

Project requirements document

Project name: Travellan

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0. Document versions

1.0 – document created according to new requirements

1. Project components (project products)

- Prototypes of application
- Project board on Jira
- GitHub repository
- Database on Firebase
- Project documentation
- Mobile app for Android

2. Project boundaries

- Users are supposed to have access only to their own trips due to security reasons.
- Users have to have an internet connection to use some functionalities that require accessing external data (map, weather update, adding accommodation).
- Android at least 4.1 or iOS at least 10.0 due to React Native requirements.
- There will be no strict guiding, just proposed route shown on map.
- No booking or payment will be possible in the application.
- Ticket and reservation PDFs won't be parsed because of too many possible forms of data.
- An iOS application won't be configured and deployed because of maintenance costs.
- Application has to be intuitive enough to not include a user manual.

3. List of functional requirements

Functionalities offered by the software are listed below in the form of User Stories.

As a user,

1. I want to see the list of all existing trips to know what trips I created.
2. I want to create a new trip for it to be stored in my trips.
3. I want to see details of my trip to know more about it.
4. I want to change general information about my trip when I made a mistake or something changed.
5. I want to delete a trip when I don't need it anymore.

TRANSPORT

6. I want to have all transport tickets stored in one place for it to be more convenient.
7. I want to scan a QR code and save it in my ticket information for easier access to it.
8. I want to attach a PDF file to my transport so that I don't have to search for it in my phone's memory.
9. I want to view my transport ticket in the form of a PDF from the application for convenience.

ACCOMMODATION

10. I want to have my accommodation information stored in one place for it to be more convenient.
11. I want to see details about my accommodation.
12. I want to save information about the hotel I booked from Booking.com in the application.
13. I want to add hotel information to the application by passing its name and/or address.
14. I want to attach a PDF file to my accommodation so that I don't have to search for reservation information in my phone's memory.
15. I want to view my reservation in the form of a PDF from the application for convenience.

BUDGET

16. I want to assign a budget to my trip.
17. I want to see my spending statistics and history to monitor my budget during the trip.
18. I want to subtract from or add an amount to my budget.

19. I want to be able to add and delete different currencies for me to monitor in the budget to distinguish between currencies.

WEATHER

20. I want to know what the weather will be like during my trip.

NOTES

21. I want to create notes necessary for my trip.

22. I want to delete a note when I don't need it.

23. I want to edit a note so that I can correct a mistake or change some information.

24. I want to distinguish between different types of notes so that I can easily organize them.

25. I want to filter through my notes by category to find the note I want to read.

MAP

26. I want to see a trip on an interactive map.

27. I want to add and delete points of interest.

28. I want to add and delete routes between markers.

29. I want to see details of my stops to know more about them.

30. I want to search for an address or a place.

31. I want to see my localization.

32. I want to see my accommodation on the map to know how to get to the place.

NOTIFICATIONS

33. I want to get a notification for:

- a. weather forecast to know what the weather will be like,
- b. departure to get there on time,
- c. some time before departure to pack up.

34. I want to set my custom scheduled notifications.

35. I want to be able to disable notifications so that they don't bother me.

AUTHENTICATION

36. I want to register an account so that I have access to my trips from multiple devices.

37. I want to register and log in via Facebook and Google account.

38. I want to be able to log in and log out of the application to access or change my accounts.

39. I want to not have to log in everytime I open an application.

40. I want to change my password if I registered through email in case I forget it.

RECOMMENDATIONS

41. I want to get recommendations on where to go to have a better trip.

42. I want to get a recommendation on which transport to choose to get to my destination.

43. I want to get a recommendation on which hotel to choose for booking.

INTEGRATION

44. I want to see saved travel dates in an external calendar app to have the information in several places.

4. List of non-functional requirements

- Technologies:

Application is supposed to:

- be developed for Android,
- allow accessing users trips from multiple devices,
- be usable without internet connection except for some features,
- have access to user's calendar,
- collect and present accommodation information.

