Entwicklung Mobiler Anwendung WS2022/23

Documentation

Project Travel World

made by

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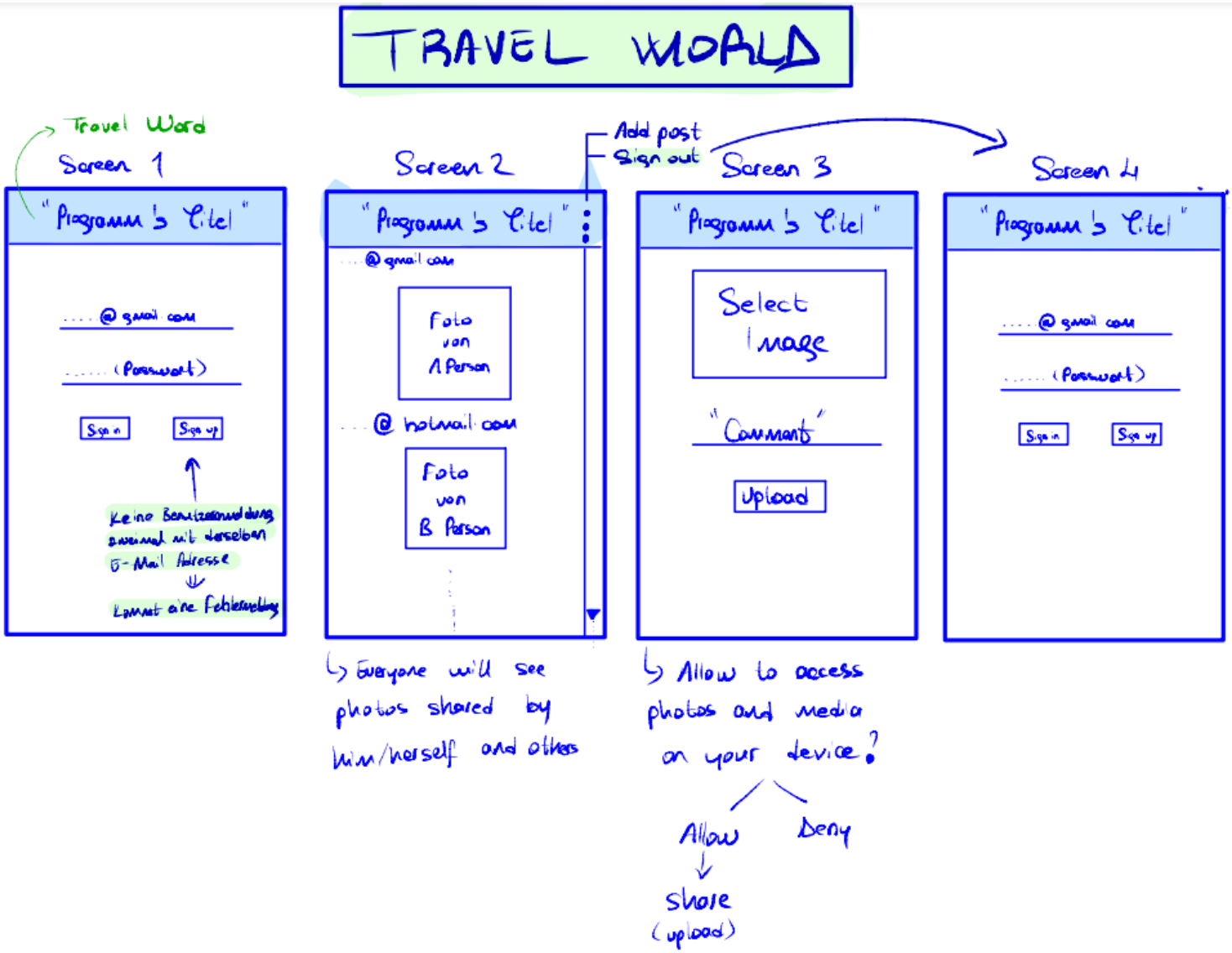
In my Projekt:

- **Multiple screens**
- **User Generated Content (User can enter data / content that is stored)**
- **App displays a list / grid of objects (recycler view)**
- **App is working offline (with a local data base)**
- **Test in Firebase Test Lab**
- **User login (e.g., Firebase Auth)**
- **App syncs data to a data base in the cloud**
- **User Permission to choose a Foto from Galery**
- **App has crashlytics / analytics in Firebase**

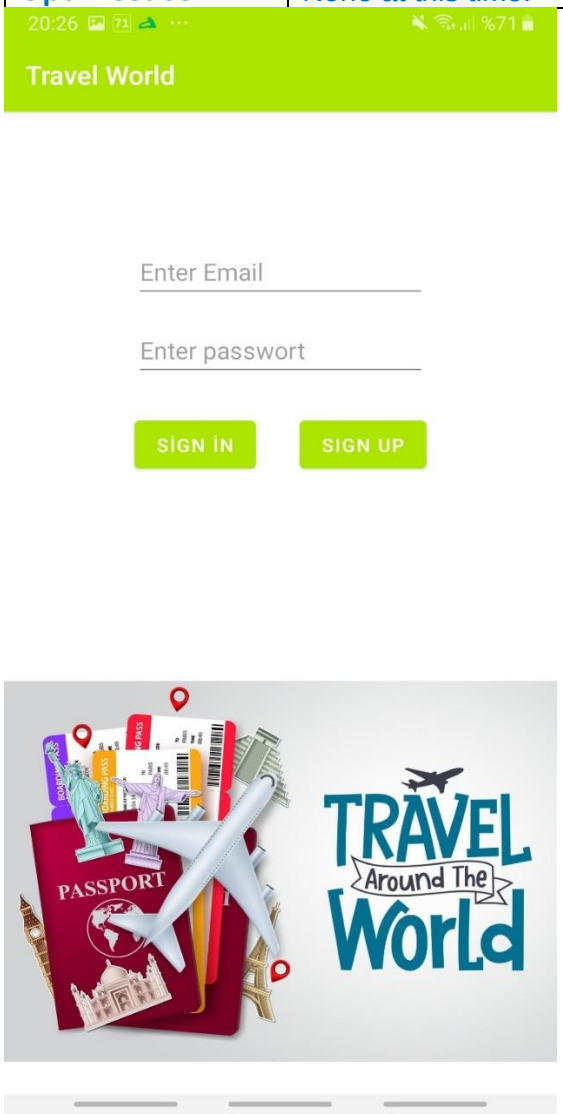
Project Idea (Design)


