**CSCI222 Personal Journal - Darryl Murphy -djm749 - 4526764**

***Planned work schedule***

The work schedule I intend to implement will be determined in an ‘hours per week’ unit of measure. Simultaneously, my schedule will be broken up into 3 phases each requiring a different amount of hours to complete.

* **Phase 1:** Requirements elicitation.
* **Phase 2:** Design and analysis.
* **Phase 3:** Implementation and testing.

***Phase 1 work schedule:***

Requirements elicitation is comprised mainly of analysing some preliminary descriptions of the system, and generating questions to ask the client in order to get specific requirements for the system. I anticipate this will require *up to* 5 hours a week to complete.

*Planned work times:*

Monday 12:00pm – 2:00pm

Tuesday 4:30pm – 6:30pm

Thursday 8:00pm – 9:00pm

***Phase 2 work schedule:***

Given the role I am assigned, the design and analysis phase will be the most time consuming phase of the project. Design and analysis will see me creating Architectural Designs and the System requirements specifications. I anticipate I will require *at least* 6 hours a week to complete this phase.

Planned work times:

Tuesday 4:30pm – 6:30pm

Wednesday 1:00pm – 3:00pm

Thursday 7:00pm – 9:00pm

***Phase 3 work schedule:***

My role during the implementation phase will be to oversee the programming of the project, and ensuring it meets the design specifications. Given the size of the project this phase will also see me contributing a decent amount of coding time in the process. I anticipate this phase will require *at least* 6 hours work per week.

Planned work times:

Monday 12:00pm – 2:00pm

Tuesday 4:30pm – 6:30pm

Thursday 7:00pm – 9:00pm

***Work Diary Phase 1***

***5/3***

Joined group and assigned the role of analyst and designer.

***Work time:***  Thursday 12:30pm – 1:30pm

***Work done:*** Read through assignment specifications.

***Expected Duration:*** 30mins.

***Difficulties:*** The description of the project to be built is very limited. Understanding exactly what work I will need to do to fulfil my role other than use cases and a domain model (e.g. the assignment states it requires “Detailed plans for the whole project”, this seems ambiguous to me at this point in time).

***Solution:*** Studying the roles of analyst/designer in software engineering.

**10/3**

***Work time:*** Tuesday 5:30pm -6:30pm

***Work Done:*** Compiled questions about project for client.

***Expected Duration:*** 1 hour.

***Difficulties:*** Having never done requirements elicitation before, it has been difficult to define what an effective question would be. The questions established today relate mainly to user interface, persistent data, sub systems and actors within the system.

***Solution:*** Decided to stick to more general questions at this point in time. For example whether a gui is needed, etc.

**13/3**

***Work time:*** Friday 10:30am – 11:00am

***Work Done:*** Compiled questions about project for client. Further added to question list for client meeting. I looked at the ‘Flight DB’ excel file that was provided.

***Expected Duration:*** 1 hour.

***Difficulties:***  This resulted in some questions about what some attributes are used for, some are not labelled. Need client clarification.

***Solution:*** get client to clarify ambiguous parts of database.

**18/3**

***Work time:*** Wednesday 10:30am – 12:30pm

***Work Done:*** Client meeting. Project Clarifications**.**

***Expected Duration:*** 2 hours.

***Difficulties:*** Note taking. Questions were answered very quickly by client which made it hard to keep up. Answers often lead to new questions which made it harder to keep on track with the questionnaire.

***Solution:*** Make sure everyone in group is taking notes during client meetings to take pressure off the person asking questions.

**23/3**

***Work time:*** Monday 11:30pm – 12:30pm

***Work Done:*** Used provided ‘Flight DB’ database file to draw up preliminary class structures. The connections between classes in the database with the database were identified. Some rough sketches of the domain model were created to better understand what this system may require.

***Expected Duration:*** 30 mins.

***Difficulties:***  Identifying what needs to be shown in the domain model. For example does the database class or sub system classes need to be identified here.

***Solution:*** Talk to tutor/lecturer for guidance.

**24/3**

***Work time:*** Tuesday 3:30pm – 4:30pm

***Work Done:*** group meeting

***Expected Duration:*** 1 hour.

***Difficulties:*** Explaining ideas to group members. I feel the rough sketches I have were not enough to fully explain my thoughts on the structure of the program.

***Solution:*** I will need more preparation before presenting ideas so to maximise understanding in the group. Draw clearer diagrams.

