Group2 - Time line manager
Implementation plan

1 Introduction

In this document you can find the information and planning about how to implementation of the use cases and other part to build the complete software of the time line manager. The use cases that is a base for the implementation can be found in the Analysis document and design decisions can be found in the Design Document. A Schedule to se what part of the software will be implemented in each iteration can be found in chapter 4.

2 Major Tasks

The major tasks of implementation will be

- Implement the data structure.
- Implement the GUI structure.
- Implement Stylesheet
- Implement SQL Database
- View Timelines and Tasks in GUI

3 Implementation Overview Plan

In this chapter the schedule of the different implementations can be read.

Iteration	Primary objectives	Scheduled start or milestone
ImpIt1	• Add basic MainWindow + controller. • Add AddTimeline Window + controller. • Implement Model (Timeline / Task) • Connect the buttons next, previous, goToCurrentDate to methods	Date from/Date to 17-04-13/17-04-19
ImpIt2	• Add Task Window + controller. • Implement adding Timeline / Tasks	Date from/Date to 17-04-20/17-04-27
ImpIt3	• Add design to GUI • Adding Timeline / Task to GUI (part1)	Date from/Date to 17-04-28/17-05-04
ImpIt4	• Implement Database • Adding Timeline / Task to GUI (part2)	Date from/Date to 17-05-05/17-05-11
ImpIt5	• Adding missing functionality • Finish design • Upgrade logics if necessary	Date from/Date to 17-05-12/17-05-18

ImpIt6	• Focus on finishing and testing the system	Date from/Date to 17-05-19/17-05-23
ImpIt7	• Final delivery	Date from/Date to 17-05-24/17-05-28

4 Implementation details

In this chapter you can find details about the implementation iterations mentioned in chapter 3.

ImpIt1:

Iteration:	Name:	Details:	Assigned to:
ImpIt1	Add basic MainWindow + controller. Add AddTimeline Window + controller.	The structure of the software will be designed so the team can map the buttons and functions.	Beysim
	Implement Model(Timeline)	Create the class Timeline with the fields needed.	Ashley
	Implement Model(Task)	Create the class Task with the fields needed.	Yibei
	Create methods for changing the date.	Making functions to move the currentTime one week forward, one week backward, to today, and to custom day.	Alexandra
	Connect the buttons next, previous, and “go to today” to methods.	Map the functions above to SceneBuilder	Ahmad
ImpIt2	Adding AddTask Window + controller.	Adding the fxml window for AddTask + edit and add the files needed to launch this from addTask button.	Alexandra
	Connecting the Date picker to local variable currentDate	Make the picked date from main view map to variable currentDate. Create logic for this if not directly retrievable from DatePicker.	Ashley + Yibei
	Implement adding Timeline / Tasks map the Timeline/Tasks window to the implementation	Do logics and mapping needed for when the user presses a add task or add timeline, that the filled in details creates a Timeline/Task.	Beysim
	Make all time affecting buttons to change the text in the date-picker	Update the textfield that belongs to the Date Picker to always reflect the currentDate	Ahmad

ImpIt3	Adding logics to show the dates in the GUI	Adding code to show dates, days, months in the GUI, mark weekends and currentDay with other colors.	Joakim
	Adding Stylesheet (CSS)	Adding a CSS stylesheet.	Ashley
	Implementing Database (SQL)	Start to look into the SQL for the project and making a connection.	Ahmad
	Add a login View (fxml)	Create the GUI for a login page, and remake fxml file to fit the needs for adding the dates / tasks to it.	Alexandra
	Backend Timeline/Tasks (continue)	Continue with the implementation of adding tasks and timelines.	Beysim
ImpIt4	Adding timelines and task to GUI	Implementing the logics for showing timelines and tasks in the GUI	Joakim
	Design and implement database.	Designing the structure of the database and implement it to the software.	Ahmad + Beysim
	GUI Design	Design so that timelines get an color chosen by us and that tasks get colors similar to the timeline. Also add color to the date-rectangles	Ashley
	Task/Timeline error messages	Design and implement the error messages that should occur when a faulty value is entered by the user	Alexandra
	Filter and sort visible timelines/tasks	Sort out only the timelines that is to be shown in the current view. And then sort out the visible tasks in each of those timelines.	Beysim
ImpIt5	Implement edit Timeline and edit Task	When a Timeline is double clicked a window similar to add Timeline should be opened with all info form the timeline. If user edit anything and presses Save button the Timeline should be edited. Same implementation for task as well	Beysim
	Implement show Timeline/Task info	When the mouse hovers a Timeline or Task a pop-up window should appear with the information of the Timeline or Task. When mouse moves the window should dissapear	Joakim

	Continue with database	The connection is set, in this iteration it's time to implement the database to the system.	Ahmad
	Make illegal dates in date-picker non selectable	When user add a task the start date and end date cannot be outside the timeline start date and end date, so checking if it's possible to dim all dates that isn't within the timeline.	Jonatan
	Improve error messages when adding timelines / tasks	Try to implement a more delicate way of showing that fields in AddTimeline / AddTask window is faulty than an error message as of right now.	Alexandra
	Continue with adding colors	Continue of previous iteration	Ashley
	Implement non-duration tasks	When a task has same start and end time they should look different in the view	Joakim
ImpIt6	Improving edit Timeline/Task	Improve the edit by if possible changing directly in the selected task/timeline	Joakim
	Merge the database	Conflicts in code need to be fixed to merge the database	Beysim
	Improve design	Change some design issued in meeting	Ashley
	Fix bug with selected Timeline when deleting timeline	When deleting at timeline the selected timeline woun't change which create some bugs.	Joakim
	Implement move timeline use-case	When right click a timeline and choose move both the timeline and task will be moved to new position decided by user	Beysim
	Fix that TableView updates	TableView isn't updated when timeline is edited which it should be	Beysim
ImpIt7	Bug fixes	Whole team is focusing on finding bugs and fixing them before final delivery.	

5 Risks

There is some parts of the implementation that can be considered high-risk. The most obvious risk is to manage to make logics of how to display the Timelines and Tasks in the GUI correctly. The team have some ideas on how to solve this and is confident that with some time and effort a good solution will be found. Another risk is that the application could be slow if using it with huge number of timelines and tasks if the data-structure and logics isn't well designed. To avoid this problem that will be looked into at implementation iteration 5.

Another risk for an unexperienced team is that the project of this size will be hard to link together and finish. Therefore both logic and database will be upgraded incrementally which will demand a little extra work but there will always be a working solution from previous iterations to fall back on if a more complicated solution will not work.