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## Contents

<u>Project Title.....</u>	<u>3</u>
<u>Project Description.....</u>	<u>3</u>
<u>Project Aims and Objectives.....</u>	<u>4</u>
<u>Interim Report.....</u>	<u>4</u>
<u>Introduction.....</u>	<u>4</u>
<u>Background.....</u>	<u>4</u>
<u>Approach:.....</u>	<u>5</u>
<u>Conclusion:.....</u>	<u>5</u>
<u>Final Report:.....</u>	<u>5</u>
<u>Introduction:.....</u>	<u>5</u>
<u>Design and Implementation:.....</u>	<u>5</u>
<u>Results:.....</u>	<u>6</u>
<u>Evaluation:.....</u>	<u>6</u>
<u>Future Development:.....</u>	<u>6</u>
<u>Evaluation of learning:.....</u>	<u>6</u>
<u>Work Plan.....</u>	<u>7</u>

### **Project Title**

The name of my final year project is "Online Booking System for After-School Childcare". This title was thought up by my supervisor David Walker.

### **Project Description**

My project is an online booking system that will be suitable for people such as parents and teachers in primary and secondary schools, all features that will be in the system are perfectly suitable and apply to both schools. The intended use of the system is for parents of students in schools to sign their children up for extracurricular activities. To create this system I will be using different programming environments to achieve a fully function working system that is worthy of its intended use. To achieve this goal I will be applying my knowledge of PHP and MySQL along with other web technologies to create this system of excellence.

The system will have four different user types which are Administrators, Instructors/Coaches and Parents/Guardians and of course the students. The Administrators will be able to setup and remove any afterschool activities, this involves setting and editing dates of activities, the capacity of the students that can attend the activity, the name of the activity instructor and finally location. The next user type which is Instructors will be able to view who is signed up to activities that at the time will be available also, be able to indicate who attended which will be similar to taking a register and finally add notes on the students such as allergies, medical conditions, injuries etc. Parents will be able to register to the system giving them the choice to register their children to activities and check that they attended also. Other than this they can print out the timetable and there will be further options for payment too. The final user type are the students, they won't have this much flexibility allocated to them, the control they will have over the system will be mainly read only meaning that they can see what exactly they are signed up for and when. What I have described above was proposed by my project supervisor, here are some ideas that I am hoping to implement to the system. In the system I will implement a simple instant message service so that people can contact each other via the system and also a desktop style interface using the new HTML 5.

The whole idea of having all of these ideas and features integrated into one system is for convenience, which is the motivation of this project, this means no more "signup sheets" that are loosely scattered across school corridors, this system will be more reliable and safe.

### **Project Aims and Objectives**

Whilst undertaking this project there are achievements that I wish to accomplish when going through the different areas of the project. Here are some aims and objectives I aim to accomplish:

- I aim to carefully plan every approach that I take with this project, this includes mostly when it comes to the implementation.
- All ideas on my behalf are fully implemented
- To create a fully functioning system worthy of any school
- To implement a login system for the users
- A messaging service for the different user groups to keep in contact
- Administrators will add/edit/remove activities
- Instructors will view attendance and add additional notes.
- Parents will register their children to the system and sign them up
- There will be payment system
- To extend my knowledge in web based languages such as HTML, CSS, XML, PHP, MySQL.
- To stick to the realistic deadlines that I set and meet each of them without fail.
- By carrying out such a large project by myself I aim to be an excellent time keeper with my project, this includes deadlines for work, attending meetings and managing my time whilst studying other subjects at University.
- Academically I aim to achieve a first class grade in my final year project.

Once I have completed the initial report for this project I will be undertaking an Interim Report and then a Final Report. I will now outline briefly what each of the reports will contain.

### **Interim Report**

#### **Introduction**

In the introduction for my interim project will basically consist of a more detailed project description from my initial report.

