6COSC006W – Final Year Project Report

Providing a better family experience on social media with my website:

Together

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**Supervisor:** Supervisor Name

This report is submitted in partial fulfillment of the requirements for the BSc (Hons) Computer Science Degree at the University of Westminster.

School of Computing & Engineering

University of Westminster

Date

# Declaration

This report has been prepared based on my own work. Where other published and unpublished source materials have been used, these have been acknowledged in references.

Word Count:

Student Name: Kayne Taylor

Date of Submission:

# Abstract

*500* words

Summarise here the problem statement, your aims (how you propose to solve the problem). Provide a brief description of the methodology, main results and observations.

* Many social media websites offer family functions but they are not used often .
* Users mainy use the websites as just personal accounts <https://www.omnicoreagency.com/facebook-statistics/>
* Most of these statistics are from user accounts and the family statistics are not shown
* Most traditional families are very careful with social media websites , mainly because of being not familiar and overwhelmed with technology.
* <https://macleighob.wordpress.com/social-media-and-its-impact-on-families/>
* <https://www.ucl.ac.uk/why-we-post/discoveries/1-social-media-is-not-making-us-more-individualistic/>
* My website is mainly to target families who have this issue with social media
* My website will be clear on privacy , and be easy to use.
* I will create an safe environment where parents feel in control and confident using a social media platform
* My website will give the Parents/Guardian control over what information is public and private .
* Just like Facebook’s family function I will use this and the base of my website
* Users will also be able to socialise with other Families on the website and attend events.
* My website will also have a premium feature which gives full access to the site
* Transfer money /send funds , money to reletives. No fees.

# Acknowledgements

Thank those you wish to.

# Table of contents

Provide a table of contents, linking Sections and Subsections to page numbers. If you can, hyperlink the page numbers/sections.

# List of figures

Provide a list of figures, linking figure numbers to page numbers. If you can, hyperlink the page numbers/figures.

# 1. Introduction

Include the problem statement, project aim and objectives.

## 1.1 Problem statement

*500* words

Explain background to the problem you intend to solve and the need for the software/application. Use illustrations, diagrams, figures, if needed.

Social media is moving at a fast pace, one example of this is Facebook. Facebook has around 2.5 billion monthly active users[1] One of the main reoccurring problems of this is the effect social media has on both modern families and traditional families. During my research I have found that the worlds leading social media platforms; Facebook, Twitter, Instagram and Snapchat , only Facebook has a family feature.

Facebook’s family feature allows the user to add a family member and choose a relationship to add to your personal profile. The issue with this is most modern popular social media networks excluding Facebook do not have a feature like this. The reason this is an issue is because social media creates a divide in a family, this is shown in a research done by ofcom, which examines children’s media literacy. What this report shows is that in ages 8-11 18% have a social media profile and then ages 12-15 69% have a social media profile and the average time for both age groups going online is around 10hours a week. This is a problem because another research done by pewresearch[3] shows that 75% of parents use Facebook actively , this means that with facebook parents are more confident with using the platform therefore finding it easier to monitor their children using the platform , however research shows that 55% of children use snapchat and 42% of kids use TikTok[4]. This shows that these social media platforms are mainly aimed at the younger generation , and parents who do not use these social media platforms are less confident and cannot engage with their kids. Causing less time a family can spend together.

The challenges I face with my website is making my website look appealing to both younger generation children and to parents , as there are so many different social media platforms which people have already used ,built their profile, found friends joined communities and groups and are overall comfortable . With my website I will have to be complaint with the GDPR and Privacy laws any violation with personal data can lead to very serious consequences .

With my website I will have to make the family features look appealing to parents while also not trying to replace the current social media platforms that exist today. The family features of Facebook are very limited and are not engaging and promoting spending time with the family, this is often left to the parents to decide off the platform. But as the growing usage of social media I feel this is a market that has not been focused on , the market has been more focused on either individual profiles or business organisations.

* As stated in abstract many online users of social media use personal accounts and rarely use the family functions.
* My website is based mainly on functions and aims to bring the benefits of family based social media
* Many traditional families are not confident in using social media ,or do not use it to its full potential
* They often are worried that their children are too exposed on the internet and often limit their childrens use of it.
* Most modern social media eg. Instagram, Snapchat, Tik tok do not have any family functions but are very popular applications
* Most parents do not know how to monitor or limit their children’s social media accounts therefore being against social media
* This leaves a market open for a family based social media platform.

