “random” database and “persons collection to solve all aggregation problems, Please solve all problems using aggregation approach, Happy Coding! 🦊**

### – Aggregation Problems

1 – **Find** all female persons.

2 – **Count** all **active** users.

**// Use isActive field on the documents.**

3 – **Group** all persons by their gender and get the **maximum** age in each gender.

4 – **Group** all persons by their **ages** and **sum** the number of persons at every certain age.

**// Hint: the output should be something like that:**

**// {“\_id”: 27, “count”: 38}**

**// where 27 is a certain age and 38 are number of persons that have that age**

5 – **Find average age** of males and **group** them by their company country location.

6 – **Find** the youngest male.

7 – **Find** the oldest active female.

8 – **Group** all persons by the tag name ‘excepteur’ and sum their ages.

**9 – Find all active females** persons and **group** them by their **favorite fruit** and **sum** number of females that love each fruit finally export the result on another collection call it “femalesFavouriteFruit”.

**// search about the operator that we use to do this ;)**

## – Indexes Problems

10 – **Get** all indexes on the persons collection on “random” database.

11 – **Find** all the persons on “persons” collection on “random” database that has **age larger than 25** and run explain method using ‘**executionStats**’ parameter and note the number of scanned documents.

12 – **Create** an index (**ascending**) using **age** field in “persons” collection on “random” database.

13 – **Repeat** question number 10 and compare the stats before and after creation of age index.

14 – **Create** a **unique** index (**ascending**) using “**index**” field on persons documents in “persons” collection.

15 – **Delete** all the indexes on persons collection.

**Don't forget:** check the project file out!