Child Account Extension Report

Saul van der Vies & Noël Keijzer

September 19th 2017

Total time spent: (combined)

Category 1: 7 hours 30 minutes
      - Adding / modifying the required methods (5 hours 40 minutes)
      - Bug hunting / solving (1 hour 50 minutes)
Category 2: 25 minutes
      - Extending the test suite with basic test methods (25 minutes)
Category 3: negligible

The extension was fairly straightforward to plan, yet somewhat complicated to implement.
This was due to the large amount of restrictions and conditions that came with a child account.
Modifying the OpenAccount method was easy enough. We used the system we already had for restricting certain methods when an account is frozen to implement the method restrictions for child accounts.
So far, we had stored dates of birth as Strings, not as dates, which made age checks quite difficult, which is why we now store actual dates as dates of birth, like in the rest of the system.

We did not create any new type of accounts, but instead added boolean flags in the following services:
In Authentication, the flag is used for restricting use of certain methods.
In Ledger, the flag is used to separate accounts when it comes to interest calculation.
In Users, the flag is used to check birthdays when time passes, and to see who can, and who cannot be a guardian for a child account.

The toughest part were the interest calculations. Since everything is different with a child account, compared to a savings account, the existing interest calculation system was not suited to calculate interest for child accounts.
We had the option to either work child accounts into the existing system, or create separate methods.
In the end, we chose to modify most of the existing methods with child flags and conditions and such, and created new methods for actions where too much would've had to be changed.