## 1.2 Aim and Objectives

*300 words*

The **aim(s)** describe, in a few sentences, the overarching purpose(s)/intention(s) of the software/application. What is the point of developing the software/application and what you wish to achieve.

The aim of this project is to create a family based social networking site ,where it requires families to engage in family activities and the ability to post and share their experiences across or within families.

This website will allow Users to create an account and add family members to their family , start or sign up for events

The website with have a sharing page / timeline feature which will let families share, like and comment on pictures from events

On the Users profile there will be options to make their profile private or public, this is to give Users control over what is seen on the website and gives personal space.

I will have a subscription plan for premium members , who will then be allowed to host events and attend premium events.

Premium events are funded by the premium subscription also premium members only have to have one subscription per family.

* The aim of this project is to target the family side of social media ,
* I want to increase Family usage on the website therefore giving Parents the confidence they need and may take onto other social media website
* My site will have a signup function to create an account , and also have a function to add users to a family,
* It will also have a function to have a private profile , private pictures
* My website will have a free membership which is automatically given after sign up and a premium membership
* Premium membership gives full access to all website features, posting on events page attending events , ability to send and donate money between family members of the site , and also priority in events and support requests.
* Users will be able to post pictures of events comment under them , users will be able to keep a private picture album only accessible to family members

**Objectives** describe with some detail the individual steps you will take to achieve your aim(s).

The proposed project will provide a social network platform made to increase engagement between families. I will create a system that is easy to use, secure and visually appealing. I first need to create a fully functional website and design it using html & CSS. Then I will create a database linking to my website where users can create and customise their profile page.

I will then test the webpage using Members of my family and some of my peers to gain feedback to see areas where my website can be improved.

I will also make sure my website is secure and not vulnerable from cyber attacks as ill be dealing with customers personal data.

# 2. Background

Include a literature survey in the research topic, discuss existing similar or relevant applications to yours and the result of a review of tools and techniques that are used to tackle projects similar to yours.

## 2.1 Literature survey

*800* *words*

Describe initial results of a literature survey on research topics related to your project subject. Use relevant books, published research articles as well as Internet content for the purpose.

<https://www.researchgate.net/publication/319660384_Social_Media_a_literature_review>

## 2.2 Review of projects / applications

*800 words*

Describe your background research on existing projects/software/applications relevant to yours, their advantages and disadvantages. Use illustrations, diagrams, screenshots for the purpose.

Produce a **Table of Features** this section, comparing the main features of the above projects/software/applications and the one you are currently building.

During my research I found Facebook as the most relevant social media platform to mine. This is because of the group function. The Facebook group function allows users to post content such as media, links, news, questions and allows you to comment. The group function allows users to come together online to either discuss and share specific subjects or to just have a private feed timeline. There are two types of settings in Facebook groups ,first one is:

* “Open”  means both the group, its members and their comments are visible to the public (which includes non-members) but they cannot interact without joining. [5]
* "Secret" means that nothing can be viewed by the public unless a member specifically invites another user to join the group.[5]

This relates to my website because my family function will work similar way as Facebook groups work.

Facebook Events is the second feature which is currently active . Facebook events is a feature which allows members to let friends know about upcoming events in their community , this can be also used to organize social gatherings.[6] The way Facebook has made this application work is that Events can be either Public or Private , Private events are invite only and will not show up on any searches and can only be accessed by and invite or link. The way Facebook Events work is it uses [hCalendar microformat](https://en.wikipedia.org/wiki/HCalendar) to mark up events, and the [hCard microformat](https://en.wikipedia.org/wiki/HCard" \o "HCard) for the events' venues, enabling the extraction of details to users' own calendar or mapping applications.[5]

hCalendar is used by Facebook, Google and Yahoo.

The Instagram feature I will be using is the scroll page

Facebook groups functions

<https://en.wikipedia.org/wiki/List_of_Facebook_features#Groups>[5]

<https://www.facebook.com/help/220336891328465>[6]

I will base the Facebook groups function as my family function, some Family groups will be private only showing the Parent or Gaurdian and others will be public allowing users to see photos and contact information

Disadvantages of this include users can add a non family member as family , but this action can only be done by the parent account

Facebook private profile

Advantages of how this works it provides a layer of privacy for the user or the users Family group, as they can control what information can be seen.

