
Project Idea

Overview:

As a collective our group has decided to pursue the idea of an application that manages and organizes chores, tasks, and activities. It will be highly customizable and easy to manipulate, for any parent or guardian that wishes to stay on top of their child's day. The application will be introduced to children as a game which rewards them for doing their chores, tasks, and activities that their parent/guardians set. The app can also be used as a planner to further organize a child's week. A wide range of rewards such as, in game points, level ups and even real-life gifts (prepared and presented by parents/guardians) can be achieved with the completion of tasks, chores and activities.

Motivation:

Raising a child has been seen as one of, or if not the hardest tasks a parent or guardian will have to go through in their lifetime. Being the toughest job in the world it is hard to see, in this day and age how there isn't a popular parenting application. Our group has decided on making an app that works alongside parents to maintain and monitor a child's day including their chores, tasks, homework, and other certain activities that need to be completed. We believe parents have it hard, coordinating their own tasks and commitments as well as their children's. Helping with this dilemma will not only ensure a healthier relationship among parents and children, but also a less stressful and more organized life for parents/guardians.

Having children experience how to organize their life at a young age would benefit them drastically in the future. To motivate the children the application would be configured as a game instead of a simple planner. Incorporating games with chores and activities will help children stay engaged in what they are doing. Adding rewards will allow for children to feel a sense of accomplishment and reinforce the idea that what they are doing is not pointless. Parents/guardians will have an option of rewards that they can choose for specific chores, tasks, and activities.

The market for this application is wide and diverse. According to The Australian Institute of Family Studies (Facts and Figures, 2021) the number of single parents has tripled from 2013. With this rate expected to increase, it is hard to see why there isn't already a popular application that offers aid to these types of parents. The Australian Bureau of Statistics calculated in 2016 that there were 9.2 million families in Australia, with a predicted 13.2 million families within 2041 (Household and Family Projections, Australia, 2016 to 2041, 2021). With this exponential growth of new generation parents, it seems logical to offer aid in the form of a digital application.

Research into other applications that offers a similar feature list to the one we have proposed is evidently non-existent. Which can be seen as both good and bad. Most other applications are either a planner (e.g. The Cozie Chore App, S'moresUp Chores and Our Home Chores), or offer parents/guardians control over a child's pocket money for the chores they do (e.g. Kachinga Chore and Allowance and Greenlight Chore and Allowance). As there is no other application like the one we have in mind, there would be a level of risk involved as success with a new innovative idea is not guaranteed. But this can also be considered a benefit as we would offer more than just one function, making our application an allrounder with a planner, game, and a progress tracker.

Description (may change slightly during Assignment 3):

The main concept of the application is a 'mobile game that can be beaten by completing chores and maintaining habits' (Andrew Noorbergen 2021). With this in mind, different games will be introduced to the user from varying genres, that allows for progression with the completion of tasks such as chores. There will be a system where parents can contribute to their child's progression through the game by unlocking rewards, in-game currency, or health support, dependent on the child's behaviour and willingness to complete set tasks. More rewards can be introduced for good behaviour that goes beyond what the game asks for, such as brushing teeth and flossing (this will allow for good habit to be rewarded). Parents will be able to monitor the child's progression on daily/weekly tasks through a planner. This can be viewed as a timetable that is customized and created for each child who will play. The tasks and their times as well as rewards can be selected by the parents/guardians, which then is presented to the children when they are on an adventure within the game. After completing the task, the child can continue their journey with new earned rewards that parents/guardians have assigned for said task. There can also be a function that allows the child to dismiss the task, which can bring devastating consequences to the game. Penalties for not completing tasks can be assigned by parents/guardians. For example, they cannot allow the child to pass a certain level without completing the task, remove health or in game currency. The different games have not been chosen in this very early state of the application, but there is interest in RPG's (roll-playing-games) and adventure. A timer can be implemented, that will allow parents/guardians to pause the game after a period of time. Most parents will want to control how long their children will sit and play the game portion of the application. An extra function that can be added is the introduction of locked pages. These pages would only be accessible by parents, as they would contain critical application features such as, the assignment of rewards and creation of tasks and chores. This would be added so that children will not have the ability to collect rewards or cancel tasks without the knowledge of their parent or guardian. Once again, the parents will have control of how the application works for their child, and we believe that is important. Parents/guardians can use the application how they like. If they prefer to just use the planner then they can organize their child's week without the need for the child to play a game. The game is not necessary but is a main feature of our application, which we believe motivates children into doing chores.

As the main users of the application consist of younger and older people alike, it is vital that both ranges are met with a good user experience. This can be achieved through means of a streamlined navigation system, use of a tutorial at the start of the application and help guides within the settings menu. This will further assist the user to become more in-tune and comfortable with the program that they are using.

The program will be made so that parents and children will eventually use it in their daily life, so different updates that offer more features can be added through the lifespan of the application.

As mentioned before the program will have an intuitive User Interface, where users can easily switch between pages and see all necessary information. The text will be viewable from a reasonable distance, the colours displayed will be put together in a way that does not lower the usability of the app, and main links will be big enough to help users from different age groups navigate through the different functions.

Links

(The links may change, as this is the very early start of Assignment 3)

The different pages that will be within the application include:

Main page (main link)

There will be a main page, which houses links all the essential pages. These connect the user to the different functional aspects of the program. The main page will be easy to use with large tabs assigned to different pages of the application. To keep things user friendly, the main page will only contain the tabs with their designated links.

