

# *Parent Chore System Vision Statement*

The Parent Chore System is a revolutionary application that is designed to encourage household responsibilities in a fun and entertaining way. Personalised for parents and children it introduces a competitive element through weekly competitions, encouraging siblings and friends to actively participate. The application also allows parents to track children's spending and builds financial responsibility for them.

The primary users of the Parent Chore System are parents and their children. Parents have the opportunity to input and assign chores to their children, while the children use the platform to complete the tasks assigned to them. The Parent Chore System will bring benefits to both parents and children by providing an efficient way to manage household tasks. It also gives children a sense of responsibility which can grow on as they get older and learn about money.

There are four main key features of the Parent Chore System which are the chore assignments, proof of completion, competitions and financial tracking. For chore assignment this is where the parents will be able to add and assign the chores to their children, specifying the details such as due date and payment. Proof of completion allows the children to check a box stating that they completed the task, so that parents can see that the chore is done. The system will generate friendly competitions by allowing siblings and friends who also have the app to challenge each other. This feature works by enabling competition between 2 children based on the earliest time of chore completion. Essentially, both children will be assigned the same chore/s and depending on who check marks it first after completion, wins the competition resulting in a possible bonus payment. The financial tracking of the application will allow parents to track their child's earnings through chore completion ensuring an educational component around financial responsibility.

The Parent Chore System will be considered successful when a Desktop app is created that allows different families to have full control over setting prices on chores, who completes them and when they should be completed by.

The system should keep track of how many chores each child has completed and the child will earn money and points for each chore. The application should also allow children to post proof on task completion by checking a box. If all these goals are satisfied the application will be very helpful for families all over the world.

## *Big User Stories*

*These user stories describe the main features of your software in very broad terms, for the entire project. You should create 3-4 big stories (categories of features) for the entire project (final release) and 5 to 6 user stories per iteration.*

### Big User Story 1: Chore Tracking and management:

As a parent, I want to be able to easily input and assign chores to my children through a user-friendly interface. The app should allow me to specify details like the completion dates and payments behind the chore completions. I also want to be able to use a centralised dashboard so that I can keep track of each child's list of completed chores such that it ensures easy and convenient management of such household responsibilities.

### Big User Story 2: Proof of Completion and Validation

As a child, I want an easy way of sending proof of completing assigned chores through methods such as simple checkbox ticking. In addition, my parents should be able to verify and approve these completed chores and reward me for my work.

### Big User Story 3: Friendly Competitions and Rewards

As a kid like me, having competitions with your brothers, sisters, or friends is super exciting! It's like having your own little Olympics at home. Here's how it goes: me and my sibling or friend can challenge each other by doing the same chores that our parents give us. It could be anything from cleaning our room to washing dishes. Then, we race to see who finishes first! And guess what? The best part is, if I win and finish my chore faster, my parents might give me an extra reward, like extra allowance. It's like a fun game that makes doing chores feel like an adventure!

#### Big User Story 4: Financial Tracking and Education:

As a parent, It is very important for our kids to be financially literate. We believe that kids aren't taught this enough at school. In this case, enabling a feature allowing both the parents and children to view the 'balance' on their (childrens') accounts will provide a better learning opportunity to understand the value of hard earned money which is a useful skill for them to possess as they grow older.

#### Big User Story 5:

As a child, if there was a way for me to download a list of all the chores my parents wanted me to do! That would be so good because then I could have it on my tablet or phone, even if I'm not connected to the internet. I wouldn't have to keep opening the app all the time to see what I have to do next. I could just look at the list whenever and wherever I am in the house! It would be like having my chore instructions right in my pocket, ready to go whenever I need them. It would make doing chores way easier and faster too!