TRAVEL WORLD
Travel Word
Screen 1
"Programm's Titel"
.....@gmail.com
.....(Passwort)
Sign in
Sign up
Keine Benutzeranmeldung zweimal mit derselben E-Mail Adresse
Kommt eine Fehlermeldung
Screen 2
Add post
Sign out
"Programm's Titel"
.....@gmail.com
Foto von A Person
.....@hotmail.com
Foto von B Person
Everyone will see photos shared by him/herself and others
Screen 3
"Programm's Titel"
Select Image
"Comment"
Upload
Allow to access photos and media on your device?
Allow
Deny
Share
(upload)
Screen 4
"Programm's Titel"
.....@gmail.com
.....(Passwort)
Sign in
Sign up

GENERAL

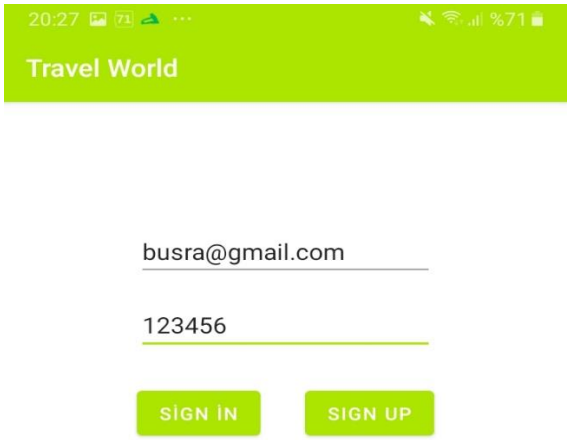
G1: Home page

Home Page	
ID	HOME
Priority	Core
Description	The homepage should have buttons for users to sign in and sign up to the application.
Additional Aspects	Attention has been paid to the user interface design to make it user friendly and easy to use.
Wireframe(s)	It looks like in the picture below.
Required	Access to the sign in and sign up pages.
Dependencies	The sign in page and sign up page need to be created before the homepage can be fully implemented.
Definition of Done / Acceptance Criteria	The sign in and sign up buttons are functioning properly and lead to the correct pages. The design and layout of the homepage meets the desired specifications.
Developer Tasks	Create the user interface for the homepage. Implement the sign in and sign up buttons. Test the functionality of the buttons.
Open Issues	None at this time.



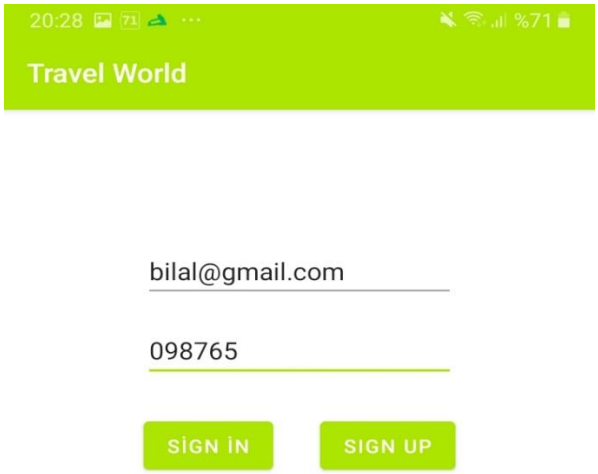
G2: Sign In Page

Short Title of User Story	
ID	SIGNIN
Priority	Core
Description	The homepage should have buttons for users to sign in and sign up to the application.
Additional Aspects	Attention has been paid to the user interface design to make it user friendly and easy to use.
Wireframe(s)	It looks like in the picture below.
Required	Access to the sign in and sign up pages.
Dependencies	The sign in page and sign up page need to be created before the homepage can be fully implemented.
Definition of Done / Acceptance Criteria	The sign in and sign up buttons are functioning properly and lead to the correct pages. The design and layout of the homepage meets the desired specifications.
Developer Tasks	Create the user interface for the homepage. Implement the sign in and sign up buttons. Test the functionality of the buttons.
Open Issues	None at this time.



