

COM397

Systems Development

Assignment 1 – Litter Smart

TEAM DAVID

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1. Product backlog

All users:

- Log in
 - Authentication 1
 - Forgot password option 2
- Log out 1
- Receive push notifications 2
- View map of litter spots 3

General users:

- Create account 1
 - Receive verification email 2
- Delete account 1
- Report litter
 - Upload photos, write description, set location 2
 - Offline capabilities 1
- Check progress on the reported litter 2
- Provide feedback 2
- View history of litter reports 2

Admins:

- Create admin account 1
- Create cleaner account 1
- Verify sightings 2
- See statistics on reporting dashboard 3
- Assign task to a specific cleaner 1
- Monitor the system
 - Access info of users 1
 - Access info of reported sightings 1
 - View list of cleaners with their availability and location 3
- Cancel a task 2

Cleaners:

- View list of tasks (sorted by urgency) 2
- Access a specific task (See pictures. Description, location) 1
- Set status (active or on break) 1
- Start task 1
- Pause task 1
- Complete task 1
- Reject task (with a reason) 1
- Reach out to admins 2
- Access fastest route 3
 - Updates in real-time 4

2. Sprint backlog

The following three items have been chosen for the first sprint:

- Account creation
- Login authentication
- Reporting litter

3. User stories

Title:

Account creation

Description:

As a **new user**, I want to **create an account** so that **I can log in**

Acceptance Criteria:

Scenario: Registration input evaluation

Given: The user has navigated to the account creation screen

When: The user enters their email and password

And: The user presses the create account button

Then: The app evaluates the input

Title:

Login authentication

Description:

As a **user**, I want to **log in** so that **I can access the app's features**

Acceptance Criteria:

Scenario: Login input evaluation

Given: The user has navigated to the login screen

When: The user enters their login details

And: The user presses the login button

Then: The app evaluates the input

Title:

Reporting litter

Description:

As a **user**,

I want to **be able to report litter with the necessary details** so that **it gets taken care of**

Acceptance Criteria:

Scenario: Report submission

Given: The user has navigated to the 'Report litter' menu

When: The user provides all the necessary details

And: The user presses the submit button

Then: The app saves this report onto the server, and sends a confirmation message to the user

4. Technical task

Task name: Account creation

Task size: Small

Dependencies: -

Checklist:

- Evaluate whether the entered email address is valid or not
- Evaluate whether the entered username is free or not
- Evaluate whether the entered password is safe enough or not

Task name: Login authentication

Task size: Small

Dependencies: Account creation

Checklist:

- Evaluate whether the entered username exists or not
- Evaluate whether the entered password is the one linked to the username or not
- Keep track of the number of times a login attempt was made

Task name: Reporting litter

Task size: Medium

Dependencies: Account creation, Login authentication

Checklist:

- Check if photos have been added to the report
- Check if description has been added to the report
- Check if location has been set for the report

5. Test case

Test Scenario ID	Test Scenario Description	Pre-conditions		
Test_Litter_001	Registration input evaluation	The app is open and the account creation screen is displayed		
Test Case ID	Test Case Description	Test Steps	Test Data	Expected Result
Account_Creation_01	The user enters a valid email, valid username and valid password	<ol style="list-style-type: none">1. Enter a valid email2. Enter a valid username3. Enter a valid password4. Click 'Create Account' button	Email: john.smith@gmail.com Username: JSmith Password: kniewho151	Confirmation message about verification email being sent is displayed.
Account_Creation_02	The user enters an invalid email, valid username and valid password	<ol style="list-style-type: none">1. Enter an invalid email	Email: john.smith@gmail	Error message about invalid