*Iteration 1 detailed user stories: these are the user stories you plan to implement in the first iteration, in greater detail. You should create 5-6 user stories for the first iteration.*

*The user stories should be written on 3"x5" index cards. Each card should have a descriptive title, and greater detail below. For the big stories, the detail will be brief; for the user stories, the detail should be more precise and may include unanswered questions. Cards should also include a priority measurement (high, medium, or low) and a time estimate, in story points (ideal development days). Note that there are typically 3 weeks between each iteration. See the Syllabus for exact due dates.*

**Title:** Chore Edit and Deletion

**Detail:** As a parent, I want the ability to edit or delete chore assignments in case of mistakes or changes in plans.

**Questions:** Should there be a log of edits/deletions? How will this feature affect ongoing competitions?

**Priority:** Medium

**Time Estimate:** 2 story points

**Title:** Registration and Login

**Detail:** As a parent, I want my each child's account to be separate such that they cannot see each others chores and balances.

**Questions:** Should parents have access to all information of their children? Should mothers and fathers register separately, or can they have a combined account? Should parents register their children, or can children register themselves?

**Priority:** High

**Time Estimate:** 3 story points

**Title:** Chore Sorting Options

**Detail:** As a parent, I want the ability to sort and filter the list of assigned chores based on various criteria (e.g., due date, child, completion status), enhancing usability.

**Questions:** What sorting options are most useful to parents?  
Should there be default sorting?

**Priority:** Low

**Time Estimate:** 2 story point

**Title:** Proof of Completion of Specified Chore

**Detail:** From the perspective of a child, I want to be able to seamlessly send/upload a photo or tick checkboxes as evidence that I finished a duty so my parents could confirm that. Parents should be able to view the submitted proof for each completed chore. This can be achieved through a dedicated section within the application and can have preview images of uploaded pictures. In cases, where a picture is not necessary, children can also go through a checkbox confirmation process on a clear and user-friendly interface which will guide them as well.

**Questions:** Should the system restrict the file upload capacity for storage reasons?

Should parents receive real-time notifications as to when the child submits a proof of completion?

**Priority:** Medium

**Time Estimate:** 3 Story Points

**Title:** Competition Algorithm Implementation Enhancement

**Detail:** As a child, I would like the competition feature to be sophisticated enough to reflect facts like chore type and the amount of time it took to complete the task so that the point system (between siblings if that's the case) can show the parents which sibling is performing better. The system can calculate competition points based on a weighted combination of the time and chore. This operation can be calculated with a specific formula. There can also be a breakdown available which will show each completed chore.

**Questions:** How should the system assign weights to different factors (for example chore difficulty or completion time)?

Should the exact calculation scheme be visible to each user on the application?

How should we make it so that the system is fair and reflects the children's efforts accurately?

**Priority:** Medium

**Time Estimate:** 2 Story Points

**Title:** Download Chores as Excel Sheet

**Detail:** We think that children should learn about financial literacy from a young age. That's why we want them to be able to see all their chores in a nice organized excel sheet. Excel is a very important tool in the professional world, especially in professions such as accounting. Letting children have experience with Excel sheets will help them get ahead both financially and in a technical/digital aspect. In addition, this also gives them something tangible to have, allowing them to be more drawn into using this app.

**Questions:** How would you implement a feature in Java to allow children to mark their chores as completed within the Excel sheet interface?

What strategies would you employ in Java to ensure the security and integrity of children's chore data stored within an Excel sheet?

**Priority:** Medium

**Time Estimate:** 3 Story Points

## ITR2-Updated plan

- Plan should be up-to-date (if there is any change from ITR0 to ITR1 and ITR2, it should be explicit and justified)

Change recorded in ITR 1: A modification that we had to make was with detailed user story #6 which was regarding the payment/financial system. Our initial plan was to incorporate a secure cash deposit/withdrawal bank type of system for the parents. We, as a group, decided that this would be too much, a "feature over-load", so then we just decided to incorporate an excel sheet/pdf generating system that acts like a Bank Statement for the Child/Parent.