G3: Sign Up Page

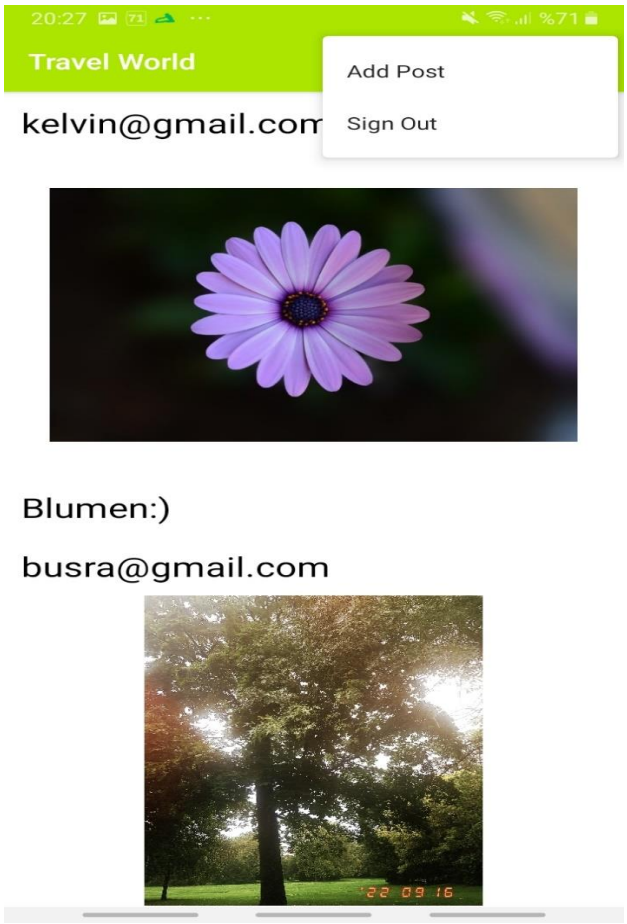
Short Title of User Story	
ID	SIGNUP
Priority	Core
Description	The homepage should have buttons for users to sign in and sign up to the application.
Additional Aspects	Attention has been paid to the user interface design to make it user friendly and easy to use.
Wireframe(s)	It looks like in the picture below.
Required	Access to the sign in and sign up pages.
Dependencies	The sign in page and sign up page need to be created before the homepage can be fully implemented.
Definition of Done / Acceptance Criteria	The sign in and sign up buttons are functioning properly and lead to the correct pages. The design and layout of the homepage meets the desired specifications.
Developer Tasks	Create the user interface for the homepage. Implement the sign in and sign up buttons. Test the functionality of the buttons.
Open Issues	None at this time.



Navigation

N1: Navigation within a product

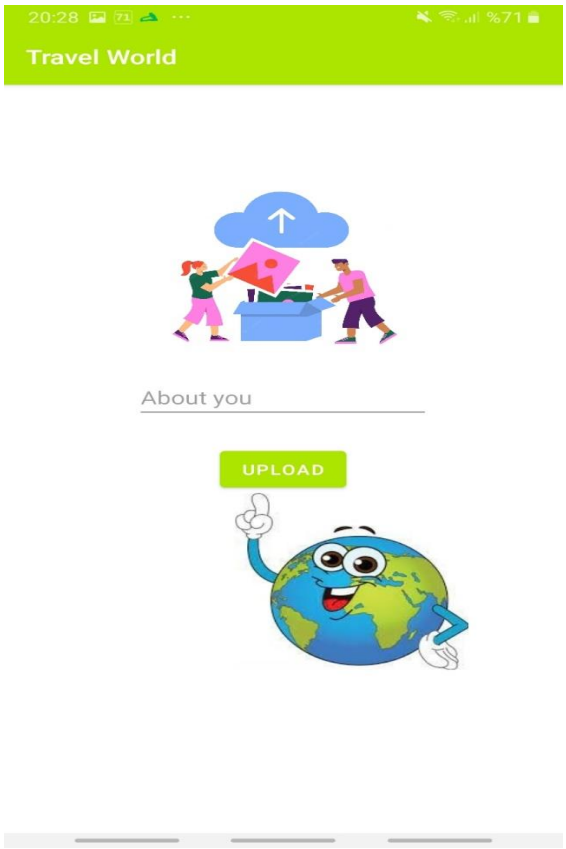
Short Title of User Story	
ID	Navigation
Priority	Core
Description	The Navigation allows the user to view their posts and sign out or add a new post to the system.
Additional Aspects	Ensure proper authentication for sign out and add post options. Implement responsive design for the homepage to display correctly on different devices. Consider any security measures for user data.
Wireframe(s)	Attached
Required	Access to the user's posts data to display on the homepage. Access to authentication system for sign out and add post functionality.
Dependencies	User authentication system. User post management system.
Definition of Done / Acceptance Criteria	The Navigation should display the user's posts correctly. Sign out and add post options should be functional and redirect the user to the correct page. The Navigation should be responsive and display correctly on different devices.
Developer Tasks	Fetch the user's posts data and display it on the homepage. Implement sign out and add post options with proper authentication. Test the homepage on different devices to ensure responsive design.
Open Issues	Need clarification on the data structure for user posts. Need to discuss security measures for user data.



