

## Bank System

In our bank, there is an Admin who can log into the system and perform various operations, including creating a new account for a new employee. He can also display the data of all employees, clients, and all the banking transactions performed by the Clients.

There is also a user who can be an employee and can log in using a unique ID and password. The manager verifies whether this employee already exists in the system or not. This employee can perform multiple operations, including creating a new account for a new client, with conditions such as the customer having a unique email distinct from the registered accounts and being assigned a unique account number. The account creation process requires the approval of the manager and the fulfillment of all the specified conditions. The employee can also modify some of his personal information and modify the personal information of a specific client with the manager's approval. He can also search for a customer in the system using the customer's name or bank account number. If the customer exists, his personal data will be displayed, The employee can also delete a specific client from the system and delete all his banking transactions by knowing his bank account number.

The user can also be a client, and the client can log into the system using ID, a unique email and password. The manager verifies whether the client is exist in the system or not. After verification, the client can perform several operations, such as modifying his account information, subject to the approval of the manager and the fulfillment of all the specified conditions. He can view all the banking transactions he have performed, as well as his personal account information. he can also perform banking operations based on its type. For example, if it's a deposit operation, he need to input a specific amount to add to his balance. If it's a withdrawal operation, there are several conditions. If the account type is a savings account, he should not withdraw more than three-quarters of his balance, and he can entitled to request the annual interest only once. However, if it's a current account, he is allowed to withdraw up to 3,000 EGP, and if his balance falls below that amount, he will be subject to taxes in accordance with the exceeded amount over 3,000 EGP.

If the operation is to send a specific amount to another client, the client must know the recipient's account number and enter the amount he want to send, subject to the condition that the recipient is also a client in the bank, and the amount to be sent does not exceed his account's conditions. This operation requires the approval of the manager if all the previous conditions are met.

The client can also apply for a loan up to a certain limit, and interest will be imposed on this loan at a specific rate. The loan should be repaid in six equal installments based on the loan amount. The client is not allowed to take another loan until he have repaid all his existing loans, and the manager confirms all the performed transactions, and they can only be executed with his approval.