Project Report

TimeLine Manager

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Contents

1 Analysis

This section will let you know the background of the program *TimeLine Manager*. The program's functional requirements as well as its non-functional requirements will also be discussed.

1.1 Introduction

This section will let you know the background of the project, such as the problem of the project, meaning why you should choose TimeLine Manager as the reliable option for managing your time schedule.

1.1.1 Members in Group 3

- Ludvig Magnusson

- Jonas Eiselt

- Amir Alizadeh

- Genet Tesfaye Shiferaw

- Jovydas Urbanavicius (Project manager)

1.1.2 Version control

For our project's version control system we used a gitlab server, which is hosted on `http://vhost8.lnu.se:20131`. The project link is: `http://vhost8.lnu.se:20131/lm222ix/Project`

1.1.3 Vision

TimeLine Manager is an application for managing timelines. The purpose of the application is to make it easy for a user to keep track of multiple timelines and the events they contain. The user communicates with the application via a graphical interface, featuring two different modes: a create mode and a display mode. In the mode of creating a timeline the user can create any amount of timelines and add any amount of events to them. An event will either be a non-durational event with a set time or an event with a set duration between a start and an end time. Upon creating an event the user will set a title and a description for it as well as a time. In the display mode the user will be able to view all the created timelines and their events. The application will also feature a saving and a loading function.

1.1.4 Problem

The problem with keeping track of events that occur within specific dates - that is usually managed by using the more traditional pen and paper way - is too many to make a list. However for starters that are using TimeLine Manager a timeline is much more editable. Instead of erasing and rewriting you can simply change the events' time with a few mouse clicks.

Using TimeLine Manager also allows for having a timeline with a duration of years, with hundreds of events planned, and still be able to view it in a nice format. This would otherwise require a big paper and a lot of writing using a non-digital solution.

The saving and the loading function in our application also allows the user to backup his or her timelines, in comparison to using pen and paper.

1.1.5 Product position

The user circle of this application is very broad, ranging from children who are going to school, to people who have a tight daily schedule. All different kind of people has meetings, events and other various stuff going on in their life and sometimes its too much to keep track of it all in your head. TimeLine Manager will be of help to anyone who needs assistance with keeping track of what is going on. As stated above, this includes that TimeLine Manager can be used by private people who uses it for personal needs or the application can be used by companies as well.

1.2 Functional Requirements

This section will let the user know the functional requirements that can be expected when using TimeLine Manager.

1.2.1 Table With Functional Requirements

ID	Requirement	Priority
1	The program should have a display and a create mode.	Must have
2	Create multiple timelines with a set start and end time.	Must have
3	Add event to timeline.	Must have
3.1	Add an event with duration to a timeline (start- and end time).	Must have
3.2	Add a non-durational event.	Must have
3.3	Events added should have a title and description.	Must have
3.4	Events should be editable(time, title and description)	Must have
4	All timelines and events should be removable.	Must have
5	The display mode should show all timelines and all events in each timeline. (By, if needed, scrolling vertically and/or horizontally)	Must have
6	Events should be displayed in the timeline in a logic manner(Event closest to today displayed leftmost, event furthest away from today rightmost).	Must have
7	In display-mode the title of each event shall be shown.	Must have
8	Events should be clickable, clicking an event will open a window displaying the title, description and time for the event.	Must have
9	Saving/Loading timelines with the use of textfiles should be supported.	Must have
10	Switch between create and display modes.	Must have
11	Saving/Loading timelines with the use of a SQL database.	Optional
12	Informational text letting the user know what is the next event and how long until it takes place.	Optional

1.3 Non-functional Requirements

This section will let the user know what should be expected when using TimeLine Manager.

1.3.1 Usability

The user will communicate with the application by using a graphical user-interface. The GUI will be designed in a way that makes it easy to use even for a first time user. Any input errors made by the user will be handled with a detailed message letting the user know what went wrong.

1.3.2 Reliability

Calculations made by the program will be carefully tested to make sure results are always accurate.

1.3.3 Performance

The response time of the GUI should be no more than 3 seconds. The start-up and shutdown progress for the program should never take longer than 15 seconds.

