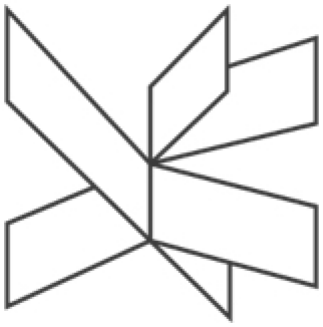

VIA University College

SEP1X-A18 Project Description

Time scheduling software

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Number of characters:

7177

8405 (with space)

Deadline:

10 / 10 / 2018

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Background Description

Eurofins is a company consisting of a network of laboratories, which are located all over the world. In these laboratories they conduct chemical, microbiological and molecular biological analyses. Eurofins Steins Laboratorium A/S located in Vejen, focuses on analysis of food and feed products. There is a total of 325 employees in Vejen, whereof 60 employees belong to the chemistry department of Steins Laboratory. The chemistry department has addressed an internal problem, implying that the issue is within the company. They require a new way of managing their employees (Agnete, 2018).

Eurofins Steins Laboratory A/S chemistry department wishes for a new tool to replace the company's current way of displaying their employee schedule.

Currently they are using excel and in excel they have 4 separate sheets, the four sheets consist of the work-plan which is the major working document, a staff time overview, a training overview and preferences from annual performance review. Together these tables make the entire employee schedule.

Eurofins has documented a set of issues they encounter daily whilst utilising Excel. First off, only one person can edit and add information at a time which has proven to be inconvenient and time consuming. Therefore, they wish for a solution which allows editing and viewing simultaneously. Agnete (2018) stated that preferably only team leaders should have the authority to edit.

Moreover, according to Agnete(2018) the chemistry department finds their current way of displaying data to be quite troublesome whilst juggling information. Instead they would prefer all data to be displayed in one sheet.

Furthermore, there is a need for a mobile application which would allow for a more flexible workspace, granting employees the ability to view their schedule no matter their location.

Additionally, Eurofins has a series of requests that they would like implemented, such as, the ability to jump to the current date, the ability to search/navigate the schedule with ease. Along with a short list of minor features. Nevertheless, this should all be made possible without installing any software.

Excel does not meet the requirements stated above which confirms its inefficiency in relation to Eurofins.

Maintaining the sheets up to date is very time consuming and Eurofins wishes for a cleaner and more intuitive interface. This can be recognised as a system migration problem.
Legacy systems pose a lot of issues on the information flow within a company. A legacy system is basically “any information system that significantly resists modification and evolution” (Wu, et al., 1997). Because of this resistance towards improvement, and other critical flaws such as unintuitive interfaces and maintenance costs, companies are now choosing to migrate to new, and more efficient solutions.

A tool which meets the new requirements set by Eurofins, would save them a substantial amount of time, as well as energy. The time saved could be used elsewhere, perhaps to increase the growth of the company, conserve money, etc.

Definition of purpose

The purpose is to modernize Eurofins way of managing employees' time-schedules, thus making it more efficient

Problem Statement

How can a program be developed for the Chemistry Department of Eurofins Steins Laboratory A/S, such that the employee time-schedule can be handled and edited in a more intuitive and time efficient manner?

Sub-problems:

- What data should be displayed?
- How should the data be displayed?
- What data about employees do we need to store?
- How to allow certain users to edit and others to view information simultaneously?
- How to make the time schedule accessible on all devices without installing an application.

Delimitation

- **The time schedule will not be accessible on all devices.**
  - *The application is going to run on local files, making it meaningless to have it accessible on multiple devices, because all files would have to be transferred every time a new device is used.*
- **The software will not allow multiple users to edit and view the file simultaneously.**
  - *Although a multiple client/server system could be assimilated in java, our team is limited by our supervisors thus the aim is to create a single user system by operating on local files.*
- **A website or mobile application will not be developed.**
  - *We must stay within the project guidelines, even though Eurofins wishes for a website or mobile application*

Choice of models and methods

What- partial problem.	Why- Study this problem - related to the purpose of the project.	Which- level of the outcome is expected.	Which- methods/ models/ theories will be used.	Who- in the group is the main responsible for this point.	What- is the estimated workload (hours)
What data should be displayed?	To acquire correct data.	Correct data is acquired.	Java. Eclipse. ("Starting Out with Java", Fifth edition, Tony Gaddis.)	All.	10 hours.
How should the data be displayed?	To be able to distinguish essential data from unnecessary data.	One platform displaying all four worksheets.	Java. Eclipse.	All.	100 hours.
What data about the employees do we need to store?	To acquire essential data of employees.	Essential data about employees is stored.	Java. Eclipse.	All.	100 hours.