Upload

U1: Upload a Bild

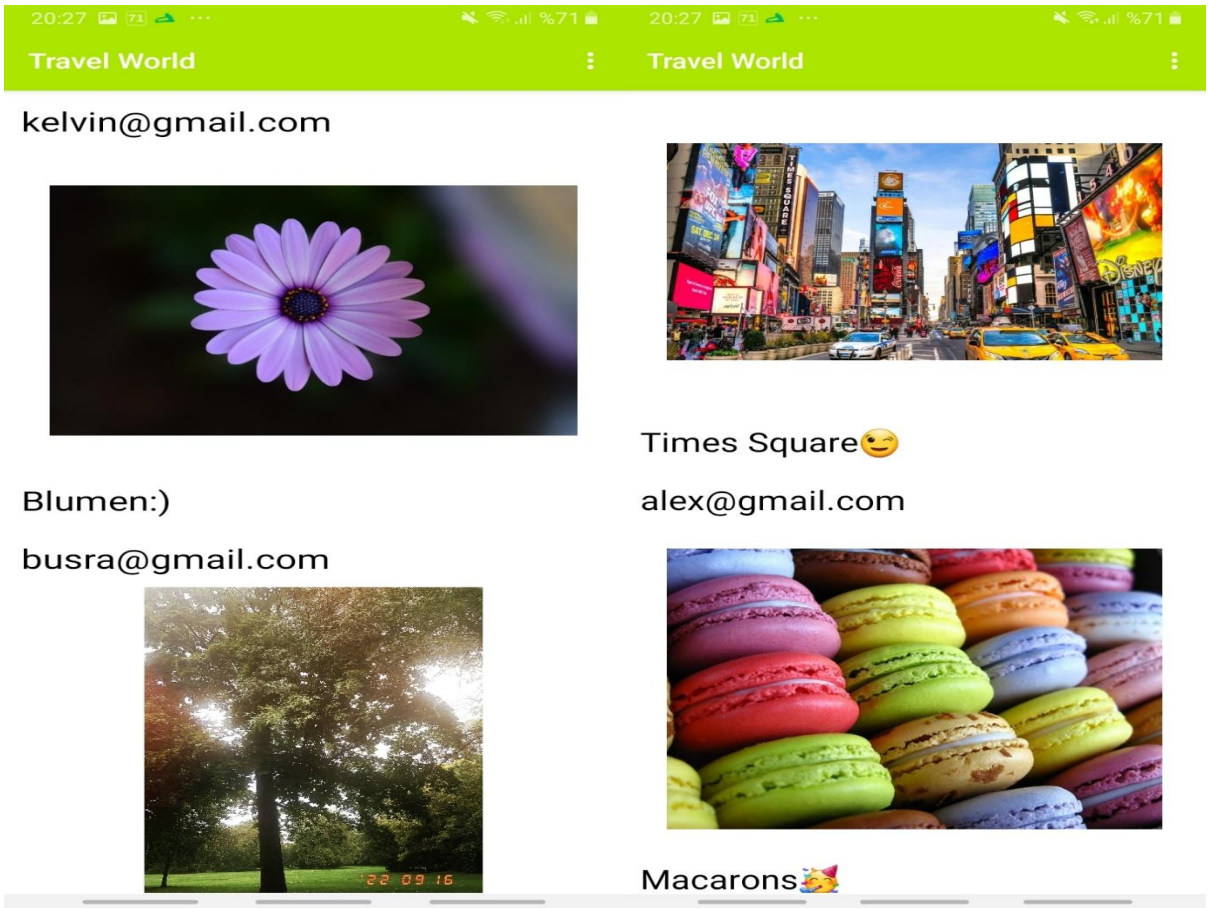
Short Title of User Story	
ID	Upload
Priority	Core
Description	The Upload Page allows users to upload pictures from their phones and write comments.
Additional Aspects	Implement a user-friendly interface for uploading pictures and writing comments. Ensure the proper storage and retrieval of images and comments. Implement responsive design for the homepage to display correctly on different devices.
Wireframe(s)	Attached
Required	Access to image storage for uploading and retrieving images. Ability to store and retrieve comments.
Dependencies	Image storage and retrieval system. User comment management system.
Definition of Done / Acceptance Criteria	Users should be able to upload pictures and write comments. The uploaded pictures and comments should be displayed on the homepage. The homepage should be responsive and display correctly on different devices.
Developer Tasks	Implement an interface for uploading pictures and writing comments. Integrate with the image storage and retrieval system. Integrate with the user comment management system. Test the homepage on different devices to ensure responsive design.
Open Issues	Need to discuss the specific image storage solution to use. Need clarification on the comment management system and data structure.