1.3.4 Supportability

The system will require a PC running Windows, Linux or Mac. Versions of Windows OS supported is XP or newer.

2   Test Cases

Test	Requirement	How To Test	Expected Result
T1	Add new timeline with start- and end date.	Click the button for creating a timeline and enter valid data in all the fields of the pop-up window.	When all the needed data has been entered a timeline should show up on the scrollpane.
T2	Add an event with duration to a timeline (start- and end time).	Click on a timeline in the listview and click the button for creating an event. Enter valid data in all the fields of the pop-up window and make sure the checkbox is not selected.	An event should have been added to the timeline.
T3	Add an event with no duration to a timeline (start time).	Click on a timeline in the listview and click the button for creating an event. Enter valid data in all the fields of the pop-up window and make sure the checkbox is selected.	When all the needed data has been entered a timeline should show up on the scrollpane.
T4	Edit a timeline.	Click on a timeline in the listview and click the button for editing a timeline. Enter valid data in all the fields of the pop-up window.	A timeline with new data should be viewable.
T5	Edit an event.	Click on a timeline in the listview and click the button for editing an event. Enter valid data in all the fields of the pop-up window.	The edited should be shown in the timeline.
T6	Remove a timeline.	Click on a timeline in the listview and click the button for removing a timeline.	The selected timeline and its events should be removed.
T7	Remove an event.	Click on a timeline in the listview and click the button for removing an event. Select an event to be removed in the pop-up window.	The selected event should have been removed after refreshing the listview.

Test	Requirement	How To Test	Expected Result
T7	Remove an event.	Click on a timeline in the listview and click the button for removing an event. Select an event to be removed in the pop-up window.	The selected event should have been removed after refreshing the listview.
T8	Remove all existing timelines and their events.	Click *File* in the menu bar and select *Clear*.	There should be no events or timelines to view.
T9	The user shall be able to click on an event to open a popup window showing title, descriptive text and time(s) for the event.	Click on a timeline in the listview that has events. Click on an event.	When a mouse-click is detected over an event a small box should be visible with all the event's information in it.
T10	Timelines and their contents should be saved (stored).	Create a timeline with events and then restart the application in order to see the created timeline from previous session.	The timeline should still be viewable after restarting the application.
T11	The user shall be able to scroll horizontally and/or vertically if all timelines cannot fit in the display window.	Create a timeline with a very long range.	If a timeline (that doesn't fit the window size) has been created a scroller should appear.
T12	The user shall be able to add multiple (more than one) timelines with separate start- and end time.	Create many timelines (see Test 1).	The timelines should be created and be visible in the listview.
T13	The user shall be able to add any number of events to a timeline.	Create a timeline and any number of events.	The program should be able to handle any number of events.

Test	Requirement	How To Test	Expected Result
T14	The user shall be able to load timelines.	Click on a timeline in the listview.	When clicking on a timeline in the listview a timeline should be loaded to the screen.

3 Test Results

Test	Requirement	Test Result	Comments
T1	Add new timeline with start- and end date.	Pass	
T2	Add an event with duration to a timeline (start- and end time).	Pass	
T3	Add an event with no duration to a timeline (start time).	Pass	
T4	Edit a timeline.	Pass	
T5	Edit an event.	Pass	In order to see the change you have to re-select the timeline in the listview.
T6	Remove a timeline.	Pass	
T7	Remove an event.	Pass	In order to see the change you have to re-select the timeline in the listview.
T8	Remove all existing timelines and their events.	Pass	

Test	Requirement	Test Result	Comments
T9	The user shall be able to click on an event to open a pop-up window showing title, descriptive text and time(s) for the event	Pass	
T10	Timelines and their contents should be saved (stored).	Pass	The application automatically saves the data. The user doesn't need to press a save-button.
T11	The user shall be able to scroll horizontally and/or vertically if all timelines cannot fit in the display window.	Pass	
T12	The user shall be able to add multiple (more than one) timelines with separate start- and end time.	Pass	
T13	The user shall be able to add any number of events to a timeline.	Pass	
T14	The user shall be able to load timelines.	Pass	