Test Plan

Timeline-Manager

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1. Introduction

The Test Plan contains of five test phases that are located within the iterations, meaning that each iteration also has a test phase where new tests are created for the implementations for that specific iteration. But aside from the new tests all the previous tests are also performed to ensure that changes within the implementation has not affected the functionality of previous implementations.
The main goal with the tests are to ensure functionality to all requirements given by the stakeholder but also to find flaws or other errors that might need to be fixed by the developers.

2. Objectives

The purpose of the Test Plan is to clarify the Test-Cases and give structure to the Test-Phases. Another important purpose of the Test Plan is to have an overview of passed and failed tests and to clarify what the goal of the tests are.

3. Scope

The tests performed on the Timeline-Manager is both JUnit testing (automated-testing) and Manual-Testing (done by interacting with the application). The JUnit tests are created for logics and models while Manual-Testing is used for the User-Interface (buttons, popup windows, etc.). Each iteration a member of the group will be responsible for the tests and in each test-phase the following will be performed by the Tester:

- Test-Cases (New implementations)
- Overview previous Test-Cases
- Implement JUnit tests
- Perform Manual-tests and JUnit tests
- Update Test-Log

Test Class	Test-Case	Step
ApplicationControlTest	-	-
ApplicationTest	001 002 003 (Set/Get) no Test-Case	6, 7 6 7
TimelineControlTest	001 006	1, 2, 3, 4, 5, 6, 7 1, 2
TimelineTest	(Set/Get) no Test-Case	
EventControlTest	002 003 004	1, 2, 3, 4, 5, 6 1, 2, 3, 4, 5, 6, 7 1, 2, 3, 4, 5, 6

	005 007	1, 2, 3, 4, 5, 6, 7, 8 1
EventTest	(Set/Get) no Test-Case	
FileHandlerTest	008	1, 2
Manual-Tests	001 002 003 004 005 006 007 008 009	8, 9, 10, 11 7, 8, 9, 10, 11 8, 9 7, 8, 9 9 3, 4, 5, 6 2, 3, 4, 5 3, 4, 5 1, 2, 3, 4, 5

4. Strategy

The approach in testing the requirements functionality will mainly be dynamic but in addition to the dynamic tests the group has online code-review meetings. At these meetings the group members perform static tests and feedback regarding the implementation is given to the developer. Each developer also performs static analysis on their own implementation to find errors and mistakes along with raising issues for discussion within the group. The dynamic tests will be created during the specific iteration for intended implementation, but in order to prevent changes that flaws the functionality all tests will be performed again after each finished iteration.

5. Test-Log

After each finished iteration the developer responsible for the tests run the tests for all implemented code and update the pass/fail status. Failed tests will be stated in the tabular below for easy access in next iteration.

Tester	**Test-Cases ID**	**Failed Tests**	**Test-Phase**
Pranav Patel	001	-	#1
Johan Eriksson	002, 003	-	#1
Indre Kvedaraite	004, 005	-	#2
Caroline Nilsson	006, 007, 008	001 - 11 002 - 11 003 - 9 004 - 9 005 - 10 006 - 1 008 - 3	#3
Stefanos Bampovits	009	001 - 11	#4

6. Requirements

- Access to GitHub repository: Group7-1DV508/1DV508-group7
- Access to GitHub repository: Group7-1DV508/1DV508-group7-docs
- Experience/knowledge of working with JUnit

7. Risk

In order to prevent negative impacts on the project following risks have been evaluated and actions have been taken to mitigate project impacts. In the tabular below the risks and how these risks might affect the project along with group efforts to minimize the negative impacts on the project.

Risk:	Impact on Project:	Mitigation:
Misunderstandings regarding tasks or implementation within the group	Implementation delay	Have an open dialog within the group during the development process.
Changes made to the already tested implementations	Functionality flaws and errors	All tests are performed at the end of each iteration.
Insufficient tests	Hidden errors within the application. Requirements not fulfilled	Group code-review meetings where implementations, JUnit tests and Test-Cases are reviewed by the group and feedback is given.

