Main Tree: Diagram

Chores Galore

Package: accountModule
- Account Class
- childAccount Class
- Parent Account Class

The account classes link into each other as parents assign chores to children and in this case for children to complete and verify these chores, they access to each other. In addition, as a parent associates them with their child, you need the parent to also be able to track their children's account to understand how to reward their children for the chore. Also, as both the parents and the children need accounts, these 2 accounts are linked to the Account class.

Package: chores Module
- Chore Class
- Chores List Class
- chores Utils class

Here the choresList and ChoresUtils classes implement the chore class. This is because the ChoreList in this case is used to add these chores into an Array List such that it can be manipulated by chore addition, deletion or even attaining the entire list of chores using getter methods. In addition, the choreUtils class also makes use of the chore class to generate the filtration system of the chores for the child such that they can filter their chores in Alphabetical, durational or by payment orders further allowing them to prioritise their chore completion.

Package: Competition Module
- Competition Class

The competition class here implements the Parent account, Child account and the Chore classes. In this case the child account is implemented twice as we are creating an option for a competition between 2 children. In this case the parent can assign the chore (simultaneously implementing chore class) in order to assign the same chores to both children and therefore this competition class is used to find out which child completed the chore first by marking it complete. This child is then rewarded with some bonus amount decided by the parent.
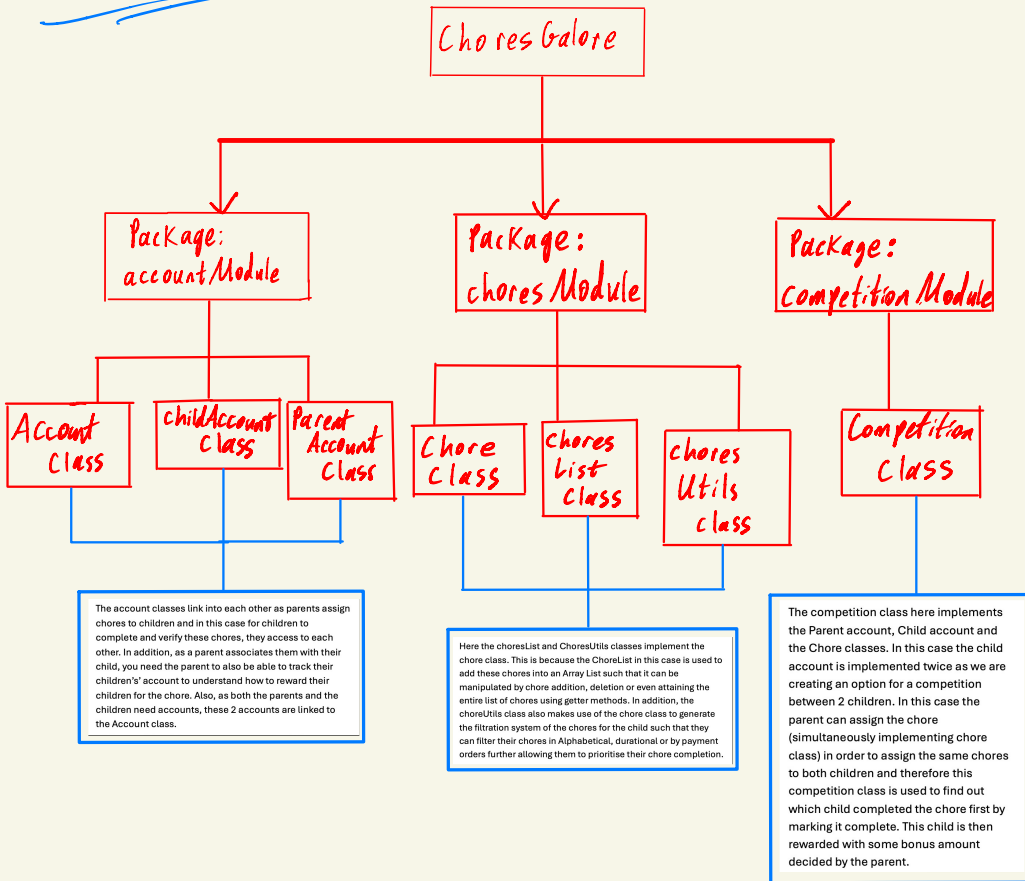
User Interface Tree Diagram :

Chores Galore

Package: User Interface

Parent Account UI
This GUI is in-charge of making sure the parents can log in and view their children's chore history, balance, and edit chores when needed to.