Table 1 - Table of models and methods.

Time schedule

SEP1 consists of 5 ETCs points, it is therefore expected for us to spend a total of 27.5 hours per ETCs point per person, which totals to 550 hours. However, it is hard to allocate those hours to tasks at this point of the project. Our Gantt chart will therefore, be used as a guideline for what we must get done, and not how much time we should spend on each given task.

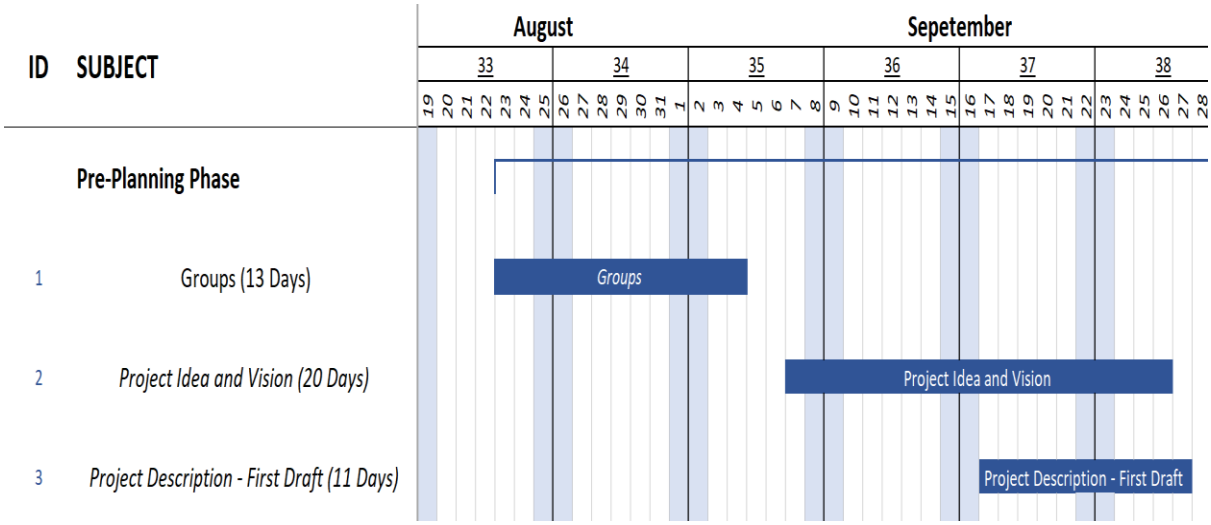

Figure 1 - Gantt chart part 1 of 4.

