**Plan-driven development for my Bachelor's degree**

**(CS1SE16-Term 1-Courserwork 2-Project Report)**

**Abstract:**

This paper is about my course (BSc Management with Information Technologies) and my personal specific academic and professional interests, everything looked from a project manager’s view and thus different elements of my degree are analysed and organised into a project plan. For this purpose, project management methods are being used and a report is being produced which consist of an introduction, where I introduce the topic and talk about my degree and interest a little. Background which elaborates more on my professional interests, describes the research I’ve done on my modules and mentions the project scheduling and project budgeting. I’ve also created a product breakdown structure for my degree and modules, a Gantt chart that further reveals more information about my program though scheduling the events and finally I expressed my own thoughts on the project and described my methods for handling uncertainties. As an appendix to the project, I’ve included a CV. The CV is important, because I’ll be able to receive early feedback on how to improve it, before I start looking for a placement from next year. This coursework helped me reflect on my learning approaches and thought me many things about project planning.

**Introduction:**

This coursework will help me develop a deeper understanding of the plan-based approach and project planning methods used in the management and scheduling of a software project. I will be implementing these methods in the creation of a detailed plan for my degree. I study a Bachelor of Science in Management with Information Technology, which is a combination of a degree in Business Management at the focus with some of the subjects studied in a Computer Science degree. Producing a report about my course will help me reflect on my choices for higher education and specialization in terms of choices I make that directly influence my career development. My own learning approach is also a topic that I will touch upon, but most of all I will approach my very thinking process and analyse my approach to different objectives, aims and problems. I believe that the thought process and problem solving skills are at the ‘root’ of creating my learning approach and deciding how to proceed in realizing my career related aims.

**Background:**

I will elaborate on these topics further in my report and mostly in the self-reflection section that will replace the typical discussion section. I will also produce a Product Breakdown Structure which is method for organizing a complicated system, also in case of my program, and displaying its components and requirements specifications clearly so that I have a better overview on my program structure. I will produce a Gantt chart which will include project scheduling of Product Breakdown Structure elements and the interactions of different elements of the project with one another. As an appendix to the report I will include a CV. This will enable me to receive early feedback on my approach in describing my personal skills and traits in a professional document for a job application.

As for my program, specifically, it is comprised of four years. In ‘year 1’ I am to be introduced to key topics that are essential for creating my base knowledge in both Business and Computer Science. This base will serve as a stepping stone when it comes to deciding which subjects am I going to be specializing in order to pursue my desired career. From this year start some of the dependencies, that limit the amount of options I will have available to pursue afterwards. It is important to weigh the risks/costs and pros/cons on specific milestones in time and update my plan in order to fit my interest. Though some dependencies are inevitable as per the requirements of the program. That’s why I made a proper elicitation of the requirements, but in contrast with how it is done with a software project, I gathered information from students, staff, subject experts and my own opinion based on new knowledge gained from a variety of sources, before I transferred to this program after my year started. Because of the organization I’ve done I could see in what I think I would be interested in and what I evaluate as not of much usefulness to me and that enabled me to create a priority list. Management with Information Technology, which I’ve discovered recently, seemed to still teach the core subjects in Business and Management in which I am interested, especially the option to study People and Organisations, while also receiving some practical skills in programming and deeper knowledge in computer science. If I am to become an entrepreneur with a business related to Information Technologies and fulfil on of my dreams, I evaluated that this program is most the efficient course of action in regard to my bachelor degree.

In ‘year 2’ I will study how to manage Information systems and acquire skills that will help me adapt and function efficiently in the ever growing technological environment. I will learn more about digital data and in addition also how to secure a placement and become effective during my third year that is supposed to comprise of a one year long full-time placement in a company with a job, according to my specialization. If I am not able to secure a work position within the set deadline of the project plan scheduling, I will compromise of functionality and proceed to fulfilling the objectives of ‘year 4’ in order to finish my education within the time constraint I’ve set for myself and also per the requirements specification of my contract with the university.

In ‘year 3-4’, depends on the course’s inherent uncertainties ‘part 3’ may take place in ‘year 3’ or ‘year 4’, I will be able to study a variety of advanced subject areas in both business management and computer science. If everything goes according to plan without anything, outside the scope of fixable problems occurring as per risk estimation and planning management, I will proceed to the final stage of the project. During my last year in university I will be able to fully choose what am I going to study, so I will be focusing on the subjects of my interest in my priority list that is still prone to modification based on the knowledge I will gather throughout the years. I will also have the opportunity to work on a final project related to the management of information systems and digital data.