Scroll Pages with Pictures

D1: All Pictures

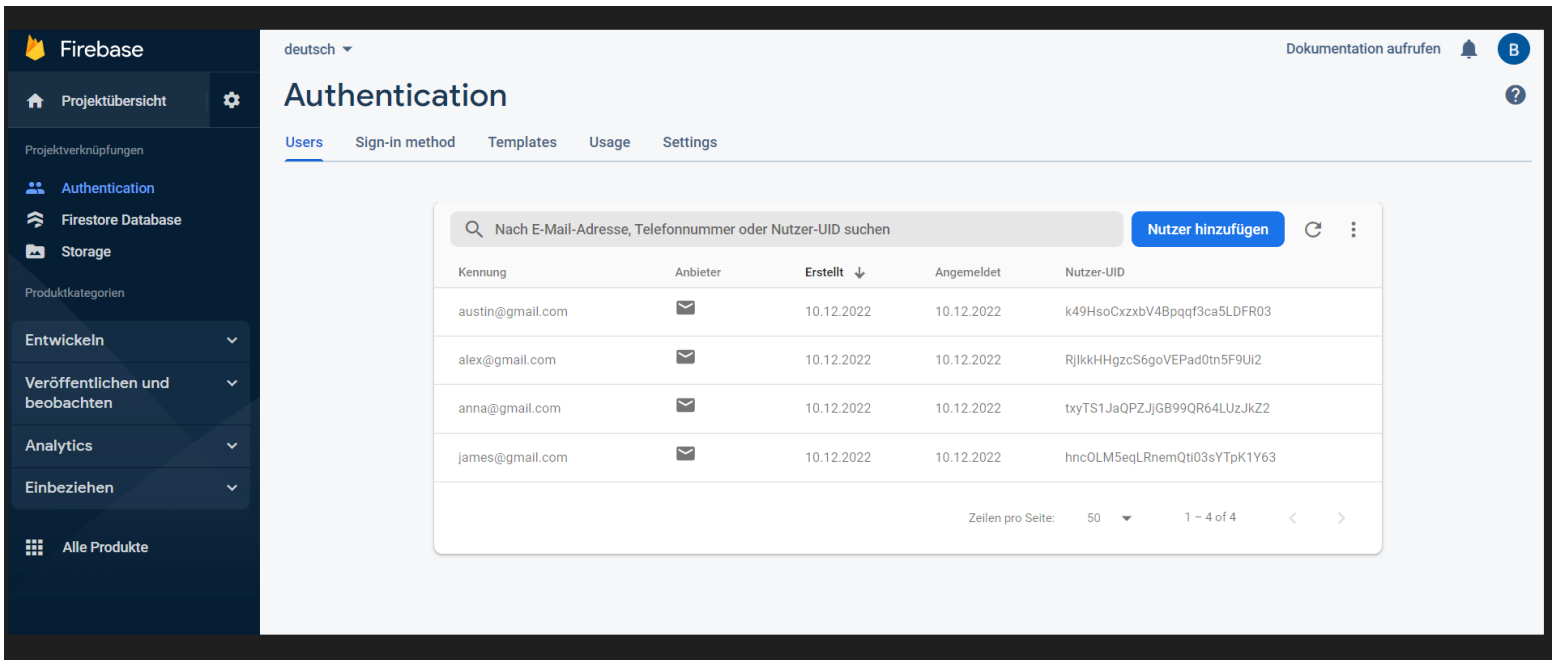
Short Title of User Story	
ID	AllPictures
Priority	Core
Description	As a user, I want to see a list of pictures and comments shared by all users on the homepage.
Additional Aspects	Consider privacy and security aspects of displaying user data. Provide a way for users to report inappropriate content. Implement a pagination system for large amounts of data.
Wireframe(s)	Attached
Required	Access to the database storing pictures and comments shared by all users.
Dependencies	Image Upload Screen
Definition of Done / Acceptance Criteria	All shared pictures and comments are displayed in the grid layout. Thumbnail images are displayed correctly. Clicking on the thumbnail displays the picture and its associated comment. Privacy and security considerations are implemented. A reporting mechanism for inappropriate content is provided.
Developer Tasks	Retrieve all pictures and comments from the database. Implement the grid layout for displaying the thumbnails. Show the picture and its associated comment on clicking the thumbnail. Implement privacy and security considerations. Implement the reporting mechanism.
Open Issues	Open issues and questions to be discussed / clarified with the product owner or other stakeholders