Change recorded In ITR 2: We have made a change to the display to the user by implementing a database to present the recorded chores in association with earned cash to add an additional feature display to the child using the app.

- **NEW Detailed user stories for ITR2**

- We added 3 new detailed user stories in this iteration:

**Title:** Database For Storing User Information

**Detail:** As a parent or guardian of children using the chore rewarding application, I need a secure and reliable database system to store user information, so that I can track their chore completion and reward them accordingly. The purpose of this user story is to ensure that the chore rewarding application has a robust backend infrastructure in place to securely store user information, including children's profiles, chore completion records, and reward history. This database will serve as the foundation for tracking and managing user data effectively, allowing parents or guardians to monitor their children's progress and incentivize them for completing chores.

**Questions:** 1) What type of database system should be used for storing user information? (e.g., relational database, NoSQL database)

2) How will user authentication and access control be implemented to ensure the security of user data?

**Priority:** High

**Time Estimate:** 4 Story Points

**Title:** Restricted View of Competition Standings for Parental Control

**Detail:** As a parent, I want each of my children to view only the competition standings and results in which they have participated. This ensures that they are not exposed to information about competitions they were not involved in, promoting fairness and privacy within our family environment. When a child accesses the competition standings section, they only see competitions they took part in. Standings for competitions they didn't participate in are not visible or accessible. Parents have full control over the viewing permissions of competition standings for each child.

**Questions:** 1) Should parents be able to override the viewing permissions for specific competitions?

2) How will the system differentiate between competitions each child participated in?

**Priority:** Medium

**Time Estimate:** 2-3 Story Points

**Title:** Child Removal Feature for Parental Account Management

**Detail:** As a parent, I want a feature that enables me to remove any child from my account. This functionality ensures that I have control over the users associated with my parental account, allowing me to manage access and permissions effectively. Parents have the ability to manage the users associated with their parental account. This includes adding new children, removing existing children, and updating user information. Parents can initiate the removal process for any child linked to their account. The removal process should be straightforward and easily accessible from the parent's account dashboard. Upon removal, the child's account and associated data should be securely deleted from the system.

**Questions:** 1) What happens to the data associated with the removed child?

2) Should it be possible to have an option for a removed child to be re-added to the parental account in the future?

**Priority:** Medium

**Time Estimate:** 2 Story Points

### • NEW User Stories for Iteration 3

**Title:** Chore Count Feature

**Detail:** As a child who completed numerous chores. It would be useful to have a tracker that keeps a track of all the chores I've completed in my time on this app. I believe this would allow me to stay on track and would serve as a way of keeping track of my progress and comparing with my other siblings to see who has been working the hardest. This feature along with the hours worked would say a lot about each child's work done and their efforts.

**Questions:** 1) Is the chore count different from the current hours worked feature?

2) Will it save the amount of chores I've completed when I log out and log back in?

**Priority:** Low

**Time Estimate:** 1 Story Point

**Title:** Optional Priority Feature upon Chore Creation

**Detail:** As a child that is responsible and busy with a lot of chores, it would be incredibly useful for their to be some sort of feature that ranks and prioritizes chores. This doesn't have to be a mandatory feature since some chores might be rather miniscule and taking the time to assign a priority level might not be worth it. However, for a lot of other chores it would make sense to set a priority level for that specific chore which would help not only me but all the other children to decide which chores to prioritize and get a better understanding of which chores are more crucial at the moment than others.

**Questions:** 1) Does the priority level have set modes to set it on?

2) Should higher priority levels possess higher pay?

**Priority:** Medium

**Time Estimate:** 2 Story Points



**Title:** Chore History Feature

**Detail:** As a child who completed numerous chores. It would be useful to have a feature that stores the chores that I have completed. It should be display my previous chores and highlight them certain colours to make it easier to navigate and understand. Green should be for tasks completed on time, red for not completed on time, white if not completed yet, and orange if completed by another child/sibling. I believe this feature would allow me to revisit my past chores done to keep a track of my initiative to see if I have been completing my tasks on time or not.