Application will be integrated with:

- **OpenWeatherMap** through fetch requests for destination coordinates.
- **Google Maps Platform** for displaying and interacting with a dynamic map.
- **LocationIQ** and **TomTom** for getting coordinates of selected destination and through map feature (search autocomplete, address/place search).
- **Unsplash** for fetching images related with the trip.
- **Booking.com** through hotel page parsing (the hotel's url will be shared to the application).
- **Google Calendar** to save trips in the user's calendar.
- **Firebase** for user authentication, data storing and manipulation.

- Quality:

- application will be tested both by the developers team and other external testers,
- application will be consulted with target group,
- interface created in accordance with Material Design and Human Interface Guidelines,
- application has to be intuitive.

5. Measurable implementation indicators

- Applications will be downloaded at least 20 times on Google Play.
- At least 20 trips will be created using the application. Those trips will be detailed.
- At least 65% of expected functionalities will be implemented, which includes: recommendations (42, 43), notifications (35), notes (23, 25) and trip flow (4) - this is the core functionality scope expected by the target group.
- In usability tests application on average will be graded at least 4.5/5 regarding intuitivity.

6. Project acceptance criteria for the first semester

7. Project acceptance criteria for the second semester of work

Required:

Functionalities:

- **1-3** - accommodation,
- **10-15** - accommodation,
- **33-34** - notifications,
- **36-40** - authentication,
- **44** - Google Calendar integration.

Other:

- Application tested by team and 3 external users.
- Lack of critical bugs causing the application to be unusable.
- Product created in time and according to requirements.

Expected:

Functionalities:

- **4** - trips,
- **23, 25** - notes,
- **28-32** - map,
- **35** - notifications,
- **42, 43** - recommendations.

Other:

- Application published in Google Play.
- Project website.
- Onboarding/development documentation.
- A short video explaining application functionalities.

Planned:

- **41** - recommendations
- Application published in AppStore.

8. Organization of team work

Team works in accordance with Kanban methodology and uses the Kanban board on Jira with scrum-like sprints. Decision for this was made due to supervisors requirements and to give more freedom in choosing further steps in development of application. Code is stored on GitHub repository.

Client: Specific users chosen by us to guide the development process. Contact is conducted using video calls, due to pandemic state, once a month.

Developers team:

- Kowalczyk Maciej – notes, weather view, weather API
- Olejniczak Weronika – prototype, creating trip, my trips, map, refactorization, code review
- Piekarski Bartosz – QR code, ticket attachment, Firebase, offline mode
- Skrzypczak Konrad – documentation, contact with client, usability test, budget

Task lifecycle:



9. Project risks

- Working remotely due to pandemic state – consulting the client by videoconference.
POTENTIAL IMPACT: low, **RISK FACTOR:** high
- Application has to be tested on previous trips.
POTENTIAL IMPACT: low, **RISK FACTOR:** high
- Hard stated dates for presenting parts of projects.
POTENTIAL IMPACT: medium, **RISK FACTOR:** medium
- Unfamiliarity with technologies – developers are learning along creation.
POTENTIAL IMPACT: high, **RISK FACTOR:** low
- Lack of exact, real client – we will select specific users acting as a client.
POTENTIAL IMPACT: medium, **RISK FACTOR:** high
- Some APIs like Trivago API are unavailable to small projects.
POTENTIAL IMPACT: medium, **RISK FACTOR:** high
- Small budget limits available options.
POTENTIAL IMPACT: high, **RISK FACTOR:** high

- Possible reduced interest in traveling due to pandemic state.
POTENTIAL IMPACT: medium, RISK FACTOR: medium

10. Milestones

2nd semester (Jul - Jan)

1. First release:

- Accommodation functionality:
 - accommodation details view,
 - adding accommodation by name/address,
 - sharing booking.com hotel page to save the data in the trip.
- Notifications functionality.
- Google Calendar integration functionality.
- Authentication and authorization functionality.
- Client application and Firebase security.

2. Second release:

- Accommodation functionality: attaching PDF.
- Recommendations functionality for:
 - accommodation,
 - transport.
- Map functionality.
- Functionalities enhancement:
 - general trip flow - editing trip details,
 - notes - filtering and editing notes.

3. Publishing in Google Play.

4. Presentation of final application.