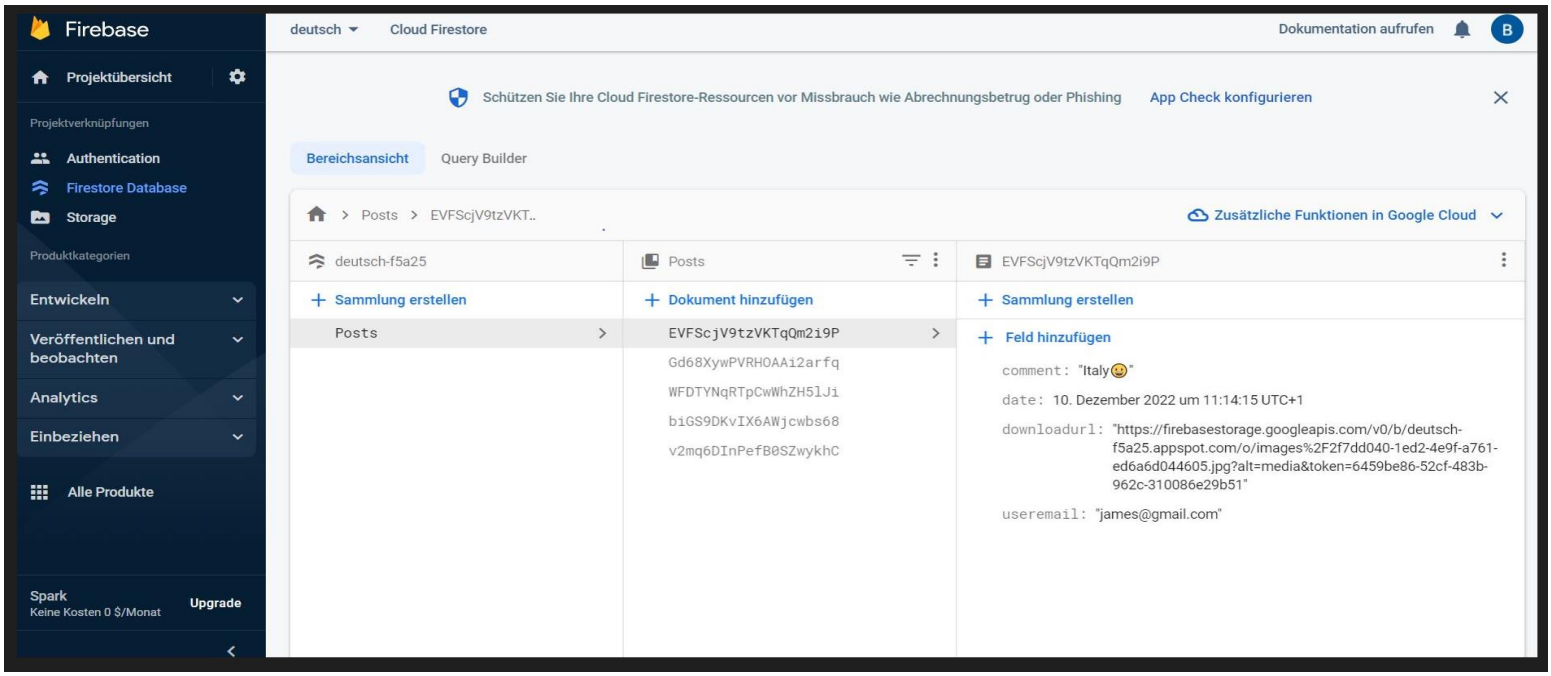


Firebase

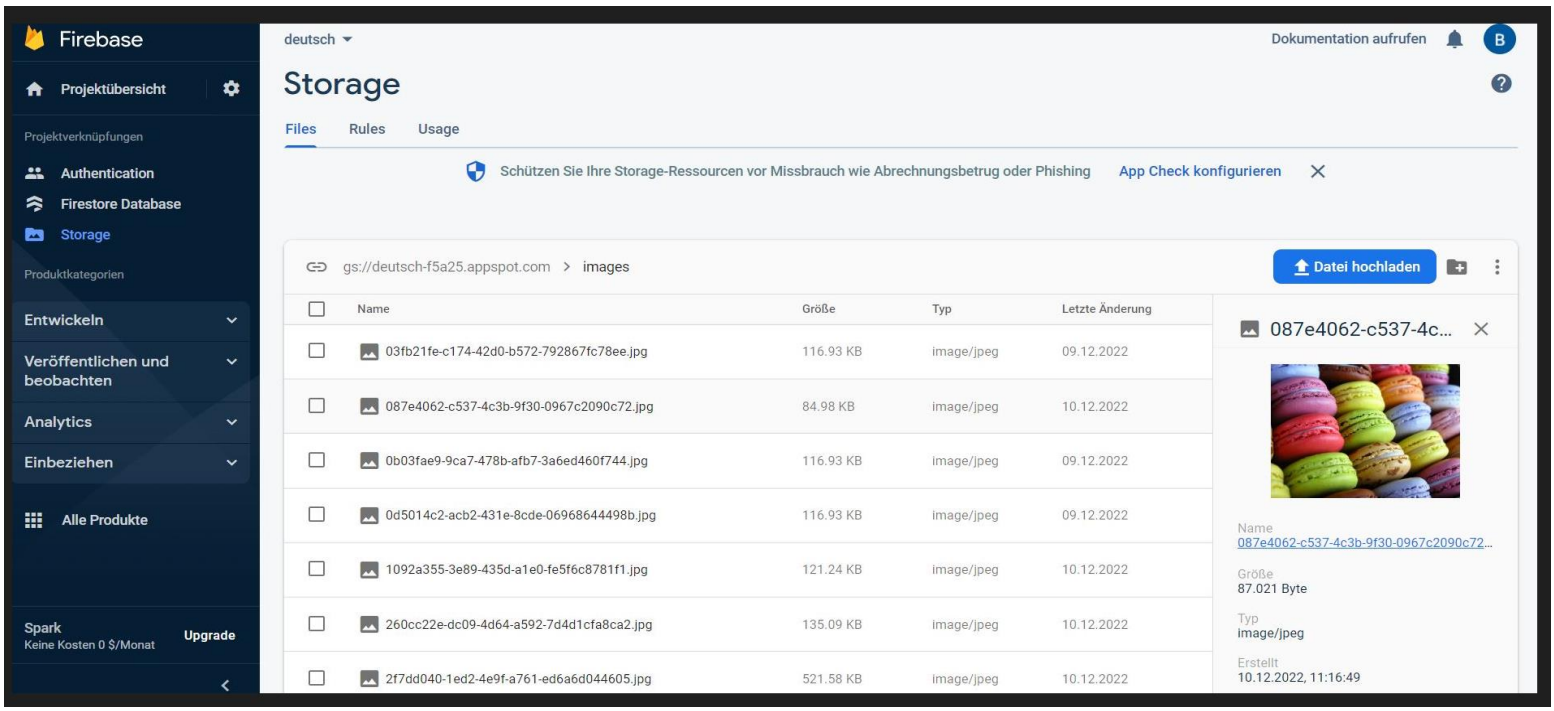
(Screenshots from my Firebase-Account)

