Project 2

For this project, you going to create a database for the commercial bank. It should be populated with some data (you have to insert your own data). Make sure you finished every step.

1. Create a database - bank_of_kz;
2. Create the following tables:
    a. borrower with columns:
        i. id, primary key;
        ii. created_at, date. When borrower information created in DB;
        iii. created_by, int, fk to manager table. Id of credit manager;
        iv. address, text;;
        v. birth_date, date;
        vi. children, int;
        vii. document_id, fk to documents;
        viii. education, varchar(30);
        ix. phone, varchar(15);
        x. email, varchar(50);
        xi. name, text;
        xii. gender, bool. 1 for male, 0 for female;
        xiii. marital_status, varchar(20);
        xiv. salary, int;
    b. credit_application:
        i. id, pk;
        ii. requested_at, date;
        iii. product_id, fk to products table;
        iv. status, varchar(20); 3 possible outcomes - rejected, approved, cancelled;
        v. created_by, int, fk to manager table. Id of credit manager;
        vi. requested_amount, int;
        vii. approved_amount; int. Null if rejected or cancelled;
        viii. requested_term, int;
        ix. approved_term; int;
        x. credit_id, fk to credit table; null if rejected or cancelled;
        xi. disbursement_date, date. Null if rejected or cancelled;
        xii. borrower_id, fk to borrower;
        xiii. verificator_id, fk to verificators;
    c. credit:
        i. id, pk;
        ii. disbursement_date, date;
        iii. product_id, fk to products table;
        iv. amount, int;
        v. term, int;
        vi. status, varchar(20). Active, Expired, Finished;
        vii. borrower_id, fk to borrower;

        viii. credit_application_id, fk to credit_application;
        ix. EIR, float. Effective interest rate;
    d. products:
        i. id, pk;
        ii. name, text. 4 products - mortgage, cash loan, car loan, credit card;
        iii. description, text;
    e. verificators:
        i. id, pk;
        ii. created_date, date;
        iii. status, bool. If active then true, if not active then false;
        iv. name, varchar(50);
    f. managers:
        i. id, pk;
        ii. created_date, date;
        iii. status, bool. If active then true, if not active then false;
        iv. name, varchar(50);
    g. documents:
        i. id, pk;
        ii. type_of_document, varchar(20). Two types: passport, id;
        iii. document_issue_date, date;
        iv. document_valid_until, date;
3. Create ER diagram for the above tables;
4. Populate tables with some fictional data with the following constraints:
    a. There should be at least 30 different borrowers;
    b. They asked for at least 100 credits. So it's 100+ credit_applications;
    c. 50+ approved, 25+ rejected, 25+ cancelled;
    d. At least 3 different verificators;
    e. At least 5 different credit managers;
5. Create triggers for changing the borrower table. Track changes in name, address, phone columns;
6. Create a function, which calculates the monthly payment amount based on the approved amount, term, and EIR;
7. Create a view which contains information about borrower and credit;
8. Add indexes to credit_application, credit, and borrower tables.
9. Create a procedure, which changes borrowers' name, address, phone;
10. Summarize everything, make a small presentation of your corporate database for the bank;