**30/3**

***Work time:*** Monday 12:30pm – 1:30pm

***Work Done:*** Compiled list of actor responsibilities for clarification with client. We need to know exactly what each actor can or cannot do.

***Expected Duration:*** 30mins.

***Difficulties:* none.**

***Solution:*** none.

**31/3**

***Work time:*** Tuesday 8:30pm – 10:30pm

***Work Done:*** Created use case scenario of a customer booking a flight. The use case consists of a text file that shows the information/screens a user will see during a booking.

***Expected Duration:*** 1 hour.

***Difficulties****:* A few assumptions had to be made about the system during creation. For example the need to book return flights, the need to book for adult/child/infant specifications, display of calendars during booking. Needs further clarification with the client.

***Solution:*** Needs further clarification with the client. They will be able t identify what they need/want during this process.

**1/4**

***Work time:*** Wednesday 10:30am – 1:00pm

***Work Done:*** Client meeting. Requirements elicitation. Walk through of use case scenario.

***Expected Duration:*** 2 hours.

***Difficulties:*** Fire alarm triggered. Took some extra time to talk to client.

***Solution:*** Client took extra time out of lab to address our questions.

***Phase 1 Summary***

Phase one consisted of 9 work periods. 2 of which were on schedule or very close to schedule. Clearly, being on schedule only 22% of the time is a poor statistic. One of 2 things needs to happen to rectify this situation: Change the schedule, or be more rigorous in sticking to it. The work times suggest that my most consistent work times are Tuesday afternoons and Wednesday mornings/afternoons.

On average, I completed 2.2 hours of work per week. My estimates were *up to* 5 hours per week. This is a reasonably consistent estimate as at the most I worked 4.5 hours in a week. However, some weeks could of definitely used more hours of work.

My time estimates were often inaccurate. Sessions that ran over the estimate occurred 4 times. Sessions that were under the estimate occurred twice, and sessions that were correct to the estimate occurred twice. This reveals that 50% of the time, I underestimate the task at hand. I will need to allocate more time to tasks in the future.

***Work Diary Phase 2***

**3/4**

***Work time:*** Friday 9:30am – 12:00pm

***Work Done:*** Study of what is involved in ‘Design’. Decided I will need to create an ‘Architectural design document’ to fully convey my design thought processes. The document will be split into 3 sections: Logical view, process view and implementation view.

***Expected Duration:*** 1 hour.

***Difficulties:*** Lack of understanding of architectural design. Intuitively I look for what diagrams are required for each view, however design requires using many of the same diagrams to portray different contexts of the system.

***Solution:*** I need to identify what Information I want to convey, and what diagram will best aid me to do so.

**8/4**

***Work time:*** Wednesday 1:00pm-2:00pm

***Work Done:*** Defined work to be done in logical, process and implementation views of architectural design.

***Expected Duration:*** 1 hour.

***Difficulties:*** How to display some concepts with diagrams. For example, how to show how a user interacts with a subsystem which interfaces with the database etc. Will need to revise sequence diagrams, collaboration diagrams, activity diagrams, and component diagrams.

***Solution:*** *possibly break up class diagrams to portray the system in a clearer way.* re-learning how to create the many diagrams needed for this document.

**9/4**

***Work time:*** Monday 12:30pm – 2:30pm

***Work Done:*** Created Data Dictionary

***Expected Duration:*** 2 hours.

***Difficulties:*** Defining all the functions for each class is quite difficult as there are many interactions I may have not covered.

***Solution:*** Continuously update the data dictionary as more of the system is designed/developed. Diagrams of the dynamic nature of the system will aid in identifying some needed functions.

**10/4**

***Work time:*** Tuesday 6:30pm – 7:30pm

***Work Done:*** Created Domain model.

***Expected Duration:*** 1.5 hours.

***Difficulties:*** Displaying All aspects of the system in one diagram (sub systems, databases etc).

***Solution:*** I eventually decided to split the diagram into 3. Now it exists as a domain model, user – sub system view and sub system – database view. The 2 new views will be used to form the logical view.

**11/4**

***Work time:*** Saturday 9:00pm – 11:00pm

***Work Done:*** Created prototype user interface program. Purpose is to map out a rough implementation of the system to ensure ease of implementation before development phase.