User Stories
Project Travel World



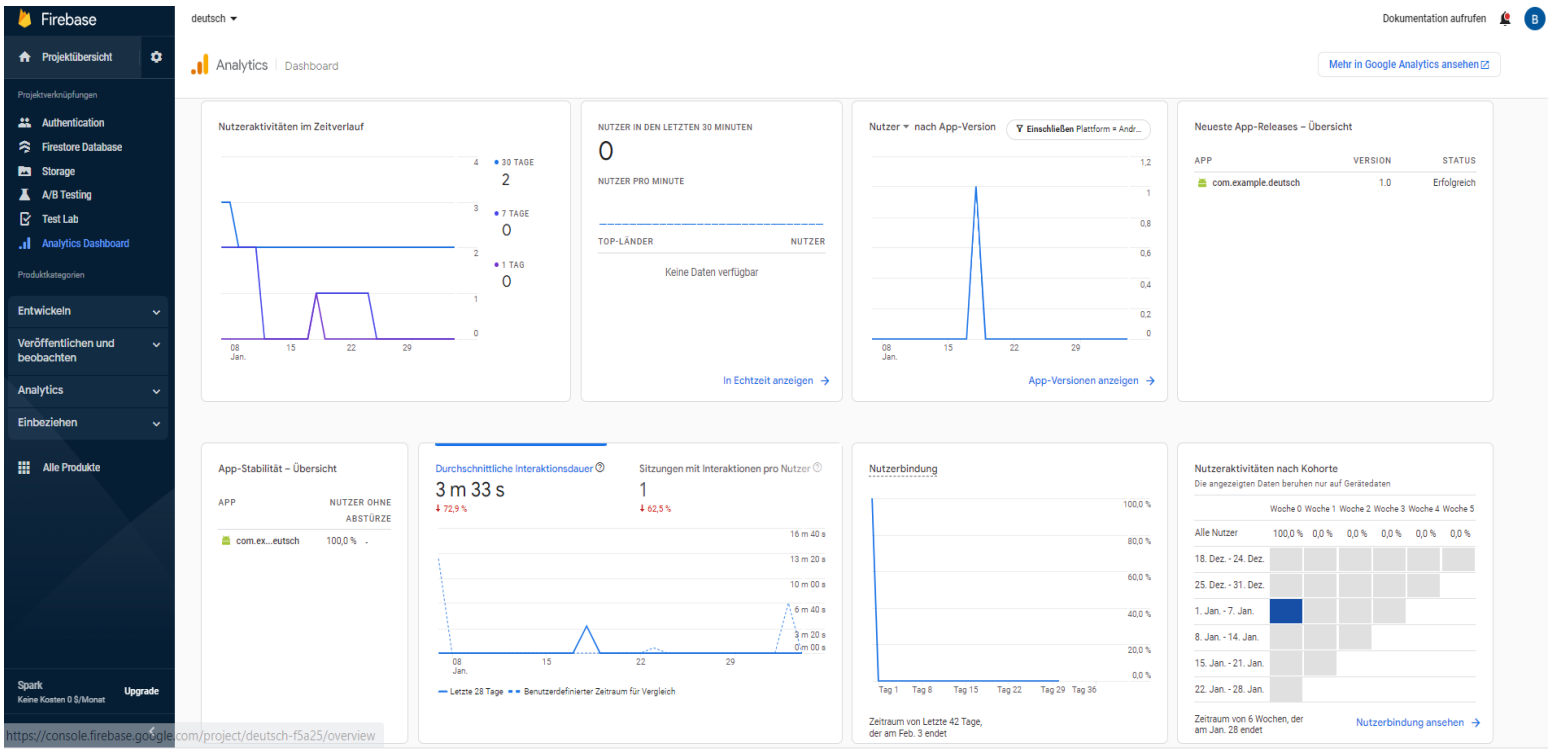


User Stories
Project Travel World



Firebase Analytics

User Stories
Project Travel World

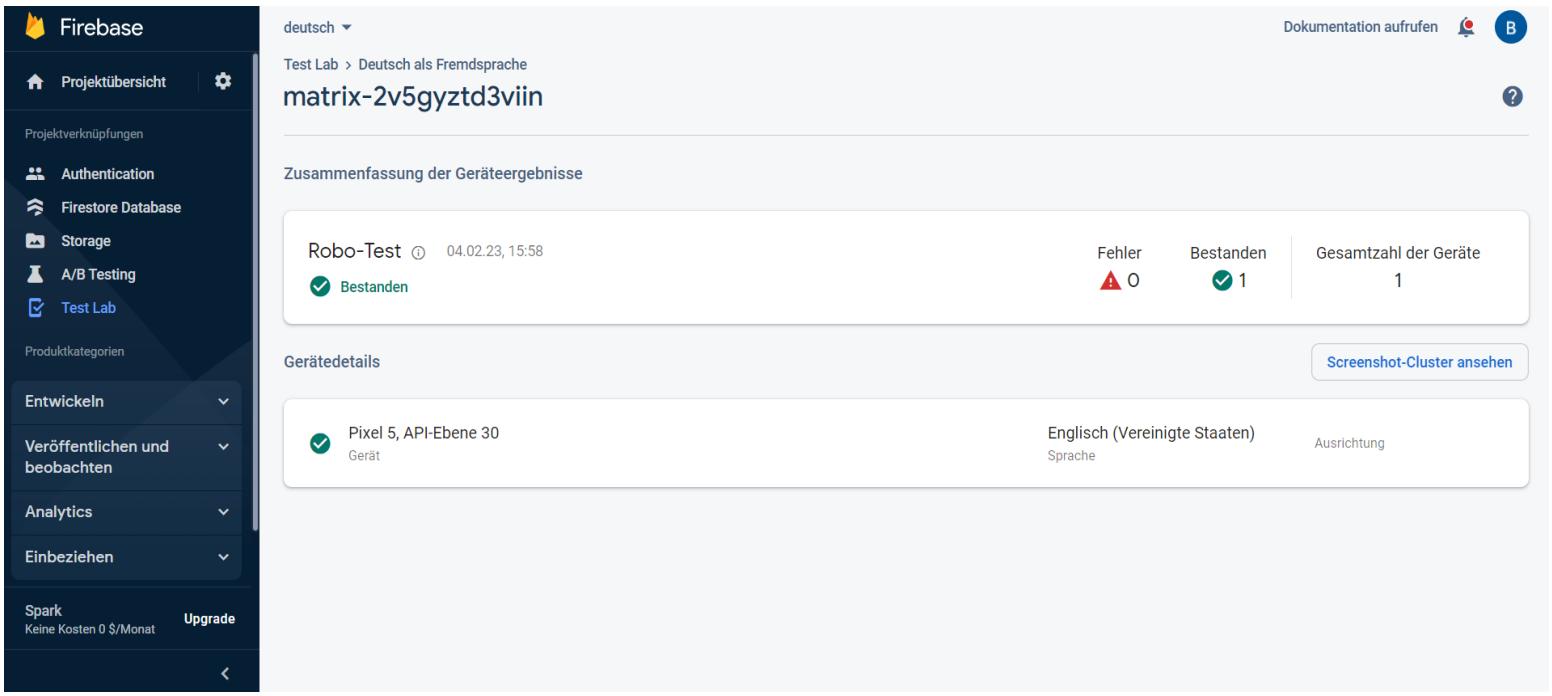


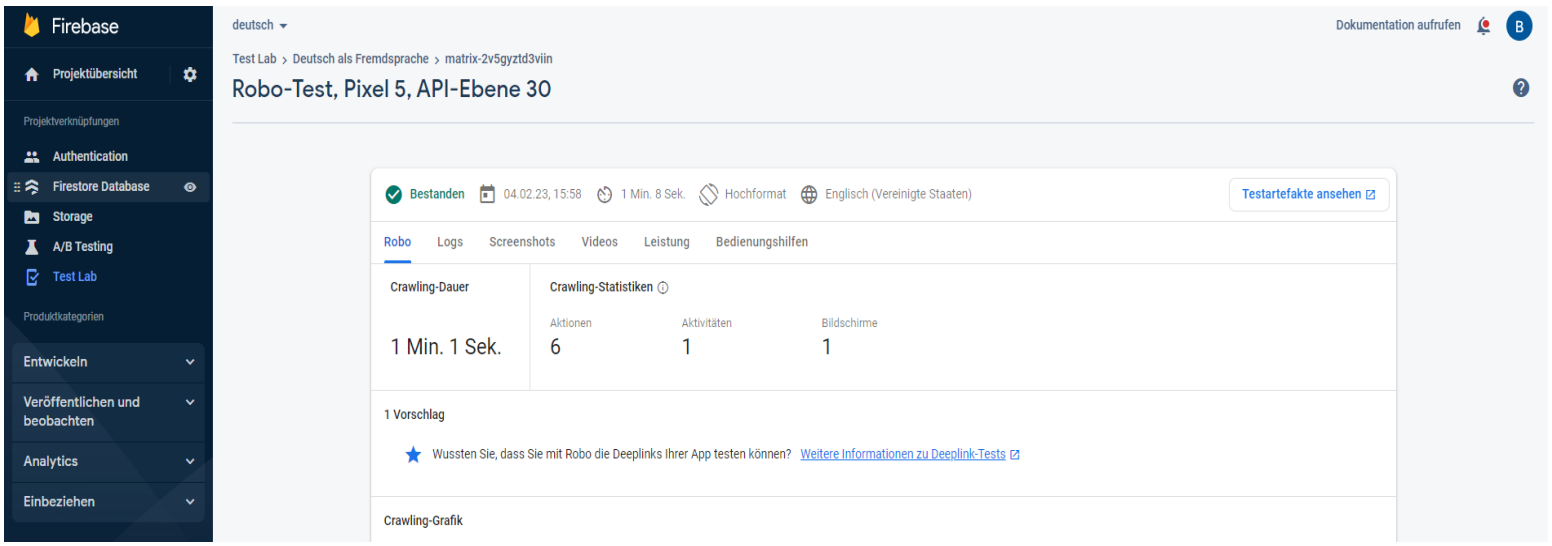
Test

(Screenshots from my Firebase TestLab)

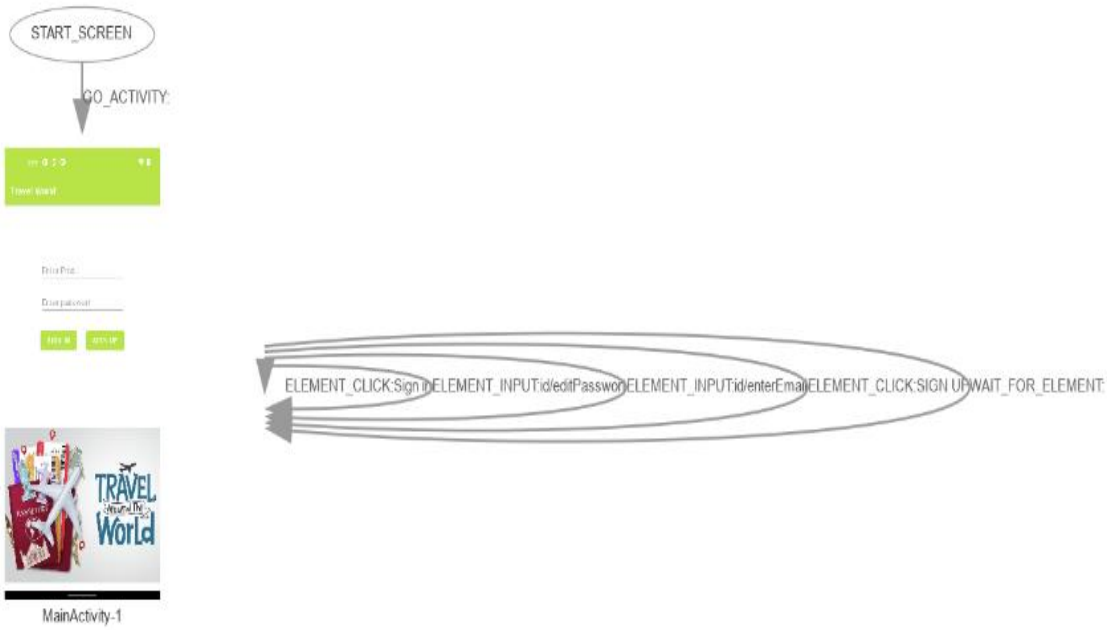
(I tested the program on my own firebase account. Here, I share the screenshots of the results.)

User Stories
Project Travel World





Crawling-Grafik



Current user and passwords in the system

Username Password

jame @gmail.com => 8k162593

busra@gmail.com => 123456

anna@gmail.com => 4k162593

alex@gmail.com => 456789

austin@gmail.com => 199422

bilal@gmail.com => 987654

kelvin@gmail.com => 202312

Explanations of certain main codes

(Explanations of other codes were written as a comment line in Android Studio.)

FirebaseAuth auth:

This is an instance of the FirebaseAuth class that provides authentication services for the application.

FirebaseFirestore firebaseFirestore:

This is an instance of the FirebaseFirestore class that provides NoSQL document-based database services for the application.

StorageReference storageReference:

This is an instance of the StorageReference class from FirebaseStorage, which provides access to a specific location within the Firebase storage service.

ActivityResultLauncher<Intent> activityResultLauncher:

This is a variable of type ActivityResultLauncher that launches an intent and returns the result to the calling activity.

ActivityResultLauncher<String> permissionLauncher:

This is a variable of type ActivityResultLauncher that launches a permission request and returns the result to the calling activity.

ActivityMainBinding binding:

This is an instance of the ActivityMainBinding class that is used to bind the data of the MainActivity to its layout.

FirebaseAuth auth:

This is another instance of the FirebaseAuth class that provides authentication services for the application.

ArrayList<Post> postArrayList:

This is an ArrayList that holds instances of the Post class.

ActivityFeedAktivityBinding binding:

This is an instance of the ActivityFeedAktivityBinding class that is used to bind the data of the FeedActivity to its layout.

FirebaseStorage firebaseStorage:

This is an instance of the FirebaseStorage class that provides storage services for the application.