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CSCI-E97 Assignment 1

Any changes you made to the proposed design and how it still supports the requirements?

Account:
1. A DEFAULT_MASTER_BALANCE was added to Account

Block:
1. Block inherits the seed value from ledger, so that it doesn't have knowledge of the ledger
2. Block creates its next block, and computes its hash at that time
3. Block does not handle the logic for when to make the next block, that is the ledger's job to ping the block
4. Accountbalancemap was changed to accountmap, you can get balances from accounts anyway. This is to keep it consistent with how accounts are accessed, by their accountid.
5. Beyond regular getters and setters, block has a few helper methods to set hash and make the next block.

CommandProcessor
1. There is a single ledger stored here. I ran out of time to get to persistence unfortunately
2. There are a variety of helper methods added, all are private.
3. CommandProcessor was implemented as static

CommandProcessorException and LedgerException
1. CommandProcessorException had line number removed. It's not necessary when the actual command is being echoed, and it adds a lot of unneeded complexity.
2. CommandProcessor had its property name command changed to action to mirror LedgerException.

Ledger
1. GenesisBlock association is unnecessary, it is block #0.
2. I needed a set of transactionIDs to create an optimized lookup as a way to prevent duplicate transactionIDs. It is stored in Ledger
3. Ledger determines when the next block is created.

LedgerService
1. I added this because I come from Swift and it's an interface/protocol oriented language. This seems pretty unnecessary now that I'm done.

TestDriver
Nothing

Transaction
Nothing

Did the design document help with the implementation?
I think so. The implementation itself was fairly straightforward, there were a number of issues related to Java that made it tricky. Java IO, Java packages, Java memory and its constant referencing, Java classpaths, Java's absolutely terrible null type handling.

How could the design have been better, clearer, or made the implementation easier?
A state diagram would have been useful to illustrate the changes that happen when the genesis block reaches 10 transactions.