		<ol style="list-style-type: none"> 2. Enter a valid username 3. Enter a valid password 4. Click 'Create Account' button 	Username: JSmith Password: kniewho151	email is displayed.
Account_Creation_03	The user enters a valid email, valid username and invalid password	<ol style="list-style-type: none"> 1. Enter a valid email 2. Enter a valid username 3. Enter an invalid password 4. Click 'Create Account' button 	Email: john.smith@gmail.com Username: JSmith Password: 123	Error message about invalid password is displayed.
Account_Creation_04	The user enters an invalid email, valid username and invalid password	<ol style="list-style-type: none"> 1. Enter an invalid email 2. Enter a valid username 3. Enter an invalid password 4. Click 'Create Account' button 	Email: john.smith@gmail Username: JSmith Password: 123	Error message about invalid email is displayed.
Account_Creation_05	The user enters a valid email, invalid username and valid password	<ol style="list-style-type: none"> 1. Enter a valid email 2. Enter an invalid username 3. Enter a valid password 4. Click 'Create Account' button 	Email: john.smith@gmail.com Username: JohnSmith Password: kniewho151	Error message about invalid username is displayed.
Account_Creation_06	The user enters an invalid email, invalid username and valid password	<ol style="list-style-type: none"> 1. Enter an invalid email 2. Enter an invalid username 3. Enter a valid password 4. Click 'Create Account' button 	Email: john.smith@gmail Username: JohnSmith Password: kniewho151	Error message about invalid email is displayed.
Account_Creation_07	The user enters a valid email, invalid username and invalid password	<ol style="list-style-type: none"> 1. Enter a valid email 2. Enter an invalid username 3. Enter an invalid password 4. Click 'Create Account' button 	Email: john.smith@gmail.com Username: JohnSmith Password: 123	Error message about invalid username is displayed.
Account_Creation_08	The user enters an invalid email, invalid username and invalid password	<ol style="list-style-type: none"> 1. Enter an invalid email 2. Enter an invalid username 	Email: john.smith@gmail Username: JohnSmith	Error message about invalid email is displayed.

		3. Enter an invalid password 4. Click 'Create Account' button	Password: 123	
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Test Scenario ID	Test Scenario Description	Pre-conditions
Test_Litter_002	Login input evaluation	The app is open and the login screen is displayed and the user already has an account.

Test Case ID	Test Case Description	Test Steps	Test Data	Expected Result
Login_01	The user enters a valid username and password	1. Enter a valid username 2. Enter a valid password 3. Click 'Login' button	Username: JSmith Password: kniewho151	The home page is displayed.
Login_02	The user enters an invalid username and valid password	1. Enter an invalid username 2. Enter a valid password 3. Click 'Login' button	Username: Johnsmith Password: kniewho151	Error message about invalid username is displayed.
Login_03	The user enters a valid username and invalid password	1. Enter a valid username 2. Enter an invalid password 3. Click 'Login' button	Username: JSmith Password: 123	Error message about invalid password is displayed.
Login_04	The user enters an invalid username and invalid password	1. Enter an invalid username 2. Enter an invalid password 3. Click 'Login' button	Username: Johnsmith Password: 123	Error message about invalid username is displayed.

Test Scenario ID	Test Scenario Description	Pre-conditions
Test_Litter_003	Report submission	The app is open and the user is logged in and the user is in the Report menu

Test Case ID	Test Case Description	Test Steps	Test Data	Expected Result
Report_01	The user uploads some photos, writes a description and enables location on their phone	1. Upload photos from gallery 2. Write in the description box 3. Turn on location	Photo: <i>Photo taken of litter</i> Description: There are some broken beer bottles on the sidewalk in front of a	Confirmation message about successful submission is displayed.

