**ManageProject\_AT1**

**Section 1: Preliminary Client Meeting Plan**

The anticipated requirements for this project fall into several categories and they are as follows: Hardware, Software, Security, People/Stakeholders.

**Hardware:** The anticipated hardware requirements are at least four computers capable of running a database and coding on NetBeans or another piece of coding software simultaneously. Four computers is specified as that is the number of people that the group consists of anymore and the computers would be wasted and any less and we could not operate at full capacity.

**Software:** The anticipated software requirements are as follows. NetBeans or an alternative for coding the Java files which this project will be heavily based. XAMPP or an alternative for running the server locally allowing us to test the server and the application. GitHub for sharing and compiling our code to ensure that we all have the most up to date version of the project and that no code clashes/collisions occur. Google docs for sharing written documentation to ensure that we all have access to the most up to date documentation. We anticipate that we will utilise Source-Tree to accompany and augment our GitHub experience/usage to make it easier to track our projects changes and who made said changes. Scene-Builder to streamline our construction of the application’s GUI and to allow us to utilise FXML as our primary method of coding the aforementioned GUI. MYQSL Workbench to construct an ER Diagram for our applications database and to assist with our databases construction. MediBang Paint Pro to create icons and banners for the various pages and buttons contained within the app. Skype, to serve as a pint of communication for the team to conduct meetings and discuss issues and ideas that may occur throughout the projects lifetime and finally a web browser to gather data, research and to act as a point of connection to our client and manager through the use of email.

**People/Stakeholders:** The anticipated stakeholders consist of the four coders, thembeing (‘Mitch’, ’Matteo’, ‘Jake’ and ‘Dion’), the project manager and the client. The project manager’s role in the project is to oversee the projects happening and to ensure that the project is progressing in a timely manner and to ensure that everyone is playing a part in the projects construction. The client’s role is to describe to the team what they wish for their application to do, look and feel like and to be as clear as possible on their hopes/intentions to ensure they get the product that they are thinking of. The coders’ roles are to code and design the application to meet the client’s specifications and to ensure that the final product is both functional and presentable. The coders’ roles involve coding, documentation and data gathering.

**Security:** Other than standard firewall rules and antivirus software we are anticipating to use an encrypted password for all levels of login. They being student, caseworker and administrator.

It is anticipated that the best practice in terms of both efficiency and appropriateness for gathering information would be to conduct an interview with the client featuring a questionnaire to allow us to ask the most pressing of questions and to ensure that complete understanding of what is to be expected is achieved between the two parties leading to at best no complications or issues and at worst only the most minor of issues.

Any repositories of information regarding FXML, Java, MYSQL and the act of interconnecting all and or any two of those things would possibly be applicable to this project. These repositories of information will most likely be found by specific google/web searches and accessed as required and not in a set format or from a set list of sources.

**Section 2: Various Documentations Activities**

**Section 3: Preliminary Analysis Report**

**Introduction**

The project is as Follows. Education and Industry Training Systems (EITS) has tasked us with constructing a system to support EITS with their in shop operations. These operations consist of administration and client supporting activities. The basis of the system requests that the application supports logins from students, caseworkers and admins.

**System Request Summary**

The client will be installed in as many terminals as necessary, the database though will have to be kept in a central location and connected to each terminal. Therefore a number of computers will be necessary, varying on the amounts of students subscribed to the service. The application is scalable based on the client’s needs.

**Findings**

The project aims at creating an application that will be used by students, case workers and admins to access, manipulate, insert and delete data from a database. It will implement a login window, where the kind of user gets recognized and directed to the necessary dashboard. There will be a student dashboard, accessible by students, where they will be able to view and update, their personal details, the case worker assigned to them and the diploma they’re attending. As well as receiving and submitting assessments. The attendance of each single user will be also automatically recorded.

Case workers will have access to the case worker dashboard, where they’ll be able to perform their duties such as assigning students, grading submissions, and view diplomas and assessments.

Admins will work from the admin dashboard, where they’ll be able to add any kind of user, view all types of users, and view all the diplomas, courses and assessments. They’ll also able to create new diplomas and generate reports about students, diplomas and the application as a whole.

We haven’t found any restriction in developing the project, as the technology necessary to build an application with these features is already available.

A project of this scope is feasible in roughly sixty days, considering the four people working on the application and the tool at their disposal.

**Recommendations**

We recommend to store the passwords in an encrypted format, with the purpose of protecting the user’s information. There are many algorithms to do this such as SHA-256.

We also recommend to use Java as the main programming language for the application, as it would make it easier to port the application to a different platform.

**Time and Cost Estimates**

Developing a project of this scope would take approximately 60 days, considering a four people team working full time to design, develop and test the application. The estimated cost, considering a wage of 30 dollars per hour, the acquisition of any software necessary for development, and including testing hardware material, would amount to 60.000 dollars.

**Expected Benefits**

Tangible benefits – Using this application will allow the store all the data about students, diplomas, and other elements in a central, easily accessible way. In addition to that with all the UIs provided it will be very easy for the end users to manipulate data in the database. Also with this setup there won’t be a need for physical data anymore.

