Ledger Project Report

Approaching to the problem:

Programming Language: Java.
Data Structure: HashMap, LinkedList.

I use hashmap and linked list to store the data. When I need find the balance of the specific person, I would traverse the hashmap to find transactions of the person, which is not consumed by other transactions and then sum them up. And when I need print or dump the transaction, i would use the linked list because it stores the sequence of transaction inputs.
As for the testing part, I use the sample which is provided by the design documentation. In my testing, I found the last two transactions' transaction ID is not correct. And I corrected IDs using IDs which are generated by SHA-1 algorithm in my project.

Challenges:

The design of the system could be a little difficult at first, especially the data storing design. And in my first version of design, I neglected some important parts and then I had to rewrite the code to correct the output.

What I learned:

1. Designing the data storing structure carefully before implementing the code.
2. Reading design file carefully before design the structure of my code.
3. Building the code like constructing a building layer by layer could solve the problem easily.
4. Digital currency is not magic stuff.