IS324 Project
(Fall 2022-2023)

PROJECT OBJECTIVES:

- Applying the concepts, you have learned in the class
- Translating the business requirements into a running application
- Scaling up your skills in developing a more sophisticated application

Introduction:

Inflow and Outflow record of our daily and monthly expended money can be easily kept with the help of expense tracker. It helps to manage our finances. In this project, we will develop an expense tracker that will track our expenses. Let's start developing the project. In this project, we will create an expense application tracker that will take details of our expenses. While filling the signup form a person will also need to fill in the details about the income and the amount, he/she wants to save. ~~Some people earn on a daily basis, so their income can also be added on a regular basis.~~ **Details of expenses will be shown in the form of a pie chart on a weekly, monthly, and yearly basis.**

Business Requirements:

The following are the gathered business requirements need to be translated into a system:

- The system should consist of multiple windows.
- Navigating from one window to another should be easy and clear.

- The first window (**Sign up**) which includes:
  - the fields that capture one customer information:
    - *First Name, Last Name*
    - *customer ID number (6 digits)*
    - *Password (at least 8 digits or letters)*
    - *Email address (in this format XXXXXXXX@XXXXX.XXX)*
    - *Phone number (in this format 05XXXXXXXX)*
  - **Submit button:** when it is clicked, the system generates a 6-digit random number that represents the e-budget number, current date and initial balance, and then, the system sends this information along with the customer information to the central database. If the customer has been already registered, the system should display an error message.

    - Input validation mechanism, and an error message should appear if there is any such violation, and the information will not be sent to the database in that case.
    - **Login button:** when it is clicked, the system opens the Login window and destroy the current window

- The second window (**Login**) which includes:
    - A field in which the customer or the admin can enter his ID.
    - A field in which the customer or the admin can enter his password.
    - Input validation mechanism, and an error message should appear if there is such a violation such as the ID is not digits or less than 6 digits.
    - **Login button:** when it is clicked, it connects with the central database to check the validity of the entered credentials. In case of success, if the user is a customer, it opens the customer e-budget window, and if the user is an admin, it opens the admin window. In case of failure, the system should display an error message to the user.

- The third window (**Customer e-budget**) which includes:
    - Information about his e-budget:
        - E-budget Number
        - current balance
        - current Date
        - and empty fields: operation source, operation Type (outcome or outcome), category of income (salary or transfer) or outcome (food and beverages, utilities, health and sport, monthly redemption payment, restaurants and hotels, education and culture, insurance and taxes),
        - A field in which the customer can enter the amount that he wants to pay or to deposit.
    - **Pay / deposit button:** when it is clicked, it connects with the central database to check the validity of the entered e-budget number (if exist). The entered amount should be deducted/ added from/to the customer e- budget. The system should update the balance of the customer e-budget correctly.
    - If the e-budget number does not exist, the system should display an error message.
    - If the customer enters an amount exceeding his balance, the system should reject this transaction and display the error *"There is not enough money "*.
    - This window should include a function that allows each customer to search and display all the successful transactions by type, category and period.

- **Back button:** when it is clicked, the system takes the user to the sign-up window.

- The fourth window (**Only one** **Admin**) which includes:
    - View customers: Information about customers and their balances.
    - ~~**Submit button:** when it is clicked, the system generates a new 6-digit random number that represents the e-budget number, current Date, X SR initial random balance to any new customer. Then, the system sends this information to the central database.~~
    - **Back button:** when it is clicked, the system takes the user to the sign-up window.

Have fun!