#### **Background**

One of the main areas of this report will consist of background research not only into the coding languages I will be using but also into the project itself, to see if anyone has previously developed any sort of system like it. By carrying out research like this it will enable me to possibly head up issues with compatibility between coding languages and also stop me from making any serious mistakes that other system developers have made.

As it has already been outlined that I am to use PHP and MySQL for the main implementation of the system in regards to coding languages I will only be looking for a secondary language to support the system by adding extra functions not for the skeleton of the system.

*Programming Languages* – Research into compatibility between PHP and other languages to see which ones you can use to add extra formatting and functionality etc.. to the system.

*Other Booking Systems* – Although I will be looking at the functionality of other booking systems such as how the data is entered on to the system and possibly try to access the source code for some of the systems if its open source, I will mainly be looking at the human interaction properties of the system. Some of the HCI properties of the system that I will be looking at will include the language used (as it needs to be understandable for adults and children), the layout and structure of the data entry (drop down boxes or open forms) and also the overall appearance of the system. However, I will be making sure I am not copying any features or designs that I see, this is to help inspire me and give me potential ideas on how to do things by myself, I want to make this system completely my own and like no other.

*Interviews* – I have some contacts from my old primary school that I have kept in contact with over the years, I will be talking to them about potential features that I could add to my system and present them with my ideas to gather opinions on whether they think they are flawed or not really appropriate. This will then give me another view point on what is really going to be important to have inside the system. By doing the user study for my system, I will be able to take my project above and beyond the average online booking system.

#### **Approach:**

In the approach section of my Interim report I will include what I will deliver before the end of the semester. By this stage I would have developed a basic online booking system as a prototype, excluding the advanced functionality that I will add later on. Alongside the prototype I will deliver a specification that describes the current state of the system and how I plan to improve it further within the next phase of my project.

At this stage of the project I will also have created a refined list of requirements for the system which will include the original specified requirements from my supervisor with added functionalities that I feel would improve the system. I will also describe how I've achieved the development of the prototype, if any problems have arisen and how I fixed them.

#### **Conclusion:**

Within the conclusion I will summarise my work so far, critically evaluate my progress and determine specific goals to meet within the next phase of the development.

#### **Final Report:**

##### **Introduction:**

In the first part of my final report I will include an introduction that is a continuation of what I would have written inside the interim report along with a more detailed project description as by this point the project would have progressed or moved into a slightly different direction also if I have any new ideas and plans these will also be incorporated into that too. Also, in the time that this current report is finished and the final report is started I may need to do extra background research if needs be which

would also be included here too.

### **Design and Implementation:**

In this section of the report I will explain why I chose to design and implement parts of the system the way I did. This will very most likely be done with some kind of HCI evaluation along with UML and use cases to name but a few. I will also include a non-technical description of the project to explain exactly what parts of the systems do what and how all together they make an online booking system. When it comes to writing about the implementation section I will be including a detailed technical solution to the original problem that I was presented with, I will talk how I went about making the online booking system, such as use of a database, what information is taken and then recorded. Then I will discuss some of the more advanced features of the system, such as the desktop style user home page that I will be implementing using the brand new HTML 5 and how that went developing it. One of the important advanced features is how that there are three user groups, all of which will have different settings, this will all be controlled with the use of sessions which is done in the PHP programming language.

### **Results:**

The next part of the final report that I'll be writing is on the results of the developed system, such as does the system work and fit its intended purpose and seeing if it is also suitable for the audience that it's being made for. This part will be very interesting to see as I'll be able to determine if this project was as successful as I am planning it to be.

### **Evaluation:**

Once the results section of the report has been completed I'll begin the evaluation phase of the project, I will be analysing every angle of the system from the appearance, language used to the functionality to assure that I have covered everything. By doing this HCI evaluation I will then be able to see how well the system works such as what does it excel in? What are its drawbacks that can be improved upon in a future date. Other than doing HCI for the system, another thing that I will be sure to do is compare the final system result with this initial plan and any requirements of the system and see if I had implemented everything that I intended, also I will know within myself too if I think I have produced an excellent project. Another idea would be to involve and demo the system to potential users of the system, that way I can see if they have any troubles using the system or anything that they would have expected me to do differently.

