

# Project Assignment - Part 3

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## Introduction & Delivery Rules

In **Part 3** of the project you are required to answer some business questions on a datacube that you will create on the database you prepared. Document how you build your datacube in your report and solve the business questions using MultiDimensional eXpressions (MDX) in SQL management studio. Each group has to solve only the assignments on the corresponding group number page. Look at the section with your *groupid* to find which assignments you need to do. For the delivery prepare a folder with the name LDS\_Part3\_groupid. Since this is the ***final delivery*** each student must create a single folder named LDS\_groupid containing the following folders:

- LDS.Part1\_groupid containing the solutions to the assignments of the first part
- LDS.Part2\_groupid containing the solutions to the assignments of the second part
- LDS.Part3\_groupid containing the solutions to the assignments of the third part

Then, the student must compress the folder and create a single .zip file, named LDS\_groupid.zip. Note that students can update the previous assignments and deliver the updated version. In this case, within the corresponding folder student must add a .txt file discussing the changes.

## Groups from 2 to 9

### *Assignment 0*

Build a datacube from the data of the tables in your database, defining the appropriate hierarchies for time and geography. Create the needed measures based on the queries you need to answer.

### *Assignment 1*

Show the total correct answers for each country and the grand total with respect to the continent.

### *Assignment 2*

Show the total confidence for each year and the running yearly for European students.

### *Assignment 3*

Show the ratio between the total correct answers of each year w.r.t the previous year.

### *Assignment 4*

Create a dashboard that shows the geographical distribution of *correct answers* and *incorrect answers*

### *Assignment 5*

Create a plot/dashboard of your choosing, that you deem interesting w.r.t. the data available in your cube

## Groups from 10 to 17

### *Assignment 0*

Build a datacube from the data of the tables in your database, defining the appropriate hierarchies for time and geography. Create the needed measures based on the queries you need to answer.

### *Assignment 1*

Show the student that made the most mistakes for each country.

### *Assignment 2*

For each subject, show the student with the highest total correct answers.

### *Assignment 3*

For each continent, show the student with the highest ratio between his total correct answers and the average correct answers of that continent.

### *Assignment 4*

Create a dashboard that shows the geographical distribution of *correct answers* and *incorrect answers*

### *Assignment 5*

Create a plot/dashboard of your choosing, that you deem interesting w.r.t. the data available in your cube

## Groups from 18 to 25

### *Assignment 0*

Build a datacube from the data of the tables in your database, defining the appropriate hierarchies for time and geography. Create the needed measures based on the queries you need to answer.

### *Assignment 1*

Show the percentage increase or decrease in correct answers with respect to the previous year for each student

### *Assignment 2*

For each subject show the total correct answers in percentage with respect to the total answers of that subject.

### *Assignment 3*

Show the students having a total incorrect answers greater or equal than the average incorrect answers in each continent.

### *Assignment 4*

Create a dashboard that shows the geographical distribution of *correct answers* and *incorrect answers*

### *Assignment 5*

Create a plot/dashboard of your choosing, that you deem interesting w.r.t. the data available in your cube