Disadvantages of this a user might want to see how the profile Can be set up or look for tips how the want their profile to look like , which they wont be able too because it is private/hidden

Membership features , modern social media website do not have subscription features as they mainly rely on advertisement , so features on my website for premium users they will get an adfree experience ,ability to donate or send money in or between family groups and ability to post events on the events page ,host events and have access to the full family account controls.

Scrolling is a technique I will use on my website as users will be able to scroll through content on the events page. Scrolling is the sliding movement of images, video or text across a display screen either vertically or horizontally.[6] This will make navigation of my events page more user friendly. Scrolling can take place without user interaction just like in movie credits but for the purpose of my website the scrolling will only take place when a user is actively on the page and interacting. One disadvantage of this is while a text or image is being displayed by scrolling the frame rate is affected. This is a disadvantage because if the frame rate is low on a webpage the images can become very pixelated and distorted therefore ruining the user experience. A way to over come this is using smooth scrolling, this is the process an image being blurred during the movement (scrolling) , removing the images that would seem to jump and look distorted.[8]This feature is now supported by most modern apps and internet browsers.

Tables of features apps to compare : groups , timeline , membership, comment, like ,post pictures

Facebook

Instagram

Twitter

Together

## 2.3 Review of tools and techniques

*800* words

Describe results of a survey on relevant tools, programming languages and environments, libraries. List their advantages and disadvantages. Use illustrations, diagrams, screen-shots for the purpose.

-html website building and features

-css website design

- java -coding of functualites of website

-php- payment services

-mySQL database – to store account data ,ability to post pictures on a thread , ability to see previous pictures in events

# 3. Requirements

Introduce the project stakeholders, the methods for the elicitation of the project requirements, how you model your requirements and relevant diagrams. Finally discuss legal, ethical, social, professional and security issues associated with your research and the software/application you are building.

## 3.1 Stakeholders

*100 words*

Describe people and, if relevant, organisations who will be using, maintaining, or/and will be affected by your software/application.

## 3.2 Gathering requirements

*600 words*

Describe the techniques/procedures you used for gathering requirements (other than the exploration of existing applications, listed in Section 2). Results will be summarised in this section (use graphs, if necessary).

Notes: Detailed results/raw data from the process of gathering requirements will be included in an Appendix in the Final Project Report.

## 3.3 Modelling requirements and relevant diagrams

*600 words + diagrams*

CS & SE (use formal analysis, design, and final code representation, plus any diagram that assists understanding)

DMD (use formal analysis, design, and final code representation, plus any diagram that assists understanding). Below is a list of diagrams that could be included:

* Context diagram
* Stakeholders and their goals
* Use Cases
* Personas
* Flow charts (depending on the project)

BIS

* SWOT – PEST - CSF
* Context diagram
* Use case modelling - Use case diagrams and use case descriptions
* Activity modelling – Actions and activity diagrams
* Class modelling – classes, attributes, class diagrams
* Entity relationship diagrams

Games (use formal analysis, design, and final code representation, plus any diagram that assists understanding). Below is a list of diagrams that could be included:

* Context diagram
* Stakeholders and their goals
* Development Stage Diagram
* Use Cases/control Diagrams
* Activity diagrams / GUI diagrams
* Level Design Analysis

## 3.4 List of project requirements

*100 words*

List (or create a able with) Functional and Non-Functional requirements of the software/application and classify them in “Essential”, “Desirable” and “Luxury”.

- Essential, sign in or create account, view profile, select private profile or public profile, add user to family , purchase membership, event list past and present see old photos, sign out.

- Desirable ,search for member function,add invite link to profile ,send and donate money between Family groups, have a chat room to chat privately,

Luxury, good page design , picture slides, events thread is endless.

## 3.5 Legal, social and ethical issues

*200 words*

Consider any legal, ethical, social, professional and security issues associated with your research and the software/application you are building.

<https://www.iasbook.com/social-media-ethics-ethical-issues-that-social-media-faces-today/>

<https://www.asha.org/Practice/ethics/Ethical-Use-of-Social-Media/>

<https://www.b2bnn.com/2017/05/legal-issues-social-media/>

# 4. Methodology

Describe fully the methodologies, processes and development techniques you followed to assist the design and development of the software/application.