**Questions:** 1) Would this be different from the front panel on the child account portal?  
2) Would having a poor history affect future pay?

**Priority:** Mid

**Time Estimate:** 3 Story Point

**Title:** Parent GUI chore assign and removal

**Detail:** As a parent, it would be useful for me to assign my desired children specific chores and also be able to remove assigned chores. This would allow me to actually assign my children the work but at the same time if I make an error and assign the wrong chore to the wrong child, I can always remove it.

**Questions:** 1) Can I assign the same chore to the same child twice?  
2) Can I remove a chore if I never assigned it to a child?

**Priority:** High

**Time Estimate:** 3 Story Point

**Title:** Payment Reminder for Completed Chores

**Detail:** As a parent overseeing my child's chores, I want to receive reminders to pay my child when they have completed their assigned tasks. This feature aims to ensure timely and fair compensation for completed chores, enhancing the accountability and motivation of both parent and child. The reminders will include details about the completed chores, such as the number of chores completed and the number already paid for, to clearly indicate which tasks are pending payment.

The message should provide a summary of the child's recent chore activity, displaying the total number of chores completed and the number of those chores that have already been paid for. This summary will enable parents to quickly identify which chores are yet to be compensated, facilitating prompt and accurate payment processing.

**Questions:** 1) Should the reminders include details of the completed chores, such as chore names, completion dates, and payment amounts?

2) How will the system handle cases where the parent has multiple children with completed chores?

3) Is there a need for customization options, such as setting payment reminders based on specific chore categories or payment amounts?

**Priority:** Medium

**Time Estimate:** 2 Story Points

**Title:** Chore Description

**Detail:** As a parent, sometimes it's nice to provide my children with specific instructions as to how to handle a chore. Maybe I want them to fold the clothes and place them in a specific drawer, or do the laundry only for certain clothes, etc. This gives me much more freedom and allows for more specific and accurate chore accuracy.

**Questions:** 1) Would the description have a certain character limit?

2) Would the description show up on the child account portal?

**Priority:** High

**Time Estimate:** 3 Story Points

**Title:** Chore Deadline

**Detail:** Sometimes when I assign chores to my children, I have a specific deadline I want the chores completed by. This gives my children a certain time frame to complete all their tasks. This adds on to the priority feature and gives the children an idea of which chores to prioritize over others. The deadline feature also adds more structure to the entire process and teaches the kid time management skills.

**Questions:** 1) Would chores completed after deadline still be paid?

2) Would chores paid on time be paid more?

**Priority:** Medium

**Time Estimate:** 4 Story Point

**Title:** Chore Ratings

**Detail:** Whenever a child of mine completes a chore, some of them complete it better than others. It would be nice to have a feature to rate the child's efforts and results on the chores assigned to them. This would encourage children to better their quality of work on future tasks and also sparks friendly competition between all the siblings. The ratings feature would also give parents an idea of which chore to assign to which child. It would be more efficient to assign high priority, near deadline, and time consuming chores to a child with good ratings because this shows they are more competent in their work and capable of working under pressure. This also applies vice versa.

**Questions:** 1) Would higher rating increase pay?

2) Would rating feature lead to more chore assignments?

**Priority:** Mid

**Time Estimate:** 2 Story Points

**Title:** Chore Presets Option When Creating A Chore

**Detail:** As a parent managing household chores, I would like the option to create chore presets to streamline the chore creation process. This feature will allow me to define standard chore templates with pre-set details such as chore name, category, frequency, and payment amount. By utilizing chore presets, I can save time and effort when assigning recurring tasks to my children, ensuring consistency and efficiency in chore management.

The chore presets option will be accessible during the chore creation process, providing a selection of predefined templates or the ability to create custom presets. Parents can easily customize these presets to suit their specific household needs and preferences, making chore assignment more convenient and adaptable.