There are some milestones I have identified and some that are yet to be identified based on the course of action, problems that occur, new knowledge gained and the rise of new requirements e.g. If I am able to secure a placement, it is unknown still what new elements will be included in my plan and what will the requirements specification for my new job. The milestones I have already set with the initial planning and scheduling are divided into two types. Those that mark the start/end of certain projects that need to be done within a specified time period e.g. start of each year, end of each year, also start/end of term and assignments that have to be done within schedule with certain deadlines and those milestones that mark points in time in which I’ve set for myself in order to assess my own progress till that moment and evaluate the situation I’m currently in. How can I improve it, do I manage to keep up with my schedule, do I manage to understand the nature of my tasks and execute them successfully etc. Such milestones I set at the end of each quarter of a term in order to track my progress In as much moments in time as possible, but not to the point that I don’t wait for a certain increment of time to have passed in which I would have gained the necessary new knowledge that will serve as a base for my evaluation. There is one exception to these milestones and this is the tutor meeting that takes place every once in a term and I am advised to report my academic progress and personal situation there.

As for the dependencies, the ones between the compulsory modules can be easily identified, but the optional modules become available after certain milestones, so I could only narrow down the potential modules that can be part of my program, based on observations of tendencies e.g. modules with dependencies that include modules I study in ‘part 1’, a tendency that shows that modules which code starts with ‘MM...’, which stands for management I think, and are marked as level 1 or level 2 tend to be either compulsory or optional, depending on the subject, but its likely that some of them, especially ones related to leadership, organisational behaviour, managerial knowledge and information systems, will be part of my optional modules afterwards. However that is only for the management part, as for the computer science part it is likely that I will some modules starting with ‘CS…’, which stands for computer science, but on level 2, because of the matching dependencies and relevance to the aims of my subject. One thing that is certain based on facts is that I will be having a total of 40 credits of optional modules in ‘part 2’ which means at least two more modules each accounting for 20 credits with at least two choices for each to choose from. In the program specification it is written that I will be able to choose from modules in Henley Business School and elsewhere in the university, which means that is likely to either have four business management modules in total, two by two for one choice, to choose from or two choices in business management and accounting related subjects and two choices for subjects related to computer science, programming or software development. In ‘part 3’ I will be choosing modules that total 80 credits from Henley Business School and I assume that the choices will be from among almost all the level 3 subjects that start with ‘MM…’ and have a numerical code afterwards. However everything related to optional modules for the upcoming years is uncertain and still I can’t identify all the dependencies on these speculation. As for ‘part 1’ the optional modules total 20 credits and are already available.

With the compulsory modules each ‘part’ has to wield a total of 120 credits. There are certain requirements for progression which are usually to achieve 40% in all subjects and in the 120 credits. The project tasks will be made successful though deliverables of the program like lectures, seminars, tutorials, workshops etc. Progress will also be tracked and evaluated though assignments that take place between or on particular milestones of ‘type 1’ I mentioned earlier in my assignment.

The are costs to this project, both costs that arise from the specification of requirements in my student contract and costs for additional materials that are essential for effectiveness and welfare e.g. textbooks, calculators, accommodation, food etc. Project cost management methods should be implemented in order to analyse costs effectively and organize a budget for achieving the project objectives. From an accounting perspective I have certain non-current liabilities to banks and project sponsors, which I have to pay back after I graduate from university and find a suitable job for me. The budget is organized by a pre-determined equity for the next four years and will be allocated in increments until the desired outcome has been achieved.

**Reflection:**

Starting a business is like developing a software product. Both can’t be started without having a clear plan how to manage resources and achieve desired outcome. Both continue to evolve and adapt to the rise of new trends due to technological advancement. Software will be needed more and more different stakeholders, but it also needs an environment in which to blossom and that is the business. Making Business is something that will never be replaced by technologies and should not, because in its base is the human potential in creating. Industries are environments where one can realize his ideas and sell them to consumers to make their life and work better. To give the AI the ability to think in place of us is the same as becoming a mindless slave to the technologies and leave your life in their hands. However as more and more technologies are created people become more reliant on them, not only because improve the standard of living, but also because we realise how hard is to discover new things and create complex systems without the help of technology, including the software that nowadays manages many operations in satellites, space rockets we send to discover the answers to some of our questions etc. My point is that business needs software and software needs business, but above all else are the people who need to learn how to create in order to adapt and creation first starts from analysing, organizing and specifying your ideas. That is one of the thing this assignment helped me to understand.