8. Tabular (Test-Cases)

8.1. Test-Case: Add Timeline

Add Timeline	
Test Case ID: 001	Test Designed by: Pranav Patel
Test Priority(High/Med/Low): High	Test Designed Date: 2017/04/19
Test Title: Add Timeline	Test Executed by: Pranav Patel
Description: Add a Timeline to the application	Test Executed Date: 2017/04/19

Pre-conditions: App object initialized (application running)

Step	Test Steps	Test Data	Expected Result	Actual Result	Status(Pass/Fail)	Notes
1	Add timeline with correct name, start and end dates	Timeline object, string, LocalDateTime variable, LocalDateTime variable	Method returns true, timeline added	Method returned true, timeline added to timeline list	**Pass**	JUnit-Test
2	Add timeline with incorrect input for name, start and end dates	Timeline object, string, LocalDateTime variable, LocalDateTime variable	Method returns false, timeline not added	Method returned false, timeline was not added to timeline list	**Pass**	JUnit-Test
3	Check if added timeline has correct name	Timeline object, string	Method returns correct name	Method returned correct name	**Pass**	JUnit-Test
4	Check if added timeline has correct start date	Timeline object, LocalDateTime variable	Method returns correct start date	Method returned correct start date	**Pass**	JUnit-Test

5	Check if added timeline has correct end date	Timeline object, LocalDateTime variable	Method returns correct end date	Method returned correct end date	**Pass**	JUnit-Test
6	Check if added timeline is ”current”	Timeline object, String, LocalDateTime, LocalDateTime	Method returns name, start date and end date of newly added Timeline	Method returned name, start and end date of newly added timeline	**Pass**	JUnit-Test
7	Check if the ChangeListener is called when timeline is added	Timeline object, String, LocalDateTime, LocalDateTime	Variable = true	Variable was true	**Pass**	JUnit-Test
8	Add Timeline window	”Add Timeline” Button	When ”Add Timeline” is clicked window shows	Popup window did show	**Pass**	Manual-Test
9	Add Timeline window	TextFields	Add Timeline window has TextFields for name, start and end year	Window has TextFields for name, start and end year	**Pass**	Manual-Test
10	Add Timeline	String, String, String (correct input)	Visual Timeline is shown	Visual Timeline was shown	**Pass**	Manual-Test
11	Add Timeline	Incorrect years	Alert window shows	Alert window showed, But when adding second timeline without start-end, same timeline is created	**Fail**	Manual-Test

8.2. Test-Case: Add Event

Add Event	
Test Case ID: 002	Test Designed by: Johan Eriksson
Test Priority(High/Med/Low): High	Test Designed Date: 2017/04/15
Test Title: Add Event	Test Executed by: Johan Eriksson
Description: Add Event with name, description and start date.	Test Executed Date: 2017/04/15

Pre-conditions: Timeline is created

Step	Test Steps	Test Data	Expected Result	Actual Result	Status(Pass/Fail)	Notes
1	Add event with correct input for name, description and date	Event object, string, string, LocalDateTime variable	Method returns true, event added to timeline's	Method returned true, event was added to event list	**Pass**	JUnit-Test
2	Add event with incorrect input for name, description and date	Event object, string, string, LocalDateTime variable	Method returns false, event not added	Method returned false, event was not added to event list	**Pass**	JUnit-Test
3	Check if added event has correct name	Event object, string	Method returns correct name	Method returned correct name	**Pass**	JUnit-Test
4	Check if added event has correct description	Event object, string	Method returns correct description	Method returned correct description	**Pass**	JUnit-Test
5	Check if added event has correct date	Event object, LocalDateTime variable	Method returns correct date	Method returned correct date	**Pass**	JUnit-Test
6	Check if ChangeListener is called when Event is added	Event object, string, string, LocalDateTime variable	Variable = true	Variable was true	**Pass**	JUnit-Test
7	No Timeline open, Add Event	"Add Event" Button	Do not response	Does not response	**Pass**	Manual-Test
8	Timeline open, Add Event	"Add Event" Button	Add Event window shows	Add Event window shows	**Pass**	Manual-Test
9	Add Event Window, TextFields	Add Event Window	Has TextFields for name, description,	Has TextFields for name, description,	**Pass**	Manual-Test

			start and end date. ComboBox for time	start and end date. ComboBox for time		
10	Add Event	Name, Description, Start date, Time (correct input)	Event circle show up at the correct spot in the Timeline	Event circle show up at the correct spot in the Timeline	**Pass**	Manual-Test
11	Add Event	Incorrect input	Alert message shown	Alert message shown, no event is created	**Pass**	Manual - Test