### **Future Development:**

When the evaluation is done I'll know exactly what I'll be able to do for any future developments such as using it as a business proposition. I will identify what I would improve, followed by how I would go about doing it and specifying how critical it would be to do it, this is similar to how it would work in a real world environment.

### **Evaluation of learning:**

Once everything to do with the project has been covered and completed, I will then use this final section to see how well I performed in the project. I will cover things such as time management and project management to name but a few and I'll reflect on what I struggled with, what I did well at and what I would have done differently.

### Work Plan

Weeks	Tasks
1	Begin background reading by looking at what programming languages I can and can't use for this project, along with what other online child care booking systems are currently available. <b>Project Started and Autumn semester begins</b>
2	Continue background reading whilst leaving time for the initial report to be completed. By the end of week 2 have an idea of what languages are compatible with each other, such as php and jsp.
3	After reviewing other child care online booking systems, see if there is anything about their systems I can improve by implementing it with mine.
4	Round up the background reading and assure all findings have been compiled into a small document for referral if needs be at a later date. <b>Background reading completed</b>
5	Decide on an approach for what will be implemented first, such as designing before hand or begin implementing immediately with what I decided should be done first.
6	Have a database design (even if it's not completely finished) implemented in phpMyAdmin and then have it connected with some of the all ready implemented scripts, such as logging in or registering. <b>Database design completed</b>
7	Set up a page where an experimental booking can be made and test to see whether data is posted and can be viewed by the user groups which can view certain information about the booking.
8	Continue from week 7 in case problems occur, otherwise advance to completing another task in the time plan. <b>Fundamental feature – make a booking completed. Decide how to solve the problem completed</b>
9	Begin adding CSS to the system while leaving time for the interim report, design icons that can appear in the system e.g. a key icon for logging in etc. Also try to find images that are free to use.
10	Finish CSS and carry on with the interim report <b>Booking system CSS completed</b>
11	Decide on what can be designed and implemented in the Christmas recess and carry on with the interim report. Assure there is a first draft of the system ready to present to the supervisor. <b>First draft of system ready to be presented – project half way mark. Submit interim report</b>
<b>CHRISTMAS RECESS</b>	In the Christmas period I will continue working on the project and taking into account any comments that the supervisor has made when presenting the first draft of the system. I will also be giving myself extra time and space from the project for my examination revision.
<b>EXAM WEEK</b>	I will not be attempting any project work in this time as it will be dedicated to exams
12	Carry on with implementation, and start to introduce when the advanced features will be added to the system. <b>Spring semester begins</b>
13	Assure that the booking system does what it's intended to do, now implement advanced features. <b>Fundamental features implemented</b>
14	Continue implementing advanced features

<b>15</b>	Begin creating new test scripts that can be used to check for bugs whilst finishing the advanced features of the system. <b>Advanced features and test scripts completed</b>
<b>16</b>	Assure all own input has been implemented and begin to finish implementing. <b>Implementation completed</b>
<b>17</b>	Begin refining the solution by seeing if there are things that can be removed that aren't needed or make the system a little too complex and document it. Also checking for bugs. This can be done by creating and using random sample data.
<b>18</b>	Finish refining the solution and begin the evaluation phase of the project, see how well the system works and document it. <b>Solution to the project refined.</b>
<b>EASTER RECESS</b>	Space and time will be given away for revision for the final set of examinations. Assure the solution has been completely refined ready before starting the final report.
<b>19</b>	Continue evaluation. <b>Evaluation completed. Begin writing final report</b>
<b>20</b>	Continue writing final report
<b>21</b>	Continue writing the final report
<b>22</b>	<b>Finish final report and submit final report. Project 125 completed.</b>

**Bold** = milestone