Event-B Course

Exercise # 2

Requirement Document for a Bank System

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- The function of this system is to model the behavior of a bank.

- A bank is handling accounts for people

- Various operations are performed on a bank account:

  - opening and closing accounts.

  - deposit and withdraw of money on an account.

  - moving money between accounts.

  - saving money

The bank is concerned with persons and accounts	EQP-1

An account has an owner which is a person	EQP-2

An account has a balance. It is a non negative number denoting the money on the account.	EQP-3

An account can be made open for a person. The balance of a just open account is 0	FUN-1

When its balance is 0, an open account can be made closed	FUN-2

It is possible to put some money on an open account	FUN-3
It is possible to withdraw some money from an open account	FUN-4
It is possible to move some money from one account to another (both are open)	FUN-5

| An account could be a normal account or a savings account | EQP-4 |

| It is possible to save money for a person owning both a normal and a savings account | FUN-6 |

| Saving consists in moving some money from a normal to a savings account | FUN-7 |

- Initial model: opening, closing, deposit, withdraw (FUN-1 to FUN-4)

- First refinement: moving (FUN-5)

- Second refinement: saving (FUN-6 and FUN-7)

- Developing the bank model on the Rodin Platform.