Planner (link one)

This page will contain the main calendar that helps parents assign and monitor tasks. From this page parents/guardians will also be able to attach rewards to their desired task. The planner can be used as a normal calendar to organize a child's activities like extracurricular activities and schoolwork. This page would only be accessible by parents as it contains critical application functions.

Game (link two)

This is where the actual game and its assets will be located. There will be an addition page that will allow children to continue with their game and progress through their tasks.

Rewards (link three)

This link will house the rewards page, which will show all the rewards earned and from which task they were collected from. The rewards that can be selected can vary, depending on the task and what reward the parent/guardian is willing to give.

Rewards that can be assigned to tasks include (additions and changes to the rewards system will evolved throughout Assignment 3):

- **Extra points:** This allows the child's character to level up faster and climb through the ranks, unlocking new levels and different adventure paths. This type of reward will be valuable as it offers players a chance to discover new aspects of their game.
- **Increased health:** This will give the opportunity to players to use extra health during boss fights or when they are close to dying within the game. This will be a temporary boost that cannot be

used repeatedly. A way these can be implemented is through the completion of tasks and good behaviour rewards.

- **In game currency:** This will allow players to buy items as they build up enough in game money. They can be used to buy different abilities, outfits, and other items the game has to offer.
- **Rescues:** This will allow players to gain help from a computer-generated player, who will help them through their journey. This will reinforce the idea of teamwork with children, enabling them to work together to achieve a common goal.
- **Extra time:** This reward will enable players to keep playing a little more past the game timer that parents might have set. An addition 5 – 15 mins can be collected to keep exploring or defeat an enemy.
- **Abilities:** This reward can be used to gain special powers that can help players to defeat enemies or explore wider areas. The abilities can only be used one at a time and wears off over a period of time.

Tool and Technologies:

Several different software's and technologies can be incorporated into the design and use of this application.

Firstly, the brainstorming phase of the application will need a simple diagram tool. This would be to section out the pages and create site maps for each. Site maps will ensure the pages are set as we want them, so when the application goes through the development phase the team will have a clear understanding of what it is meant to look like.

Tools that we can use to create site maps include:

- Draw.io
- Lucidchart
- OmniGraffle

To build the application from the ground up a more versatile tool is needed, as it would give us the freedom to make and configure anything we wanted. Another aspect that needs to be realized when choosing a tool is whether it is cross-platform compatible. This will allow users from different phones and operating systems to use our application. As some applications are only supported on a native mobile development tool, it might be hard to reach our goal of helping as many parents and guardians as possible. Having a tool that is also easy and accessible to use is important, as it will allow members of the development team to change certain aspects and fine tune the application to how we want it. To start off and make some prototypes, Eclipse IDE would be sufficient.

Tools that we can use to create the application include:

- Xamarin

- Adobe PhoneGap
- Ionic
- MobiLoud

Technologies that will need to be used to implement the application will include:

A computer (including keyboard and mouse): Preferably a 64bit windows machine, capable of storing tools, application files and programs. Have sufficient ram to help with development of application. Network interface card, capable of connecting to networks (so assets can be taken from the internet).

Monitor: To view application and change code within tools.

Mobile Phone (smartphone): Both android and IOS variants, to test the cross-platform performance. Also, to test for formatting issues with user interface (placement of buttons, icons and functions). These two phones will be used as test machines to go through all the features that the application offers.

Technologies that will need to be used to use the application will include:

Mobile Phone (smartphone): Any vitiation of phone either iPhone or android can be used to access this application.

Skills Required:

What we are learning in our courses should allow us to use most of the tools and technologies mentioned above.

Good knowledge navigating through a computer: Must understand how to save, find, use and manipulate data within a system. A computer is where the application will be made. Understating how correct naming conventions and saving techniques is a basic requirement. This We believe everyone in the group has. Through years of interest int eh I.T field and exploring our own computers and systems.

Knowledge on how to use diagram tools: during the brainstorming process, it is important that all the site maps and other key elements are planned out on a diagram. Having knowable on how to use these tools is important. This again is a skill that we all believe already have, some of us have done similar projects int eh past and have grown custom to diagram tools.

Knowledge on mobile application development tools: This is by far the most important trait as this is where the whole program will be made. Having sufficient knowledge on how an application development tool works will enable us to make a wholesome and fine-tuned program. To gain this skill there are many tutorials and help online, that allow us to go in with the knowledge we already have and create our project. As some of us are studying the programming course it would be easier to understand the terms and expressions used within developer tools.

Outcome:

The outcome of this project will result in a mobile application that will change the lives of parents/guardians that use it. As they live busy lives taking care of their own lives as well as their children's, this app will fill a gap that will enable busy people like this to take some time to relax. With personal experience we all know that parents want to stay on top of what their children are doing and introducing an application that does that for them will be considered revolutionary.

As we are living in the age of technology people are getting more and more comfortable with different technological advances happening every day, now is the best time to create a management app that is tailored to parents/guardians and their children. As now it is considered a norm to manage your life using an application, where now we learn and teach through technology to make up our minds. Technology is changing everyone's life in a personalized and unique way.

This application will reinforce this idea, as it will help many people and their families get through one day at a time.

References:

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