8.3. Test-Case: Add Duration Event

Add Duration Event	
Test Case ID: 003	Test Designed by: Johan Eriksson
Test Priority(High/Med/Low): High	Test Designed Date: 2017/04/15
Test Title: Add Duration Event	Test Executed by: Johan Eriksson
Description: Add event with name, description, start and end date	Test Executed Date: 2017/04/15

Pre-conditions: Timeline is created

Step	Test Steps	Test Data	Expected Result	Actual Result	Status(Pass/Fail)	Notes
1	Add event with correct input for name, description, start and end dates	Event object, string, string, LocalDateTime variable, LocalDateTime variable	Method returns true, event added to timeline's	Method returned true, event was added to event list	**Pass**	JUnit-Test
2	Add event with incorrect input for name, description, start and end dates	Event object, string, string, LocalDateTime variable, LocalDateTime variable	Method returns false, event not added	Method returned false, event was not added to event list	**Pass**	JUnit-Test
3	Check if added event has correct name	Event object, string	Method returns correct name	Method returned correct name	**Pass**	JUnit-Test
4	Check if added event has correct description	Event object, string	Method returns correct description	Method returned correct description	**Pass**	JUnit-Test
5	Check if added event has correct start date	Event object, LocalDateTime variable	Method returns correct start date	Method returned correct start date	**Pass**	JUnit-Test
6	Check if added event has correct end date	Event object, LocalDateTime variable	Method returns correct end date	Method returned correct end date	**Pass**	JUnit-Test
7	Check if ChangeListener is called when Event is added	Event object, string, string, LocalDateTime variable	Variable = true	Variable was true	**Pass**	JUnit-Test
8	Add Event	Name, Description, Start date, Start time, End date, End time	Event circle show up at the correct spot in the Timeline	As expected	**Pass**	Manual-Test

		(correct input)	and duration bar shows when circle is hoovered			
9	Add Event	Incorrect input	Alert message show	Alert message shown, no event is created	**Pass**	Manual-Test

8.4. Test-Case: Edit Event

Edit Event	
Test Case ID: 004	Test Designed by: Indre Kvedaraite
Test Priority(High/Med/Low): High	Test Designed Date: 2017/04/22
Test Title: Edit Event	Test Executed by: Indre Kvedaraite
Description: Editing existing event, changing its name, date and description	Test Executed Date: 2017/04/22

Pre-conditions: Timeline and Event is created

Step	Test Steps	Test Data	Expected Result	Actual Result	Status(Pass/Fail)	Notes
1	Edit event's name with correct input	Event object, string	Method returns true, event's name is changed	Method returned true, event's name changed	**Pass**	JUnit-Test
2	Edit event's description with correct input	Event object, string	Method returns true, event's description changed	Method returned true, event's description changed	**Pass**	JUnit-Test
3	Edit event's date with correct input	Event object, LocalDateTime variable	Method returns true, event's date changed	Method return true, event's date changed	**Pass**	JUnit-Test
4	Edit event's name with empty string	Event object, empty or null string	Method returns false, event's name not changed	Method returned false, event's name was not changed	**Pass**	JUnit-Test
5	Edit event's description with empty string	Event object, empty or null string	Method returns false, event's description not changed	Method returned false, event's description was not changed	**Pass**	JUnit-Test
6	Edit event's date with empty LocalDateTime variable	Event object, null LocalDateTime variable	Method returns false, event's date not changed	Method returned false, event's date was not changed	**Pass**	JUnit-Test
7	Event Information	Event Circle	When Event Circle is clicked a window with the Event	Window with the Event information shows	**Pass**	Manual-Test

			information shows			
8	Event Information Window	”Edit” Button	When ”Edit” is clicked, TextFields become editable	TextFields become editable	**Pass**	Manual-Test
9	Edit Event	Event View	When Event is edited, circle placement, and information is updated	Event edited successfully, able to switch between duration and non duration, event placed correctly	**Pass**	Manual-Test