*700 Words*

CS & SE (use appropriate methodology for project. e.g. UX, UI, unit testing for typical client-server applications, white box for algorithmic and mission critical code etc. Use prototypes with outputs every 2-3 weeks where appropriate.)

DMD - use appropriate methodology for digital media projects e.g. discuss how software development methodologies like the ones in the following list best suit the project and why:

* Waterfall
* Spiral
* Rapid Application Development (RAD)
* Agile Software Development
* Crystal Methods
* Dynamic Systems Development Model (DSDM)
* Extreme Programming (XP)
* Feature Driven Development (FDD)
* Joint Application Development (JAD)
* Lean Development (LD)

for example:

* Multimedia Development (flowcharting, menu maps, data flow diagrams – storyboarding – prototyping – assets development)
* Web based application development (requirements – architecture envisioning – prototype development and acceptance – resource procurement and contract negotiation – feature driven development – SCRUM (delivery sets are the prioritized feature/task list producted in a sprint) – evolution process
* Mobile development approaches – Web app – Native – Hybrid (inception, design (UX, UI, development, stabilization (prototype, alpha, beta, release), deployment)
* Game development (initiation, pre-production, production, testing, beta, and release)

BIS

* Development approach- structured / object oriented etc.
* Agile / traditional; describe the chosen methodology and the reasons (merits) of the chosen methodology.
* Describe how/if hybrid methodology is used. i.e. which techniques and/or processes are used from which methodology and why.

Games (use appropriate methodology for project. e.g. UX, UI, unit testing for typical client-server applications, white box for algorithmic and mission critical code etc. Use thow-away prototypes with outputs every 2-3 weeks where appropriate including Camera-view outfits.)

Provide clear representation of the SDLC selected methodology

Development Stage Diagram with clear indicators of testing over Alpha- beta and gold edition releases of the prototype

# 5. Design

Describe design issues related to your software/application, discuss how the proposed project design will be implemented and the tools you will be using for doing so.

*700 Words*

Discuss in some detail issues relating to:

* User Interface
* Infrastructure
* Functionality
* Algorithm development (if applicable)
* Content creation
* Other

Discuss how these address the project requirements.

CS & SE (use appropriate design methods for project e.g. make use of activity/state diagrams for complex algorithms and workflows, use UI design methodology and heuristics for predominately UX based projects)

DMD (use appropriate design methods for project e.g. make use of Flowcharting, menu maps, data flow diagrams – storyboarding – prototyping – assets development)

BIS

Developing a business strategy to solve a business problems – business process mapping – SWOT – PEST – Business models etc.

Systems design to include ‘current system’ and proposed ‘new’ systems

The techniques used will vary according to the methodology chosen.

Example – for traditional methodology - Data Flow diagrams, ER diagrams etc can be used

for agile – user stories, estimation techniques, acceptance test etc. are required

Prototypes used/developed

Games use appropriate design methods for project e.g. make use of activity/state transition diagrams for complex algorithms and workflows, use UI design methodology and heuristics for predominately UX based projects, storyboarding level designs (Walkthrough)

# 6. Tools and implementation

## 6.1 Tools

*300 words*

Describe the tools (programming environments & languages, libraries,) you used for the development of your application. Justify your choices.

State acquired or/and new skills you employ.

## 6.2 Implementation

*2200 words*

Explain implementation of main code for key functions, indicate any novel code clearly and code that is adopted/adapted and the original sources.

# 7. Testing

## 7.1 Functional testing

*800 words*

Discuss black box or/and white box testing.

## 7.2 User testing

*700 words*

Discuss how you obtained used feedback, using expert and non-expert users.

# 8. Conclusions and reflections

*1000 words*

Include conclusions and reflections (strengths and weaknesses) on the resulting application, acquisition of any new knowledge and skills and further work to improve its workings.

# 9. References

Include a list of cited in your text items (books, papers, websites, etc.). Use Harvard style for the purpose, or any other preferred standard referencing style.

# 10. Bibliography

Include here a list of general reading items (books, papers, websites, etc.). List the items in alphabetical order, using Harvard style to describe them.

6. <https://www.techopedia.com/definition/5469/scrolling>
7. <https://appuals.com/what-is-smooth-scrolling-and-how-to-enable-disable-it/>

# Appendix I

Provide additional material, if appropriate, in separate appendices.

Do not include the entire code in print.