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Travlendar+ project Jerkenhag, Kverne, Rebner

Acceptance Testing Document

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1 Project Group Information

These are the main info about the project we have analyzed:

Authors

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- Alessandro Pina
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GitHub Repository: **link**

Reference documents considered in order to redact this document:

- RASD document **Repository link**
- DD document **Repository link**
- Implementation document **Repository link**

2 Installation

In general the instructions were clearly presented but we did encounter a lot of problems setting up the project following them. We never got the APK-test going due to a error with AndroidJpsBundle which was complaining about a missing bundle which we could not fix, we tried this both with Android Studio 2.3 and 3.0.1 without any success, this was after trying to fix the APK for a very long time due to the module not being affected by adding the APK to the rest of the project.

We instead downloaded the whole project which we after a while got working and ran via the emulator as proposed in the guide. We could also ran the APK-file on a Samsung S6, Android 7.0, which we could then use to see the connection between the two devices via the database since we could log into the same account, even though we got thrown out if we tried to do it simultaneously which was a good feature.

Since we did experience some problems with the connection to the server we also tried setting up a local server but following the instructions we could not connect to it.

3 Acceptance Test Cases

We have tested the implemented user stories as stated in the ITD delivery. Since the document did not include any detailed test cases we made our own, based on their documentation from RASD, DD and ITD.

For this we have used the implemented tested requirements stated in the ITD document and mapped them to the goals we deemed that they corresponded to. The requirements all have the same notation, Rxx. The test cases made up by our group is called ATDTx. For some tests we felt that they either could not be carried out in a convenient way within the application or that they were already satisfied by a previous test. In these cases we added a comment to the test detailing our thought process.

Figure 1: UC1 Registration

Test ID	ATDT1
Description	Check if we are able to create a user profile.
Input specification	Fill in all the required fields during log in.
Expected Result	Be logged in and have a profile.
Actual Result	We were able to login and get a profile.
Test Status	Success

Figure 2: UC2 Login

Test ID	R1
Description	The system checks if the e-mail inserted is real
Input specification	We entered some variations of invalid email addresses.
Expected Result	The application should deny the entry.
Actual Result	The application denied the entry by saying that the email address entered was invalid.
Test Status	Success

Test ID	R2
Description	A user cannot sign up with the same e-mail twice
Input specification	We tried creating a new user with a previously used email address.
Expected Result	The application should deny the creation of the user.
Actual Result	The application denied the creation of the user by saying email already in use.
Test Status	Success

Test ID	R3
Description	E-mail and password inserted must be correct.
Input specification	We tried entering incorrect combinations of email and password, i.e too short password, email address missing @ notation.
Expected Result	The application should deny log in.
Actual Result	The application warned that the combination was incorrect.
Test Status	Success

Test ID	R4
Description	Incorrect credentials prevent the user from logging in
Input specification	We tried logging in with an incorrect password for an existing user.
Expected Result	The application should reject the log in.
Actual Result	The application rejected the log in.
Test Status	Success

Figure 3: UC3 View calendar

Test ID	ATDT2
Description	Calendar displays events correctly according to their start and end time.
Input specification	We created an event for a certain time period.
Expected Result	The application should display the event at the right time.
Actual Result	The event was displayed at the right time.
Test Status	Success

Figure 4: UC4 Create event

Test ID	R5
Description	A user must specify all mandatory fields to add the new event
Input specification	We tried adding an event without filling in certain fields.
Expected Result	The application should reject the creation of the event.
Actual Result	The application rejected the creation of the event and indicated which fields were mandatory.
Test Status	Success
Comments	The application does first show which fields are mandatory after a failed attempt of creating an event.

Test ID	R6
Description	The system reserves the specified time-slot for the event
Input specification	We tried creating an event at the same time as an already pre-existing event.
Expected Result	The application should show that the events overlap.
Actual Result	The application creates the event but places it in an overlap column as a non-active event.
Test Status	Success

Test ID	R7
Description	The system warns the user if the inserted event overlaps with an already existing one.
Input specification	We tried creating an event at the same time as an already pre-existing event.
Expected Result	The application should warn the user that the new event overlaps.
Actual Result	The application places the new event in an overlap column as a non-active event.
Test Status	Success
Comments	The application does not warn the user that the event overlaps as a notification but it is visible in the calendar.

Figure 5: UC5 Create personalized event profiles

Test ID	R12
Description	The system does not consider paths that violate constraints on travel means defined by the user.
Input specification	We created 2 different preferences for travelling and tried to see if the event would display different information regarding the travel. We used 'Normal' preference and one customized with only the travel mean 'walking' selected.
Expected Result	The application should generate different estimations of travel time.
Actual Result	The application showed different information regarding the event for the 2 preferences showing that the application takes into consideration the constraint.
Test Status	Success

Test ID	R13
Description	The system checks user preferences to decide which feasible travel path is the best.
Comments	To the best of our knowledge the application generates the best path but we have no way of confirming this within the application.