8.5. Test-Case: Edit Duration Event

Edit Duration Event	
Test Case ID: 005	Test Designed by: Indre Kvedaraite
Test Priority(High/Med/Low): High	Test Designed Date: 2017/04/22
Test Title: Edit Duration Event	Test Executed by: Indre Kvedaraite
Description: Editing existing event, changing its name, start and end dates and description	Test Executed Date: 2017/04/22

Pre-conditions: Timeline and Event is created

Step	Test Steps	Test Data	Expected Result	Actual Result	Status(Pass/Fail)	Notes
1	Edit event's name with correct input	Event object, string	Method returns true, event's name is changed	Method returned true, event's name changed	**Pass**	JUnit-Test
2	Edit event's description with correct input	Event object, string	Method returns true, event's description changed	Method returned true, event's description changed	**Pass**	JUnit-Test
3	Edit event's start date with correct input	Event object, LocalDateTime variable	Method returns true, event's start date changed	Method returned true, event's start date changed	**Pass**	JUnit-Test
4	Edit event's end date with correct input	Event object, LocalDateTime variable	Method returns true, event's end date changed	Method returned true, event's end date changed	**Pass**	JUnit-Test
5	Edit event's name with empty string	Event object, null or empty string	Method returns false, event's name not changed	Method returned false, event's name didn't change	**Pass**	JUnit-Test
6	Edit event's description with empty string	Event object, null or empty string	Method returns false, event's description not changed	Method returned false, event's description didn't change	**Pass**	JUnit-Test
7	Edit event's start date with empty LocalDateTime variable	Event object, null LocalDateTime variable	Method returns false, event's start date not changed	Method returned false, event's start date didn't change	**Pass**	JUnit-Test
8	Edit event's end date with empty	Event object, null	Method returns false, event's end	Method returned false, event's	**Pass**	JUnit-Test

	LocalDateTime variable	LocalDateTime variable	date not changed	end date didn't change		
9	Edit Event	Event View	When Event is edited, circle placement, duration bar and information is updated	When Event is edited, circle placement, duration bar and information is updated	**Pass**	Manual-Test
10	Edit Event	Incorrect input	Alert Window	Alert shown, no event is created before or after timeline	**Pass**	Manual-Test

8.6. Test-Case: Delete Timeline

Delete Timeline	
Test Case ID: 006	Test Designed by: Caroline Nilsson
Test Priority(High/Med/Low): Medium	Test Designed Date: 2017/05/01
Test Title: Delete Timeline	Test Executed by: Caroline Nilsson
Description: Delete an existing timeline from both the Timeline Manager and the XML-File if the Timeline has been saved.	Test Executed Date: 2017/05/02

Pre-conditions: Timeline and Event is created

Step	Test Steps	Test Data	Expected Result	Actual Result	Status(Pass/Fail)	Notes
1	Delete saved Timeline	Timeline	Timeline is removed from ArrayList of open timelines, XML-File is deleted	N/A	**Fail Not implemented**	JUnit-Test
2	Delete non-saved Timeline	Timeline	Timeline is removed from ArrayList with open timelines	Timeline was removed from ArrayList	**Pass**	JUnit-Test
3	Delete Timeline: confirmation window	“Delete Timeline” Button	When clicked a confirmation popup window show	Conformation window shows	**Pass**	Manual-Test
4	Conformation window (Timeline), Buttons	Conformation window: “Ok” Button	When “Ok” is clicked the timeline is deleted and does not show to the user.	“Ok” = timeline deleted	**Pass**	Manual-Test
5	Conformation window (Timeline), Cancel Button	Conformation window: “Cancel” Button	When “Cancel” is clicked timeline resumes before delete button was clicked	“Cancel” = resumes at timeline	**Pass**	Manual-Test

6	Delete Timeline (View Update)		When a timeline is deleted the View shall not contain the timeline	Timeline is removed from the View (empty if no timelines are open otherwise the first one shows)	**Pass**	Manual-Test

8.7. Test-Case: Delete Event

Delete Event	
Test Case ID: 007	Test Designed by: Caroline Nilsson
Test Priority(High/Med/Low): Medium	Test Designed Date: 2017/05/01
Test Title: Delete Event	Test Executed by: Caroline Nilsson
Description: Delete an Event from Timeline.	Test Executed Date: 2017/05/02