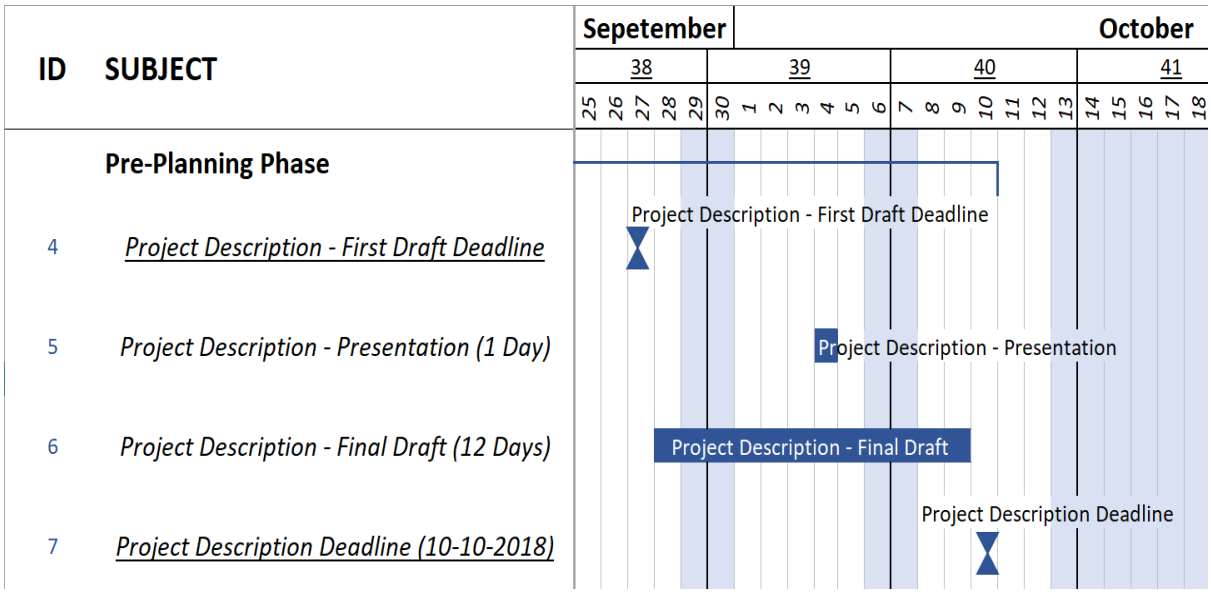

Figure 2 - Gantt chart part 2 of 4.

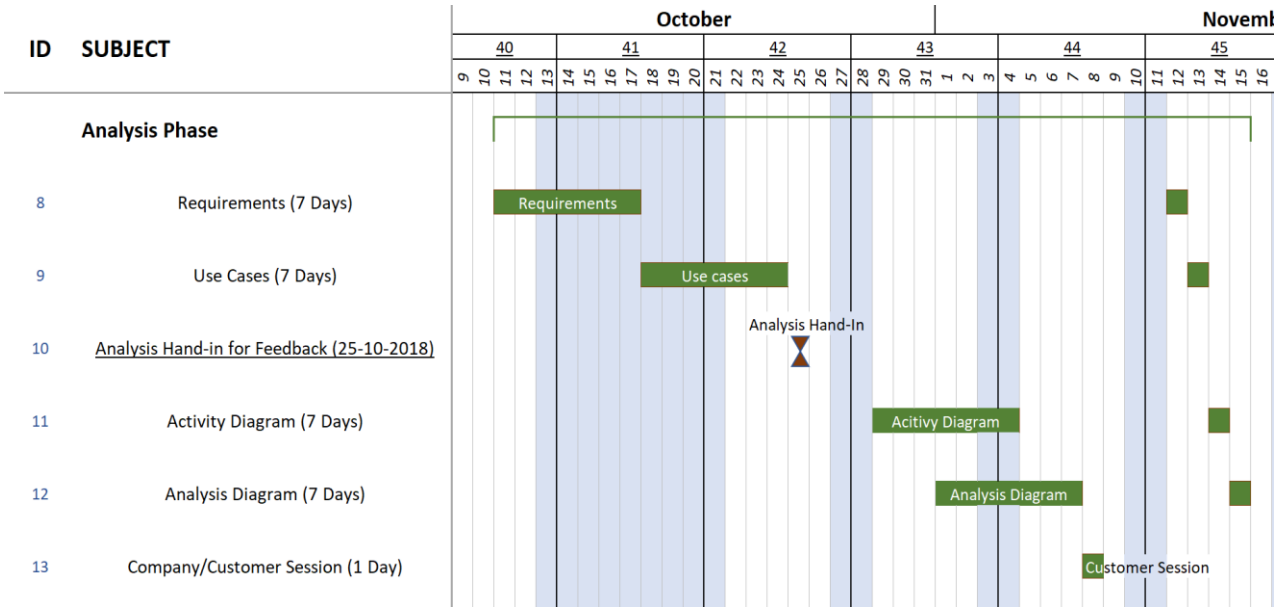

Figure 3 - Gantt chart part 3 of 4.