***Expected Duration:*** 1.5 hours.

***Difficulties:*** Vector implementation. In particular iterators and operator overloading. While this held up the implantation process, this was a minor difficulty.

***Solution:*** Some extra study of vector iterator and operator overloading was required to implement parts of the database.

**12/4**

***Work time:*** Sunday 3:30pm – 5:00pm

***Work Done:*** Sketched sequence diagrams.

***Expected Duration:*** 2 hours.

***Difficulties:*** Defining which use cases should be modelled. The models aim to portray how the system operates dynamically. So the use cases need to show as many components of the system as possible.

***Solution:*** Focus mainly on booking functionality as they require a few sub systems to complete (reservation, profile, and service). Some less complicated use cases were chosen to display other sub system interactions.

**13/4**

***Work time:*** Monday 9:00am – 10:00am

***Work done:*** sketched dependency diagram

***Expected Duration:*** 30mins.

***Difficulties:*** Having never done a component diagram before, I had to do some research before sketching. Defining what parts of the system were important to be in the diagram.

***Solution:*** Research and practice with component diagrams in argoUML. The primary dependencies will occur with the database system and its file imports. Also dependencies will occur with the sub-systems and the database.

**15/4**

***Work time:*** Wednesday 1:00pm – 4:00pm

***Work Done:*** Created Architectural Design Diagrams.

***Expected Duration:*** 2 hours.

***Difficulties:*** Had to install and use ArgoUML software. ArgoUML crashed and erased 2 diagrams during operation. ArgoUML has some ineffective functionality (creating self calls in sequence diagrams is frustrating ) and missing functionalities(cannot display stick figure as actor in sequence diagrams.)

***Solution:*** Re-create lost diagrams. Save work consistently during creation. Clearly labelling actors in sequence diagrams.

**17/4**

***Work time:*** Friday 7:30pm – 10:30pm

***Work Done:*** Completed Architectural Design, added explanations to the diagrams and sorted diagrams into views.

***Expected Duration:*** 2 hours.

***Difficulties:*** Finding the best way to explain the views. Ideally these diagrams will be used by my group members to implement the system. Therefore these explanations need to be as coherent as possible.

***Solution:*** Constant re-evaluation of diagrams and explanations. Some explanations highlighted inconsistencies and missing components in diagrams.

**18/4**

***Work time:*** Saturday 3:00pm – 4:00pm

***Work Done:*** Compiled list of requirements in preparation of SRS.

***Expected Duration:*** 1 hour.

***Difficulties:*** none.

***Solution:*** none.

**18/4 – 19/4**

***Work time:*** Saturday/Sunday9:30pm – 4:00 am

***Work Done:*** Created SRS

***Expected Duration:*** 4 hours.

***Difficulties:*** Converting the summarized requirements I have in the list into one or more requirement tables. Some requirements that are not in the list needed to be added to the list.

***Solution:*** Constant re-evaluation of requirements. One requirement in the list may need to be split into several distinct requirements in the SRS

***Phase 2 Summary***

Phase two consisted of 11 work periods. 2 of which were on schedule or very close to schedule. This means I only worked on schedule 18% of the time, Even worse than phase 1. This may have occurred due to more documentation being required during this phase. Often I had to learn new documentation methods or re-study familiar methods. I have noted that dealing with unfamiliar methodologies can prolong my work times. The work times suggest that my most consistent work times during phase 2 were Friday mornings and Saturday afternoons/nights. This could be a ‘last minute rush’ mentality causing the bulk of work to be committed towards the end of the phase. I believe being proactive in overcoming the ‘unfamiliar methodology’ issue highlighted above will allow me to complete work in a more timely fashion.

On average, I completed 6 hours of work per week. My estimates were *at least* 6 hours per week. While this statistic is accurate to my estimate, My work times were heavily skewed to the last week of phase 2 (14.5 hours work). Again, this highlights the poor work practices in phase 2.

My time estimates in phase 2 were more accurate than phase 1. Sessions that ran over the estimate occurred 5 times. Sessions that were under the estimate occurred twice, and sessions that were correct to the estimate occurred 5 times. This reveals that 45% of the time, I underestimated the task at hand. However, some tasks in phase 2 were drastically underestimated. For example I estimated the SRS at 4 hours work, whereas it took me 6.5 hours to complete. Again, this issue boils down to underestimating tasks that I have little experience in performing. Identifying future tasks that I have not performed before will hopefully rectify many of the issues encountered in phase 2.