**Questions:** 1) What default chore presets should be included, and can they be modified or deleted?

2) How will the system handle updates or changes to chore presets after they have been used in chore assignments?

3) Will there be an option to schedule recurring chores based on preset templates, and if so, what frequency options will be available?

**Priority:** Medium

**Time Estimate:** 4 Story Points

- Development tasks assigned in ITR1 (what exactly has been done by developers)

User Story	Development Tasks
Chore Edit and Deletion* Tester: (Ayan Saiyed)	<ol style="list-style-type: none"><li>1. Designing UI</li><li>2. Defining a "Chore" class</li><li>3. Storing each created chore in memory</li><li>4. Updating each chore upon edit/deletion</li></ol>
Registration and Login* Tester: (Ayan Saiyed) Developer: (Will)	<ol style="list-style-type: none"><li>1. Designing UI</li><li>2. Validating user input for username and password</li><li>3. Storing account logins</li></ol>
Chore Sorting Options* Tester: (Will)	<ol style="list-style-type: none"><li>1. Implementing a sorting algorithm</li><li>2. Data structure to be implemented</li></ol>
Proof of Completion* Tester: (Will)	<ol style="list-style-type: none"><li>1. Designing UI</li><li>2. Doing Event Logging</li><li>3. Dashboards/summary page of task after completion</li><li>4. Confirmation Page / Updated</li></ol>

Competition Algorithm Implementation* Tester: (Vrushank)	<ol style="list-style-type: none"> <li>1. Designing UI</li> <li>2. Designing a points algorithm with conditional statements</li> <li>3. Dashboard to showcase results</li> <li>4. Storing points / Updated frequently</li> <li>5. Comparison Structure for Siblings</li> </ol>
Secure Cash Depositing* Tester: (Vrushank)	<ol style="list-style-type: none"> <li>1. Designing UI</li> <li>2. Generating Excel Sheet / PDF</li> <li>3. Bank Statement Layout</li> </ol>
Database For Storing User Information* Tester: (Harmandeep Arneja)	<ol style="list-style-type: none"> <li>1. Database Setup using SQL</li> <li>2. Database designing to accommodate all user information (i.e. appropriate tables, fields)</li> <li>3. Establish Connection to database</li> <li>4. Unit and Integration Testing</li> </ol>
Restricted View of Competition Standings for Parental Control* Tester: Adam Raihan	<ol style="list-style-type: none"> <li>1. Competition Participation Tracking</li> <li>2. Design the database to record and store participation.</li> <li>3. Standings Display on UI</li> <li>4. User Access Control system to manage the view of both parent and child/</li> <li>5. Unit Testing</li> </ol>
Child Removal Feature for Parental Account Management* Tester: Nathen Binu	<ol style="list-style-type: none"> <li>1. Designing UI</li> <li>2. Modifying to add removal feature</li> <li>3. Database recording and storing</li> <li>4. Unit Testing</li> </ol>

- The time planned for the development tasks and detailed user stories and the actual time it took, in ITR1

Times originally allocated per development task / Actual time spent on each task (in story points) in ITR 1:

User Story	Development Tasks	Original Time	Actual Time
Chore Edit and Deletion	<ol style="list-style-type: none"> <li>1. Designing UI</li> <li>2. Defining a “Chore” class</li> <li>3. Storing each created chore in memory</li> <li>4. Updating each chore upon edit/deletion</li> </ol>	2	2
Registration and Login	<ol style="list-style-type: none"> <li>1. Designing UI</li> <li>2. Validating user input for username and password</li> <li>3. Storing account logins</li> </ol>	3	4
Chore Sorting Options	<ol style="list-style-type: none"> <li>1. Implementing a sorting algorithm</li> <li>2. Data structure to be implemented</li> </ol>	1	2