			pub. Location: Auto location	
Report_02	The user uploads some photos, does not write a description and enables location on their phone	<ol style="list-style-type: none"> 1. Upload photos from gallery 2. Leave the description box blank 3. Turn on location 	Photo: <i>Photo taken of litter</i> Description: <i>empty</i> Location: Auto location	Error message about no description is displayed.
Report_03	The user uploads some photos, writes a description and does not enable location on their phone	<ol style="list-style-type: none"> 1. Upload photos from gallery 2. Write in the description box 3. Turn off location 	Photo: <i>Photo taken of litter</i> Description: There are some broken beer bottles on the sidewalk in front of a pub. Location: <i>Not provided</i>	Error message about no location is displayed.
Report_04	The user does not upload any photos, writes a description and enables location on their phone	<ol style="list-style-type: none"> 1. Do not upload photos 2. Write in the description box 3. Turn on location 	Photo: <i>Not provided</i> Description: There are some broken beer bottles on the sidewalk in front of a pub. Location: Auto location	Error message about no photos is displayed.
Report_05	The user does not upload any photos, does not write a description and enables location on their phone	<ol style="list-style-type: none"> 1. Do not upload photos 2. Leave the description box blank 3. Turn on location 	Photo: <i>Not provided</i> Description: <i>empty</i> Location: Auto location	Error message about no photos is displayed.
Report_06	The user does not upload any photos, writes a description and does not enable location on their phone	<ol style="list-style-type: none"> 1. Do not upload photos 2. Write in the description box 3. Turn off location 	Photo: <i>Not provided</i> Description: There are some broken beer bottles on the sidewalk in front of a pub. Location: <i>Not provided</i>	Error message about no photos is displayed.
Report_07	The user uploads some photos, does not write a description and does not enable location on their phone	<ol style="list-style-type: none"> 1. Upload photos from gallery 2. Leave the description box blank 3. Turn off location 	Photo: <i>Photo taken of litter</i> Description: <i>Not provided</i> Location: <i>Not provided</i>	Error message about no description is displayed.

Report_08	The user does not upload any photos, does not write a description and does not enable location on their phone	<ol style="list-style-type: none"> 1. Do not upload photos 2. Leave the description box blank 3. Turn off location 	Photo: <i>Not provided</i> Description: <i>Not provided</i> Location: <i>Not provided</i>	Error message about no photos is displayed.
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6. Sprint review

In this sprint we have gathered all the potential features for the app in the product backlog. As part of sprint planning, we have assigned numbers for each of the features on a scale of 1 to 5, 1 being the easiest and 5 being the hardest to implement. To be able to deliver a minimum viable product as early as possible, we have decided to choose the three most basic features for this sprint. These were 'Account creation', 'Login authentication' and 'Reporting litter'. We put them in the sprint backlog. It is important to note that in this sprint, these features were interpreted in their most basic forms.

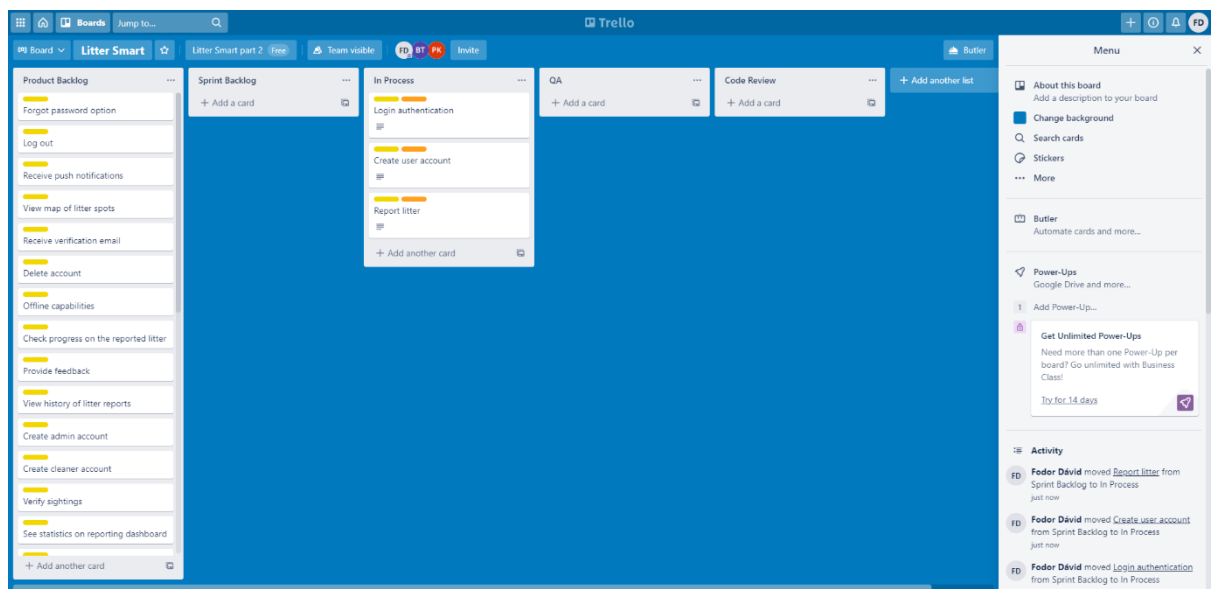
We have made user stories with acceptance criteria for these three features.

