ASSIGNMENT 1

Deadline: March 13, 23.59 pm

Submission: in .pdf or .word document

Assignment type: Individual

Lecturer: Ulzhan Bissarinova

Lecture groups: 4**N**, 15**N**, 16**N**, 17**N**

Weight: 10% of your final grade

PROBLEMS

Task 1

Select a data set from the following websites:

https://data.egov.kz

https://data.worldbank.org/country/kazakhstan

https://data.world/datasets/kazakhstan

taldau.stat.gov.kz (suggested by students)

You are allowed to use other datasets from other web-sources as long as your dataset is Kazakhstani data.

Requirements for the data set:

- Make sure that your data set contains numerical values (some might have only character columns)
- There is no formal requirement for the number of rows in your data set, but try to select datasets which have at least 100 rows.
- Select data set which is of your interest
- Show link from which you have downloaded your data.

Task 2

Choose 2 data formats out of 3: .JSON, .XML, .CSV

Write a code which will load your selected dataset using 2 different formats to the Oracle or MS SQL Server database

You can use any number of data tables, if needed you can break down the dataset into several tables.

Task 3

Check if any of the columns contain NULL values by writing respective code.

If some columns contain NULL, count how many values are NULL for each column.

Show information about each column. This is how we checked if our data is complete.

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Task 4

Find 3 interesting facts about your data.

For example, it can be average salary in a region, corruption rate in a republic or number of hospitals in some city.

If suitable do comparison (different sectors, regions, years, month, quarters, etc.)

The most interesting facts will get bonus points.

Task 5

Task 5 is not related to the previous four tasks. Compare Oracle DBMS with two other database management systems that exist in the market. It can be any database: MySQL, MSSQL, PostgreSQL, MongoDB, etc.

Choose any two and compare them with Oracle using following table:

Comparison criteria	Oracle	DBMS1	DBMS2
Supports core sql	Yes	Yes	Yes
Supports usage of procedures	Yes	Yes	No
Supports looping	Yes	Yes	No
Can create variables	Yes	No	Yes
Can create packages	Yes	Yes	Yes
Can create triggers	Yes	Yes	Yes
Add you own criteria #1			
Add you own criteria #2			
Add you own criteria #3			
Write unique features that this database has and that makes it different from other type	There might come some long sentence. Try to put it into max 3 sentences if possible	There might come some long sentence. Try to put it into max 3 sentences if possible	There might come some long sentence. Try to put it into max 3 sentences if possible