Proof of Completion	<ol style="list-style-type: none"> <li>1. Designing UI</li> <li>2. Doing Event Logging</li> <li>3. Dashboards/summary page of task after completion</li> <li>4. Confirmation Page / Updated</li> </ol>	3	2
Competition Algorithm	<ol style="list-style-type: none"> <li>1. Designing UI</li> <li>2. Designing a points algorithm with conditional statements</li> <li>3. Dashboard to showcase results</li> <li>4. Storing points / Updated frequently</li> <li>5. Comparison Structure for Siblings</li> </ol>	2	2
Excel Sheet	<ol style="list-style-type: none"> <li>1. Designing UI</li> <li>2. Generating Excel Sheet / PDF</li> <li>3. Bank Statement Layout</li> </ol>	4	3
Database For Storing User Information*	<ol style="list-style-type: none"> <li>1. Database Setup using SQL</li> <li>2. Database designing to accommodate all user information (i.e. appropriate tables, fields)</li> <li>3. Establish Connection to Database</li> <li>4. Unit and Integration Testing</li> </ol>	4	6
Restricted View of Competition Standings for Parental Control*-	<ol style="list-style-type: none"> <li>1. Competition Participation Tracking</li> <li>2. Design the database to record and store participation.</li> <li>3. Standings Display on UI</li> <li>4. User Access Control system to manage the view of both parent and child</li> <li>5. Unit Testing</li> </ol>	2-3	3
Child Removal Feature for Parental Account Management*	<ol style="list-style-type: none"> <li>1. Designing UI</li> <li>2. Modifying to add removal feature</li> <li>3. Database recording and storing</li> <li>4. Unit Testing</li> </ol>	2	2
Chore Count Feature	<ol style="list-style-type: none"> <li>1. Database Schema Update</li> <li>2. Frontend UI Integration</li> <li>3. Source Code</li> <li>4. Testing and Optimization</li> </ol>	1	1
Optional Priority Feature upon Chore Creation	<ol style="list-style-type: none"> <li>1. Creating dropdown menu on GUI</li> <li>2. Source Code</li> <li>3. Testing Code</li> </ol>	2	2
Chore History Feature	<ol style="list-style-type: none"> <li>1. Database Schema Update</li> <li>2. Frontend UI Integration</li> <li>3. Source Code</li> <li>4. Creating a colour based scheme</li> </ol>	3	5

	5. Testing and Optimization		
Parent GUI chore assign and removal	<ol style="list-style-type: none"> <li>1. Chore Removal Method</li> <li>2. Chore Assign Method</li> <li>3. Database Schema Update</li> <li>4. Testing and Optimization</li> </ol>	3	2
Payment Reminder for Completed Chores	<ol style="list-style-type: none"> <li>1. Creating a Count for completed and paid chores.</li> <li>2. Source Code</li> <li>3. UI Message Dialog upon Parent Login</li> <li>4. Testing and Optimization.</li> </ol>	2	1
Chore Description	<ol style="list-style-type: none"> <li>1. Database Schema Update</li> <li>2. UI Integration</li> <li>3. Testing and Optimization</li> </ol>	3	3
Chore Deadline	<ol style="list-style-type: none"> <li>1. Importing date and time library for GUI</li> <li>2. Not allowing invalid user input</li> <li>3. Source Code</li> <li>4. Storing in Database</li> <li>5. Testing and Optimization</li> </ol>	4	3
Chore Ratings	<ol style="list-style-type: none"> <li>1. Database Schema Update</li> <li>2. Frontend UI Integration</li> <li>3. Source Code</li> <li>4. During Payment Process (1-5)</li> <li>5. Testing and Optimization</li> </ol>	2	1
Chore Presets Option When Creating A Chore	<ol style="list-style-type: none"> <li>1. Source Code</li> <li>2. Frontend UI Integration (dropdown menu)</li> <li>3. Database Storing</li> <li>4. Testing and Optimization</li> </ol>	4	4