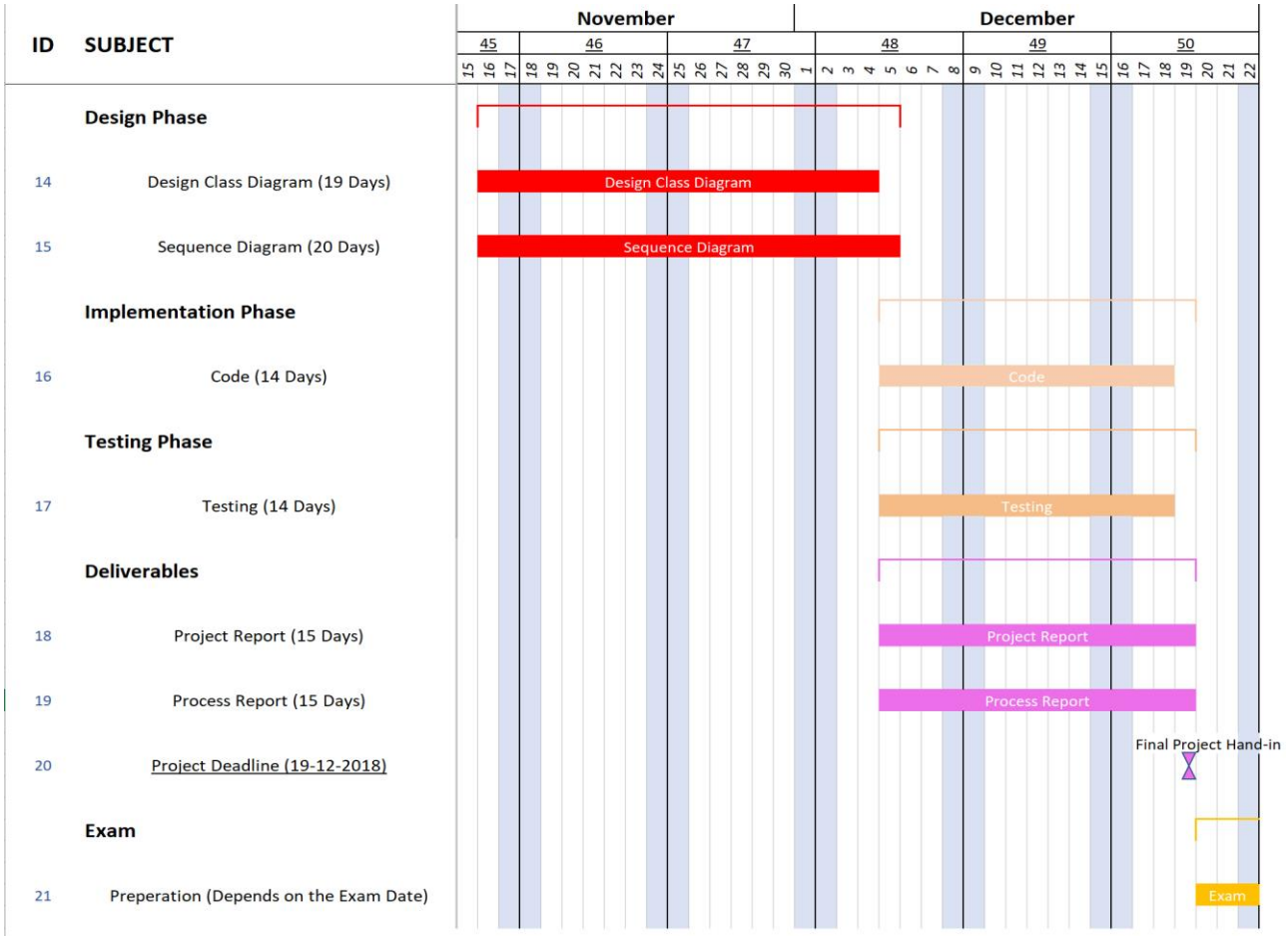

Figure 4 - Gannt chart part 4 of 4.

Risk assessment

For our product to be delivered without issues we need to assess the risks that are attached to the development process. The following matrix lists all the problems that might occur within team members and concerns regarding the specific tasks we need to address (see table 2).

Risk	Description	Likelihood Scale (1-5)	Severity Scale (1-5)	Responsive Actions	Identifiers	Responsible
Risk 1	Lack of knowledge.	2	2	Attend classes physically and mentally.	Not having the capacity to complete assigned tasks.	All.
Risk 2	Lack of interest.	1	4	Group members shall constantly do topic related researches during the semester project period.	Deteriorating performance.	All.
Risk 3	Group conflicts.	2	5	Actions will be taken accordingly, according to the group contract.	Time loss, lack/poor of communication.	All.
Risk 4	Health issues.	2	3	Team members must take care of their conditions.	Missing team meetings and classes.	All.
Risk 5	Bad time management.	3	5	The group will divide the workload amongst us.	Postponements, extra work, stress.	All.
Risk 6	Technical issues.	2	5	Repair the broken device(s).	Time and data loss.	All.
Risk 7	Conflict with supervisor(s)	1	3	Notify the head of department.	Passive aggressive behaviour	All.

Table 2 - Table of risks during development

Sources of information

Viuf, A., 2018.Presentation of work planning tool. [presentation] (Public communication, 7 September 2018).

J.Bisbal, 1997. An Overview of Legacy Information System Migration. [pdf] Hong Kong. Available at: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=640219&isnumber=13814> [Accessed 20 September 2018].

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