# Homework M3: Databases and Analytics

The main goal is to build further on what was demonstrated during the practice

## Tasks

1. Cosmos DB task
   1. Create an account that is set to use API for MongoDB
   2. Create a database and a collection to store the data
   3. Enter a few (at least five) items (documents) that hold personal data (id, name, sex, salary)
   4. Write a query (in the MongoDB shell) to show the average salary by sex

*Note: This URL contains helpful information on the topic:*

[*https://docs.microsoft.com/en-us/azure/cosmos-db/mongodb-introduction*](https://docs.microsoft.com/en-us/azure/cosmos-db/mongodb-introduction)

1. Stream Analytics task
   1. Create a Stream Analytics job
   2. Prepare one input to read data from a BLOB (like we did during the practice)
   3. Prepare one output to send data to an Azure SQL database
   4. Create a query to transform the data in a form suitable for storing the data in a SQL database (you can use the Power BI one used in the practice)
   5. Create a visualization of the data from the Azure SQL database in a Power BI Desktop application (you must download and install it, it’s free)

*Note: You may use the sensor data generation application provided with the practice. Furthermore, you can reuse the query definition used for the Power BI output*

Please note that you can do either one of the tasks or both. Whichever you choose, your submission will be accepted, and you will be eligible to receive the corresponding amount of homework points

## Proof

Prepare a document that shows what you accomplished and how you did it. It can include (not limited to):

1. The commands you used to achieve the above tasks
2. Any configuration files produced while solving the tasks
3. A few pictures showing intermediary steps or results