Requirements and design specification

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Functional requirements

The system is capable of:

- Register a user at the time of entering the bank and get their turn in order to locate the person in the corresponding row, the user must enter their name and identification number.

- Search for a user in the bank's database efficiently so that when the user approaches the office, they already have the client's information such as: name, ID, bank account, debit / credit cards, date of credit card payment and date you joined the bank. It should be noted that this functionality is handled by a bank manager.

- Make a deposit or withdrawal in the user's savings account, that is, modify the amount stored in the customer's savings account.

- Cancel the user's account, deleting all the customer information in the database of the holders and incorporating the information in an external database that stores all the customers who have canceled their account with the bank, in addition, the date and reason must be recorded user withdrawal.

- Pay a credit account with the amount used on the card either with cash or a savings account

- Undo the mistakes that may occur when performing a system functionality even if the information has already been saved, the program will return the wrong action that has been committed either by the customer or the cashiers, in other words a button Once the action done returns.

- View the customer database in a spreadsheet-type table and also be able to sort the table according to four parameters: name, ID, date of connection and amount.

Non-functional requirements

- One of the ordering algorithms must have a temporal complexity O (n ^ 2) in the average case, the other three ordering algorithms must have a lower temporal complexity O (n ^ 2).

- The bank queues are fixed in size and have a maximum capacity of 12 people