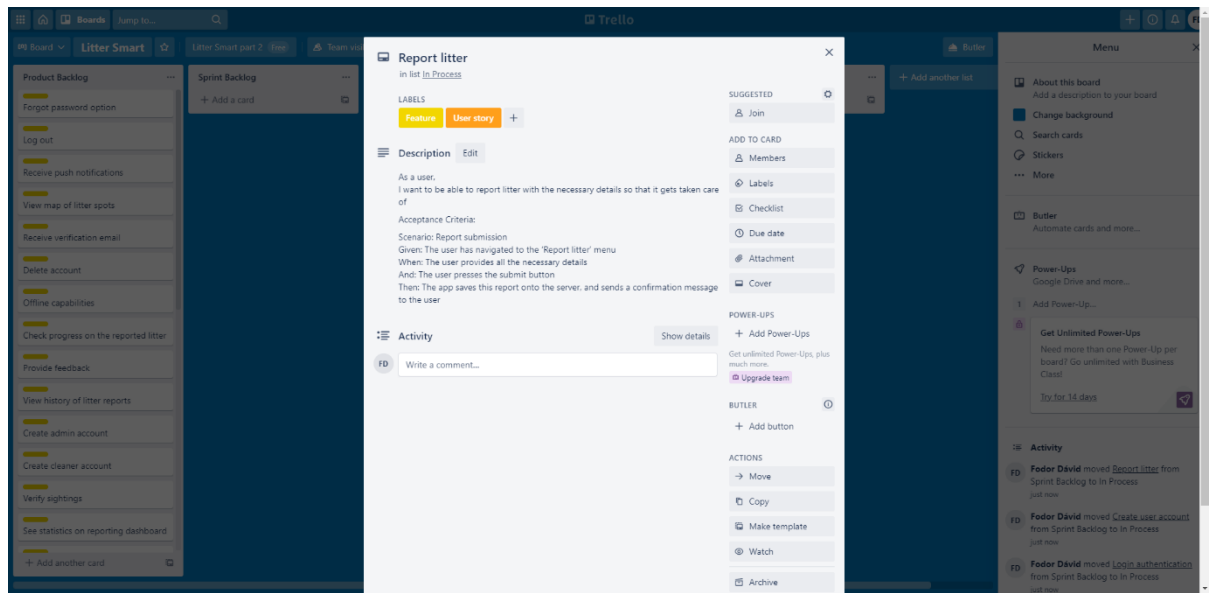
Next up, we have detailed the technical task for each of the items in the sprint backlog.

After that, we have written test cases for all scenarios in the user stories.

This concludes this sprint. In the next sprint we plan to put features in the sprint backlog which are linked to the three in this sprint, such as 'Forgot password option', 'Receive verification email' and 'Offline capabilities'. We also plan to include some other key features, like 'Verify sightings' and 'Assign task to a specific cleaner'.

7. Kanban board





Appendix

Team Contribution Declaration form

Name	Student code	List of contributions	Contribution %
Abdelhakim Ouchboug	B00794491	Contributed to everything	25%
Bibek Thapa	B00792128	Contributed to everything	25%
David Fodor	B00796884	Contributed to everything	25%
Pami Karki	B00796002	Contributed to everything	25%