Requirements for the project to be created in the Databases course.

1. Think through the data that will be stored in the database. For example, if you plan to design a database that will be used in a medical system there should be data about doctors, patients, diseases, etc. If you would like to design a database that would be used in an online store there should be tables with data on orders, customer data, products, product categories, etc.
2. Design the structure of the database. The database should have a minimum of 8 tables, primary and foreign keys, relationships (1:1 and 1:N/ M:N). Remember the rules of database normalization. The database should follow the rules of the third normal form. https://learn.microsoft.com/en-us/office/troubleshoot/access/database-normalization-description#third-normal-form
3. Create a script for your database (create columns, tables, keys, relationships and sample data in the database).
4. Rethink the data types for each column and give them the appropriate restrictions (number of characters).
5. Create indexes and constraints.
6. Create 3 views for the database. At least one w of the views should use a JOIN clause and one of the views a UNION clause. The third view should be based on a subquery. The views should use commands such as WHERE, BETWEEN, LIKE, AND, OR, etc.
7. Create a script that will back up the database once a week. If there are more than 30 backups, the oldest file will be replaced with the newest one.
8. Develop and create 3 other selected procedures for the database.
9. Develop and create 3 triggers for the database.
10. Develop and create 3 sub-queries for the database.
11. Use 10 selected system stored procedures and describe them in the report (along with the results of execution).
12. Design roles and permission gradations in the database.
13. Create several users in the database and assign them selected roles and permissions.
14. Create queries for the database that use the commands: DISTINCT, MIN, MAX, AVG, COUNT, HAVING, SELECT TOP, EXISTS, CASE.
15. A script must be prepared for each of the above points (it is not enough to click from the interface of each issue).
16. Create a report and submit the created scripts in a file with .sql extension. Also upload the database backup.
17. The report should include the following information: name, name of the course, description of the data that will be stored in the database, description of the structure of the database (tables, columns, keys, indexes, relationships) along with a diagram (database schema), description of all scripts created and used, e.g. procedures, triggers, sub-queries, description of the gradation of permissions, created roles in the database and users. The report should include a description of the conclusions, a description of the possible extension of the project in the future, and a description of the problems encountered and solved during the implementation of the project.