Test ID	R15
Description	Appropriate travel means must be suggested according to the type of event that they are related to.
Input specification	We created a preference type that included only walking. (The type of event is the same as the type of preference.)
Expected Result	The application should show that the travel mean for the event is walking even though we know that other means would be preferred otherwise.
Actual Result	The application showed that the travel mean was by foot.
Test Status	Success

Test ID	R23
Description	The system requires minimum and maximum length allowed for a path to impose a constraint on a travel mean.
Input specification	We put a constraint on maximum length for walking, very low at 2 km. We then tried to generate an event using the walking preference which we knew was further than 2 kms.
Expected Result	The application should notify the user that this event is not feasible.
Actual Result	The application creates the event but puts it into the overlapping column.
Test Status	Success
Comments	The application never specifies why the event was not able to be created.

Test ID	R24
Description	The system requires an interval of time allowed to impose a constraint on a travel mean.
Input specification	We tried to create an event that started 15 minutes after the previous event ended which we knew would be to short amount of time to reach the next event.
Expected Result	The application should say that the event is not reachable in that time.
Actual Result	The application placed the event in the overlapping column.
Test Status	Success
Comment	We would have liked to to be able to see how long the travel time would have to be even though it is not scheduled and placed in the overlapping column.

Test ID	R25
Description	The system does not consider solutions that violate constraints.
Comments	This requirement is hard to falsify, however in Test ID R23 we could confirm that it did not allow for this particular violation.

Test ID	R26
Description	The system allows the user to specify one or more travel means that cannot be used.
Input specification	We created a preference with only the travel mode walking.
Expected Result	The application should accept the preference.
Actual Result	The application accepted the preference.
Test Status	Success
Comments	It is possible to remove all transport modes from a preference. However when then creating an event with that preference the application crashes.

Test ID	R27
Description	The system does not consider solutions that include deactivated travel means.
Input specification	We used a preference type which only had walking activated and created an event for this preference.
Expected Result	An event created with this preference should only show walking.
Actual Result	The event created with this preference only displayed walking.
Test Status	Success

Figure 6: UC6 Define flexible breaks

Test ID	R9
Description	The system allows the user to specify a flexible interval and a minimum amount of time to schedule a break.
Input specification	When adding an event we select 'Break Event' instead of 'Normal Event', we are able to create a break event to the calendar.
Expected Result	The application should a break to the calendar.
Actual Result	The application adds a time slot as a break to the calendar.
Test Status	Success

Figure 7: UC9 Add ticket possessed

Test ID	R32
Description	The system allows the user to specify all the tickets he already owns.
Input specification	We selected 'Add ticket' and specified which travel means and during which time period we could use this ticket.
Expected Result	The application would store the ticket correctly with our inputed information.
Actual Result	The application stored the ticket correctly.
Test Status	Success

Figure 8: UC10 Obtain feasible travel paths - Without the alternatives paths

Test ID	R10
Description	Every travel path proposed must be feasible in the available time (the interval between two consecutive events).
Comments	This test was satisfied in Test ID R24.

Test ID	R11
Description	If the travel involves two or more travel means, the starting location of the first proposed travel path and the ending location of the last proposed travel path must coincide respectively with the starting location and the ending location of the whole planned travel.
Input specification	Create a trip that requires more than one travel type.
Expected Result	The starting location and the ending location should coincide with the starting and ending location of the travel.
Actual Result	No path found.
Test Status	Failed
Comment	We tried to create a trip with several travel means, however the application only responded with no path found.

Test ID	R35
Description	The system provides information about time of departure and arrival of the proposed travels.
Input specification	Created an event in between two locations.
Expected Result	A travel time and mean from starting location to destination.
Actual Result	A list of information regarding time of departure, the location of which and the travel means to get to the destination and the time of which one would arrive.
Test Status	Success

Figure 9: UC11 Choose between overlapping events

Test ID	R6
Description	The system reserves the specified time-slot for the event.
Input specification	We created an event which overlaps with another event. We opened the information regarding the event and clicked 'schedule' of the event currently situated in the 'overlap' column.
Expected Result	The event in the 'overlap' column moves to the 'scheduled' column and the event which was overlapping was now moved to the 'overlap' column.
Actual Result	The chosen event is moved to the 'scheduled' column whereas the other event were moved to 'overlap' column.
Test Status	Success

Test ID	R14
Description	The system warns the user if it is not possible to arrive at an event location before its starting time.
Input specification	Created an event with a preference type including only 'walking' which we limited to 2 km but we chose two locations which we knew were further than 2 kilometers from each other.
Expected Result	A warning that the event would not be reachable.
Actual Result	The event was placed in the 'overlapping' column without any warnings. When trying to schedule the event nothing happens, even after increasing the max walking distance. (This may be because we did receive warnings before when trying to create another event that Google Maps was not reachable, we did not receive such a warning in this case though.)
Test Status	Failed

Test ID	R20
Description	The combination of the travel paths proposed for the day must be feasible in the allotted time.
Comments	Given that Test ID R6 was satisfied it is reasonable to assume that this will hold for a full day of events.