Pre-conditions: Timeline and Event is created

Step	Test Steps	Test Data	Expected Result	Actual Result	Status(Pass/Fail)	Notes
1	Delete Event from timeline	Event	Event is removed from timeline ArrayList of events	Event was removed from ArrayList	**Pass**	JUnit-Test
2	Delete Event confirmation window	Delete event button	When delete event is clicked, a confirmation window shows to the user	Confirmation window shows to the user	**Pass**	Manual-Test
3	Confirmation Window (Event) Buttons	Confirmation Window: “Ok” Button	When “Ok” is clicked the event is deleted,	“Ok” = event deleted	**Pass**	Manual-Test
4	Confirmation Window (Event) Buttons	Confirmation Window: “Cancel” Button	When “Cancel” is clicked resumes at event information window	“Cancel” = resume at event information	**Pass**	Manual-Test
5	Event Deleted (View Update)		When event has been deleted, it no longer shows to the user and remaining events are aligned properly	Event is no longer visible. Remaining events are aligned correctly	**Pass**	Manual-Test

8.8. Test-Case: Save and Load Timeline

Save & Load Timeline	
Test Case ID: 008	Test Designed by: Caroline Nilsson
Test Priority(High/Med/Low): Medium	Test Designed Date: 2017/05/01
Test Title: Save and Load Timeline	Test Executed by: Caroline Nilsson
Description: Saving a Timeline and the Events belonging to the Timeline. Load Timeline from XML-file	Test Executed Date: 2017/05/01

Pre-conditions: Timeline and Event is created

Step	**Test Steps**	**Test Data**	**Expected Result**	**Actual Result**	**Status(Pass/Fail)**	**Notes**
1	Save timeline to an XML-file	Timeline, File	XML-File contains Timeline and Events belonging to the Timeline	XML-File contains the saved Timeline and Events	**Pass**	JUnit-Test
2	Load timeline from an XML-file	File	Timeline with correct input is created	Timeline has been created from XML-File with correct input for Timeline and Events	**Pass**	JUnit-Test
3	Save timeline, interrupted by pressing cancel in FileChooser	Timeline, File = null	No alert window, no exception	No alert window	**Pass**	Manual-Test
4	Load timeline with incorrect File path	File = non XML-File	Can't pick file without .xml	Not able to choose files except XML-File	**Pass**	Manual-Test
5	Load timeline with correct File path	File	Timeline and Events shows to the user	Loaded timeline is added to the view.	**Pass**	Manual-Test

8.9. Test-Case: General view

General view	
Test Case ID: 0089	Test Designed by: Stefan Bampovits
Test Priority(High/Med/Low): Medium	Test Designed Date: 2017/05/07
Test Title: General view	Test Executed by: Stefan Bampovits
Description: The general view once the application is started	Test Executed Date: 2017/05/08

Pre-conditions: None

Step	Test Steps	Test Data	Expected Result	Actual Result	Status(Pass/Fail)	Notes
1	Run application by executing jar file	Main UI window	The application starts successfully by displaying main UI	Main UI is displayed	**Pass**	Manual - Test
2	Check main UI window buttons	“Add Timeline” “Delete timeline” “Add event” “Load Timeline” “Save Timeline”	Add, delete, save timeline and add event buttons are located in main UI and displayed	All buttons have been displayed correctly	**Pass**	Manual - Test
3	Check Main UI Window Help Button View and Functionality	“ ? ” Button	The “ ? “ (Help) Button is displayed in the Main UI Window and opens a new window when button is clicked	The button is displayed correctly and opens a new window successfully	**Pass**	Manual-Test
4	Check Main UI Window Timeline ComboBox View and Functionality	“Choose Timeline” ComboBox	ComboBox is displayed in the Main UI Window and displays a new timeline when one of the timelines is loaded	The ComboBox is displayed and works successfully	**Pass**	Manual-Test
5	Check Main UI Window ScrollPane	“ScrollTimeline” ScrollPane	The ScrollPane is located in the Main UI Window and	The ScrollPane is displayed and is functioning	**Pass**	Manual-Test

			displays a current “default” timeline with events