Intangible benefits – With this application, the workflow will improve significantly as all users will be able to interact with each other from a single platform.

**Section 4: ER Diagram**

**Section 5: Analysis Report**

**Section 6: Project Management Software Tools Report**

**Skype**

We chose to utilise skype for a plethora of reasons. The first reason is that skype is completely free, easily accessible and familiar to all of us. The second reason is that skype has a multitude of communication capabilities and options that very few other platforms can rival. These are video chat, voice chat, messaging, file sharing, screen sharing and image sharing. These features are not limited by the number of people within a group and all sharing and chat functions can be broadcast to multiple members simultaneously. Skype also has the benefit of being available on all but the most obscure devices.

**Source-Tree**

We chose Source-Tree because it was free and easily accessible due to its open-source nature. Source-Tree allows us to share changed code and preview what code will be changed and subsequently what files will be changed as a result. Source-Tree allows us to upload our changes to a personal cloud file so it is available to us on any computer with an internet connection. This can be done without pushing the changes to the rest of the project, allowing us to create and work on experimental code without chancing damage to the project’s code.

**MS Project**

We chose MS Project due to its available access and our in class learnings. MS Project has the ability of making various graphs, diagrams and other informative visual displays that can be utilised for a plethora of datatypes and reasons. The benefits of MS Project do not end at its ability to generate graphs, MS Project also totals values such as total hours, total costs, total materials and total workers. This allows us to total the amount of hours we are expected to put in and to whom those hours belong to.

**Section 7: Methodology Report**

We will be using the waterfall methodology. We believe the waterfall methodology is the most appropriate methodology for this project because it helps ensure that no task/stage is missed/skipped and that the project is running on time and that tasks are being completed by their estimated end time. The waterfall methodology is also chosen as it can be adapted into a Gantt chart and can easily be created with Microsoft Project which has a whole host of other features to help with project management. The process for the usage of the course code control is as follows.

1. Fetch. (Gets the current status of all the branches)
2. Commit any changes you have made.
3. Pull to your local repository.
4. Push to the origin (Online Repository).

During the push stage any possible conflicts are shown and recognised giving the member a chance to see what will be changed in both terms of code and specific files.

**Section 8: Project Plan**

**Section9: Demonstration of project management tools.**

**Section 10: Management Report**

The project has resulted in a resounding success with all mandatory and requested tasks being completed and additional non requested features being completed to acceptable operational standards. The main approaches used for the management of the project were constant and rapid communication through skype which served as our main communication platform when not in a position to speak to other members in person. The approaches used to conduct the happening of the project have been successful and acceptable, falling short in no noticeable areas and fulfilling the group’s requirements aptly. The management of the project has not been so successful but has improved with time. The main issues that plagued the initial stages of the project from a management perspective was the general lack of organisation and understanding of what needed to be done and in what order they needed to be done. As a result all members were essentially working as solo units within the group environment doing seemingly random but meaningful tasks at seemingly random moments. Resulting in the project having no defined direction. As the project continued specific tasks were being assigned to specific people and each member had more or less found their main role within the group. This level of communication has only improved since the start of the project and management of the team has presented no issues as these strategies and this management technique have evolved. The project plan has in turn evolved tremendously since the initial stages of the project as the requirements and the scope of the project became clearer and the final goal more refined. Resulting in no defined project plan but an evolving plan that was always changing and communicated effectively throughout the group.

**Section 11: Management Tools Review**

The management tools we utilised were mainly MS Project and Source-Tree.

The pros of using MS Project are that it provides a simple interface laced with complex tools, allowing for the creation of intricate graphs and detailed diagrams with the use of simple inputs.

MS Project also has the added benefit of being able to formulate a Gantt chart among other various charts through the use of the Information inputted by the user about how long each task may take and who will undertake each task. MS Project will also highlight instances where a person is allocated two different tasks at the same time.

The cons of MS Project are that such a detailed management tool is not entirely possible to follow for a first venture into a project such as this one. As the project’s scope evolved and narrowed and our understanding became clearer the MS Project file we had made at the beginning of the project had quickly become outdated as new tasks appeared and old ones become redundant and or irrelevant.

The pros of using Source-Tree are that it has a clean interface and that it allows us to track the projects progress and the contributions and work done by each member and at what time those contributions were done. It also has the added advantage of showing us when conflicts in code appear and what code had been added and removed with each update and the files that are subsequently edited because of those changes.

The cons of using Source-Tree are that it is relatively complex to use and hard to wrap ones head around. It is quite easy to get lost in the actions of fetching, pushing and pulling. Issues can sometimes occur if these actions are done incorrectly. The easiest mistake to make is to perform these actions in the wrong order. Some actions also have prerequisites that must be completed before they can take place which can sometimes but rarely hinder the debugging process when you can’t identify the issue at hand.

If we were to use these tools in the future they would not have so many cons and would most likely be much more effective tools than what they were this time round. The experienced gained from this project and the experience that can be gained by research will allow us to possibly use these tools to their full extent with minor complications in the future.

**Section 12: References**

**Section 13: Project Manager Sign-Off**