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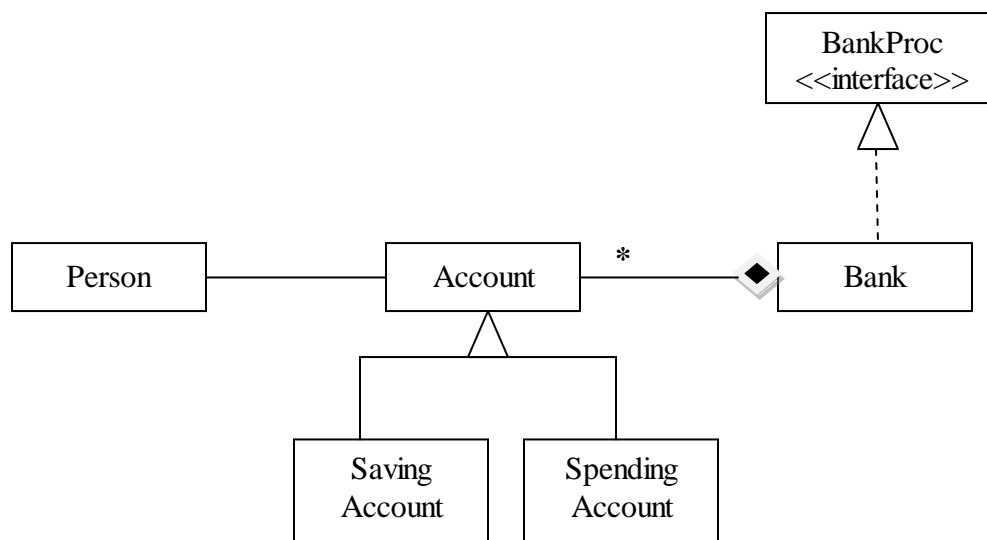
## TP Lab –Homework 4

### Objective

Design by Contract Programming Techniques

### Description

Consider the system of classes in the class diagram below.



1. Define the interface **BankProc** (add/remove accounts, read/write accounts, report generators, etc). Specify the pre and post conditions for the interface methods.
2. Implement the classes **Person**, **Account**, **SavingAccount** and **SpendingAccount**. Other classes may be added as needed (give reasons for the new added classes).
3. Implement the class **Bank** using a hashtable. Chaining will be used in case of collisions. A method **toString** will be also defined for the class **Bank**.
  - 3.1 Define a method of type “well formed” for the class **Bank**.
  - 3.2 Implement the class using Design by Contract method (involving pre, post conditions, invariants, assertions).
4. Implement a user guided test driver for the system. The initial account data for populating a **Bank** object with **Account** objects will be taken from a file. Testing evidence should be provided to the console for defined methods.