



My Important Things App

Cardiff University, School of Computer Science and
Informatics CM3203 – One Semester Individual Project
Initial Plan

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Project Description

Children in the foster care process are often declared 'wards of the state' where all the parental responsibility has been passed from direct family members to the local authorities. Looked after children are those who are removed from their homes and separated from their families due to an unsafe home environment.

Cardiff Council Children's Services in partnership with UNICEF are keen to develop an application that allows children/young people in foster care to track important information regarding health appointments, education meetings and have a safe place to keep personal effects such as birthday cards and family photos. When in foster care, it is not uncommon to bounce from house to house, changing families, carers and this lack of stability does not help when trying to keep your life organised and all your information up to date, it may become very difficult to find out when your last dentist check-up or eye-test was and any other relevant medical data. On top of this, without anywhere safe and permanent to store personal items like family letters and photos. All of these issues could be resolved using an online application that allows for storing personal information and items regarding the young people in foster care.

Having spoken with Children's Services Wales it is clear that in the current environment there is no platform or centralised method for maintaining and storing relevant data for foster children whilst they are in care. Although a certain family or carer might keep information, it is rare this is passed on entirely, if at all and results in the need to chase up doctors and find lost data. In order to combat this, I have been tasked with creating an application that will be available online (via a website, with future options for a mobile app), that will act as a central hub for information regarding the children in question. This application will be the driving idea during my project build, with the aim to have a working prototype with the main elements functional and secure to allow Children's Services to see what could be a potential option to resolving the ongoing issues they face.

If the issue continues unresolved, then the mismanagement of foster children will simply continue, and with more than 50,000 children in foster households (as reported by Ofsted in November of 2020) it is incredibly important to try and address the issues they face. If we go on as we are now, then the people in care will remain struggling to organise their lives, potentially skip vital vaccinations, check-ups and lose memories of their loved ones and lives so far. Children's Services expects the application to be of great use both to the children themselves, but also the carers and families of those involved. With hopes to be able to better manage to coordinate all known information, the process of changing household will no longer be a daunting and complicated task risking the loss of information.

Throughout this project I will be in close contact with Children's Services as well as a group of young people in foster care and some who have just left the foster system. This will aid me in designing functionality directly for the needs of those who will be using the system and allow me to test ideas and prototypes with real-world experience. Also due to the need to be working with young-people for research purposes I will be undertaking the Cardiff University Research Ethics Training before any research collection begins.

Project Aims and Objectives

The final goal for this project is to have a built prototype with working functionality on the main aspects of the platform that will allow users to store personal details and items, as well as manage their lives through some form of calendar/reminder that will keep track of all relevant information. The hope is that the finished prototype build if approved can be taken further and developed to completion with help from Children's Services so that it can be put into action for the thousands of people in foster care in Wales, but also with the potential to be used further within the rest of the United Kingdom. Improving the lives of those in foster care is the main objective of this project and it is important to remember that such a project can help so many lives.

In order to reach my final objective, I will need to first accomplish the following tasks and milestones to reach the finished product:

- ❖ Complete the Cardiff University Research Ethics Training course and pass all necessary tests to receive the certificate of approval.
- ❖ Choose an appropriate method/language to complete the project in, bearing in mind that it is a web-development project and will need to be accessed online.
- ❖ Undertake research collection through meeting with foster carers and young people in the foster care system, use this time to brainstorm ideas and discuss existing systems in use that aim to solve the problem at hand.
- ❖ Create a wireframe design for the website in order to get a better understanding of how the application will flow and be used by a user on a day-to-day basis.
- ❖ Build the front-end of the website with intuitive UI and ease of use in mind for younger people.
- ❖ Build a secure and efficient back-end that will keep all information safe inside a database.
- ❖ Have a working secure document "wallet" for private information and "memory box" for personal memories.
- ❖ Discuss progress with trial group and make amends as they see fit.
- ❖ Trial the application with a small test group using test data to make sure everyone is satisfied with the product.
- ❖ Begin to look at how the application could become an app for mobile users.
- ❖ Review what has been created and discuss what would need to be worked on going forward with the project.

Work plan

Throughout the project I will be attending meetings with my supervisor every week, on top of this I will be in regular contact and attending meetings with Children's Services Wales as well as a group of young people in the foster care program. With all of this beginning the week of the 1st of February 2021.