Test ID	R21
Description	If there are multiple events at the same time the system will propose in the schedule only the first event added.
Input specification	We tried creating two events, both starting and ending on different times but still in collision with an already created event.
Expected Result	The firstly created event should still be the one chosen by the system.
Actual Result	The two later created events were placed in 'overlapping' with the first event still marked as scheduled.
Test Status	Success

Test ID	R22
Description	If the user forces into the schedule an event that overlaps with events already present in the schedule, these are removed from the schedule.
Input specification	We created an event which we knew was overlapping with an already existing event and then clicked 'schedule' on the newly created event.
Expected Result	The newly created event should be placed as scheduled and the older event should be moved to the 'overlapping' column.
Actual Result	The two events switched columns.
Test Status	Success

Test ID	R30
Description	If there is enough time for a break, the system reserves it within the specified flexible interval.
Input specification	We created a break where there was already an event, but it did have time for the break. We then created a event which should make the break unfulfilled.
Expected Result	The break should be marked as unfulfilled.
Actual Result	The newly created event was put as 'overlapping'.
Test Status	Success
Comments	We marked this as successful since it did not let the newly created event take place, we did however expect the event to be created but the break to be moved or marked which did not happen.

Test ID	R31
Description	If there is not enough time into the flexible interval specified, a warning is thrown.
Input specification	We created a break where we knew it would not have the time needed to be fulfilled.
Expected Result	A warning that the break is unsatisfiable.
Actual Result	The break was put in the 'overlapping' column.
Test Status	Success

Figure 10: UC12 Edit event - Only in Application server, not yet available on Android app

Test ID	ATD3
Description	Editing event in the application server
Comments	We could not try this since the deployment of the application server was troublesome.

Figure 11: UC13 Delete event

Test ID	
Description	Deleting an already existing event.
Input specification	We created multiple events, both scheduled and overlapping. We then tried to directly delete them from the calendar and also deleting them from the event information window.
Expected Result	The events to be deleted.
Actual Result	The events were deleted in a satisfactory manner.
Test Status	Success

Figure 12: UC14 Edit personalized event roles

Test ID	
Description	Creating and editing a preference type.
Input specification	Created a new type and set a name to it. Went out and back in and edited some of the transport options. We then created an event with this type.
Expected Result	The new preferences to be saved and the event to take these into consideration.
Actual Result	The preferences were saved as expected and the event took them into consideration when creating a event.
Test Status	Success

Figure 13: UC15 Delete personalized event proles

Test ID	
Description	Remove a custom preference type from the list.
Input specification	Go to preferences and remove one of the types.
Expected Result	The type to be removed.
Actual Result	The type was removed both from preferences and in the list in the creation of an event.
Test Status	Success

4 Additional Comments

The project is well executed, it contains good documentation and it is a professional application which is very aesthetically appealing, even if we did miss a few features. We can tell that the group worked a lot of hours producing the outcome. Our concern was mostly that it was a little bit difficult to read the requirements and link them to the test cases, as we did not find a list of the test cases in specific, just the requirements being tested. We have some considerations regarding the prototype:

- Every location needs to be saved and added to the users profile and can only then be selected in the journey creation. While the visual map for all locations is a nice feature, having to add all locations permanently is not optimal for unique events when the destination will not be travelled to again.
- When creating an event we get a lot of useful information by clicking the event but we are not able to see the actual route with the different stops along the way.
- We are not able to create recurring breaks.
- We would like to see the option of changing the route to an event out of some options proposed by the application.

We also, as mentioned, experienced some troubles with the connections. Sometimes we got the message that there was no internet, even though we knew it was available since we both tried on 4G with full coverage and also via WiFi, on both there were other internet communications working. This problem was both on the phone and the computer emulation so we highly suspect it is on the server side, due to the problems of setting up the local server we tried to work with the situation.

We also got the message that the Google Maps service was unreachable, we could change our preferences and such but when we did try to do anything which needed the calculation of routes or such the action would abort.This might have affected the outcome of some tests since we tried to perform the tests anyhow, we could for example test that it was possible to add a ticket but not actually test if the transit were affected by it.