Child Account UI
This GUI is in-charge of allowing the child to enter login details to access their list of chores, check balance and mark off any completed chore.

Login Page UI
This GUI is in-charge of general login information.

Child Registration UI
This GUI is in-charge of the registration of the account for the child/children.

Main Page UI
This GUI is in-charge of the home page display where multiple options can be accessed.
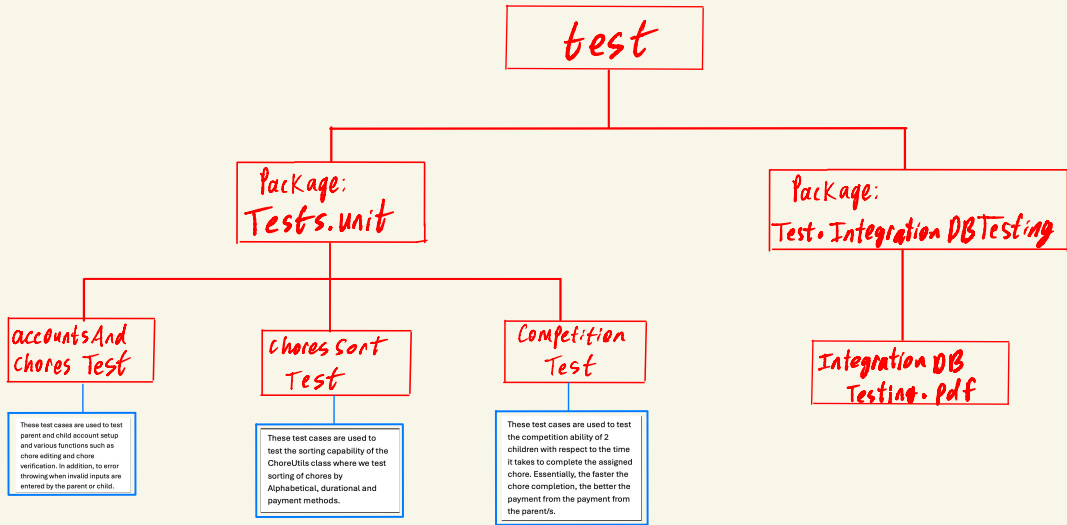
Parent Registration UI
This GUI is in-charge of registration for parent/s.

Competition Standings UI
This GUI is to resemble the competition between children showing the leading child of the chore/s assigned.

Testing Tree Diagram

```
                              ┌──────────────┐
                              │     test     │
                              └──────────────┘
                    ┌──────────────────────┴──────────────────────┐
          ┌──────────────────┐                          ┌────────────────────────────┐
          │ Package:         │                          │ Package:                   │
          │ Tests.unit       │                          │ Test.Integration DB Testing│
          └──────────────────┘                          └────────────────────────────┘
```

Package:
Tests.unit

Package:
Test.Integration DB Testing

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accountsAnd
Chores Test

These test cases are used to test parent and child account setup and various functions such as chore editing and chore verification. In addition, to error throwing when invalid inputs are entered by the parent or child.

Chores Sort
Test

These test cases are used to test the sorting capability of the ChoreUtils class where we test sorting of chores by Alphabetical, durational and payment methods.

Competition
Test

These test cases are used to test the competition ability of 2 children with respect to the time it takes to complete the assigned chore. Essentially, the faster the chore completion, the better the payment from the payment from the parent/s.

Integration DB
Testing. Pdf

Database Tree Diagram

Chores Galore

Package: Database Module

Database Connector

Here a DatabaseConnector class is created to establish a database connection using properties from a configuration file. It loads the properties from the file and uses them to connect to the database via JDBC(Java database connectivity) DriverManager. If any errors occur during the connection process, it throws a RuntimeException.

Database Operations

The DatabaseOperations class handles database operations for accounts, chores, competitions, and assignments. It inserts accounts, updates chore statuses, retrieves balances, and fetches chore and competition details. Utilizing JDBC, it executes SQL queries and manages exceptions for robust database functionality.

Database Setup

The DatabaseSetup class sets up the Parent Chore System's database structure by creating tables for accounts, chores, assignments, and competitions using SQL statements. The setupDatabase() method executes these statements, initiated by the main() method. It confirms successful setup or prints any encountered SQLExceptions.