I used various software to achieve my objective, but no matter how much easier does it make it to create a PBS with ‘Mind View’ I didn’t know how exactly should I create my deliverable. I new which elements to include, but I was freaking out over things like structure, should it start and spread in two side to the left or the right or should it be top-down. There were also things to consider like the types of spaces in which I can write that emerge from the branches and this depended on the structure I chose. There were many details I needed to consider, so the ideas in my head were in total chaos. I stopped thinking about how to do my PBS for a moment and tried to look at my PBS as a project itself and solve my problem by first discovering the requirements. What is requested of me exactly, what is needed to be done in order to include all elements and display their relationships effectively. Second, analysing what is the way to list my elements most clearly, having in my that I have a requirement for the showing the relationships, I have requirements from the coursework and I have the requirement to present it to the end-users in way they can understand as much as possible. I narrowed down options until I reached the point thinking about one of two plans to implement. I chose one, organised my ideas to fit the plan and specified my plan on a separate sheet of paper so that I can always refer to it look at it visually how it looks like. I managed to create my project plan with the help of creating a plan for a project. Then I came up with the idea that everything has its own project plan and even though some methods cannot be implemented the same way for two things, still everything has its requirements for success and thus the right approach to organizing your ideas in order to have a clear view on them. To know how to create a thing is entirely different from knowing what to create.

As for my approach to changing universities and handling the uncertainties involved, I have considered this possibility. However I am not planning to leave the university on my own volition and I have several reasons for that. First, the unique aspects of my course. When I did some research after I switched my course, I wasn’t able to find another course elsewhere to fit so many of my requirements as my current course. Second, the budget is made possible by a contract and its requirements have already been specified. In order to switch universities I have to renew my contract with the project sponsors and this involves a whole new long and costly process of specifying new requirements. Third, I have already created a plan, but this plan is not flexible enough, in my opinion, as to consider a major managerial change on an institutional level. My project has already started in this organisation and I use the resources available here, so most likely I’ll have to create a whole new plan and start from square zero with my transfer and this is absolutely unacceptable, considering I have a set schedule for my career development and I want to stick to it. There are several uncertainties, however I have to take into account e.g. am I going to cover minimum academic standard and my personal situation. I cannot predict what is going to happen, so I can’t make a certain estimation, but I can use an estimation technique to analyse and dissolve into separate elements to look on individually, the possible outcomes I can think of and the most likely ones, for now, based on my progress, both academic and personal. Each Outcome I then dissolve into stages and analyse each stage e.g. I won’t be able to graduate, stage 1-Business statistics does not go well as expected, stage 2-failed assignments begin to stack etc. After that I can better give estimates to situations, based on my current progress. As for the leftover uncertainties, I will come up with an efficient plan, while taking into account scheduling and requirements to deal with the problem, but in order to do that I will need all the details of the situation in order to analyse it and adapt.

**Software I used:**

For my PBS and Gantt chart I decided to use ‘MindView’. I have also taken into consideration Microsoft Project and also using Excel as a base and modifying it to its complete form with the flexible options provided by Microsoft OneNote. Microsoft Project was inefficient, because there are significant costs to using this software, while the quality in functionality and the tools it offers are no better than ‘MindView’, which is on a subscription bases, but there is a free 30-day demo to it, which gives you access to almost all of its tools. As for Excel and OneNote, it would have worked out if I divided the work into both, but this is inefficient. I would have to do a lot more operations and the project schedule would suffer. ‘MindView’ is a famous software that is really easy to work with and I could manage to learn how to create PBS and Gantt, through its tutorials, for minutes. I could benefit from the free Demo and as whole, there are almost no risks to using it and certainly no costs. The only potential risk I discovered is that the trial period lasts for 30-days only and if anything happened to the schedule, at some point this software would have required a subscription, but I estimated that until that happens the project will long be over.

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