With the risk of COVID-19 and other delays, where weekly progress checks are disrupted, these will be rescheduled for as close a date as possible. Below is a week by week work plan for the entire project timeline starting from the 1st of February all the way through to the final report hand-in in May.

Date	Deliverables	Documentation	Milestones
Feb 1 - Feb 2	Complete Research Ethics training program.	Receive my training certificate for ethics.	Submit my certificate to supervisor.
Feb 8 – Feb 21	Application/Methodology Research for project.	Set-up of chosen language/program. Write up of approach.	Decision made for application methodology.
Feb 22	Initial Research collection from Children's Services meeting.	Notes from discussion regarding key elements and functions required.	A final list of key functions and project targets in mind.
Feb 19 – Feb 27	Wireframe design for project UI and flow	Wireframe notes and prototypes	Discuss and finalise a single wireframe from user input.
Feb 27 – Mar 19	Front-end design with final wireframe design	Write up of the front-end code for visual aspects of project.	Completion of initial front-end design for review with test group.
March 20 – April 20	Back-end coding with database setup.	Write up of back-end code and database design.	Database tests working as expected. And website secure and functional with main functions listed earlier from research.
Mar 24 – Mar 27	Meet with test group.	Write up of alterations to be made to front-end	Final set of alterations noted and ready for implementation.
Mar 27 – Mar 29	Alter front-end from meeting with group.	Final changes made to the front-end	Front-end complete.
Apr 10 – Apr 20	Security Testing and debugging.	Document of security tests and functionality debug testing	Passes all pre-written tests. No major bugs found.
Apr 20 – Apr 27	Prototype testing with test group for final thoughts.	Notes and discussion of all final amends to be made.	Finalisation of the application to be finished.
Apr 25 – May 5	Final Meeting with Children's Services to discuss project prototype and features.	Presentation of the finished prototype and discussion of potential future changes.	Project is shown to Children's Services.
Apr 28 – May 15	Final Report written up.	Report covers all research, design and build process for the entire project.	Final report submitted.

The project will be following the waterfall methodology of work, with each element of my timeline flowing through into the next with some overlap. By setting tasks and milestones throughout I should be able to best manage my time and reach each milestone within the given timeframe thanks to this method which will also work well when I am only one person and will be creating the entire application on my own.

Risk Plan

Risk	Description	Impact on project (1-5, low-high)	Probability (1-5, low-high)	Mitigation Response
COVID-19	With the ongoing coronavirus pandemic, there is a chance that myself or a member of childrens services/supervisor will catch the disease which will halt progress or delay meetings.	3	2	Personal safety through following government guidelines. When working with other groups however I have to hope they follow the same safety procedures.
Loss of Data	The project will result in a great deal of code and data being stored on a single device for working on. Potential loss of work through mis-management, accidents etc.	4	1	Storing backups of vital code, and backing up the project at certain milestones so I can never fall too far behind in the case of an accident.
Insufficient time	When working with new technologies and methodology. It could be easy to run out of time trying to both learn and implement new work.	2	2	I won't be using resources/methodologies that I feel will be too complicated to quickly learn or lack a great deal of available documentation.
Ethical Restrictions	When working with young people and collecting research I may be faced with certain aspects restricted by the ethics of the project.	3	1	Avoiding ethical grey areas for research collection. Ensuring I am well-versed in what I can and can't ask, collect during research.
Personal Circumstances /Illness	Alongside covid, there is also other illness or personal circumstances for both myself and those whom I will be working with. May result in delays and setbacks.	2	3	Not a lot I can do to avoid myself or others getting ill or having personal issues. But managing time and rescheduling around anything as best I can to

				sort my time most efficiently.
Insufficient Data during research	The lack of participants or interest in the project from the Children's Services test group results in little to no help going forward with developing the project.	2	1	Ensuring that my lines of questioning and participation is inciteful and engaging for those who are partaking in research/discussion groups. Aim to collect as much information as possible.
Online Hosting	Not being able to find a way to host the application online either for free or cheap whilst working without a budget.	2	3	Plan to develop the application locally to avoid worrying about online hosting until a more complete stage. Speak with the university regarding potential hosting services and cheap options for testing in an online environment.
Lack of support from Children's Services	Children's services fail to respond to emails or ignore my questions and meeting requests.	3	1	Secure support and chase up help where I feel I am being left out or ignored.