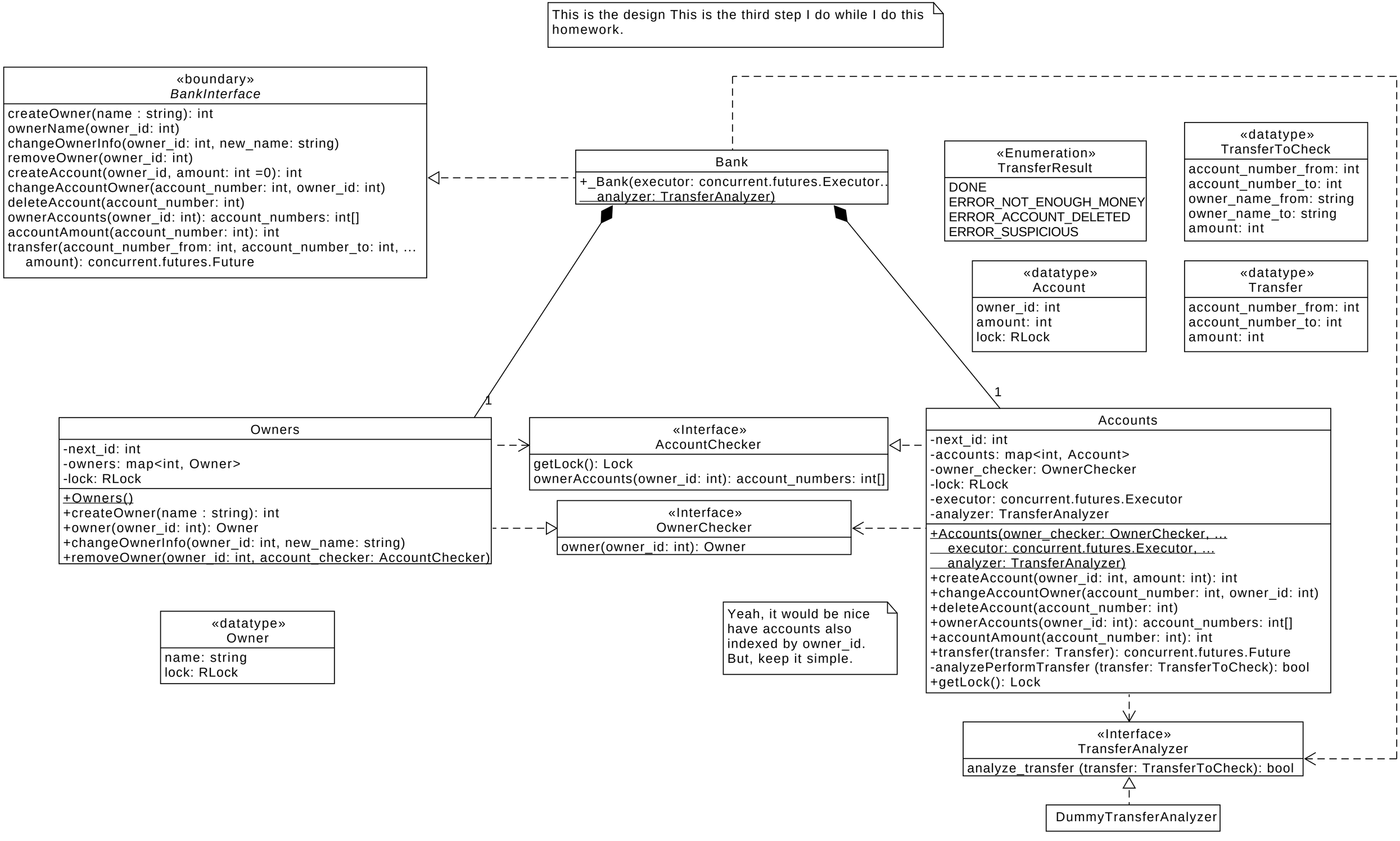
This is the design This is the third step I do while I do this homework.
«boundary»
BankInterface
createOwner(name : string): int
ownerName(owner_id: int)
changeOwnerInfo(owner_id: int, new_name: string)
removeOwner(owner_id: int)
createAccount(owner_id, amount: int =0): int
changeAccountOwner(account_number: int, owner_id: int)
deleteAccount(account_number: int)
ownerAccounts(owner_id: int): account_numbers: int[]
accountAmount(account_number: int): int
transfer(account_number_from: int, account_number_to: int, ...
amount): concurrent.futures.Future
Bank
+_Bank(executor: concurrent.futures.Executor..
analyzer: TransferAnalyzer)
«Enumeration»
TransferResult
DONE
ERROR_NOT_ENOUGH_MONEY
ERROR_ACCOUNT_DELETED
ERROR_SUSPICIOUS
«datatype»
TransferToCheck
account_number_from: int
account_number_to: int
owner_name_from: string
owner_name_to: string
amount: int
«datatype»
Account
owner_id: int
amount: int
lock: RLock
«datatype»
Transfer
account_number_from: int
account_number_to: int
amount: int
1
1
Owners
-next_id: int
-owners: map<int, Owner>
-lock: RLock
+Owners()
+createOwner(name : string): int
+owner(owner_id: int): Owner
+changeOwnerInfo(owner_id: int, new_name: string)
+removeOwner(owner_id: int, account_checker: AccountChecker)
«Interface»
AccountChecker
getLock(): Lock
ownerAccounts(owner_id: int): account_numbers: int[]
«Interface»
OwnerChecker
owner(owner_id: int): Owner
Accounts
-next_id: int
-accounts: map<int, Account>
-owner_checker: OwnerChecker
-lock: RLock
-executor: concurrent.futures.Executor
-analyzer: TransferAnalyzer
+Accounts(owner_checker: OwnerChecker, ...
executor: concurrent.futures.Executor, ...
analyzer: TransferAnalyzer)
+createAccount(owner_id: int, amount: int): int
+changeAccountOwner(account_number: int, owner_id: int)
+deleteAccount(account_number: int)
+ownerAccounts(owner_id: int): account_numbers: int[]
+accountAmount(account_number: int): int
+transfer(transfer: Transfer): concurrent.futures.Future
-analyzePerformTransfer (transfer: TransferToCheck): bool
+getLock(): Lock
«datatype»
Owner
name: string
lock: RLock
Yeah, it would be nice have accounts also indexed by owner_id. But, keep it simple.
«Interface»
TransferAnalyzer
analyze_transfer (transfer: TransferToCheck): bool
DummyTransferAnalyzer