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CONTENT

- ☐ DESCRIPTION AND MOTIVATION
- ☐ LITERATURE REVIEW
- ☐ METHODOLOGY
- ☐ STAKEHOLDERS
- ☐ CLIENT-SERVER ARCHITECTURE
- ☐ REQUIREMENT MODELING
- ☐ USER INTERFACES
- ☐ TESTING
- ☐ CONCLUSION AND FUTURE WORK
- ☐ REFERENCES

Brief description of the project

Al-Madina privacy-conscious, complaint submission App. It improves the safety of the community. Everyone has a role to play, the users submit complaints to the application and in turn they transfer it to the responsible ministry and follow up on these complaints.

Motivation

- to enhance community safety
- foster stronger relationships between residents and ministries.
- our efforts will streamline the process of identifying and resolving issues for ministries, ultimately resulting in a safer and more cohesive community.

LITERATURE REVIEW

Amman municipality website

Includes a service allows the residents to submit complaints to the municipality. However, there are a few shortcomings such as :

- The lack of GPS service requires reliance on written addresses.
- Lack of feedback leaves users unaware of complaint status.
- The service is limited to Amman Municipality.
- There is no option for editing/deleting the complaint.



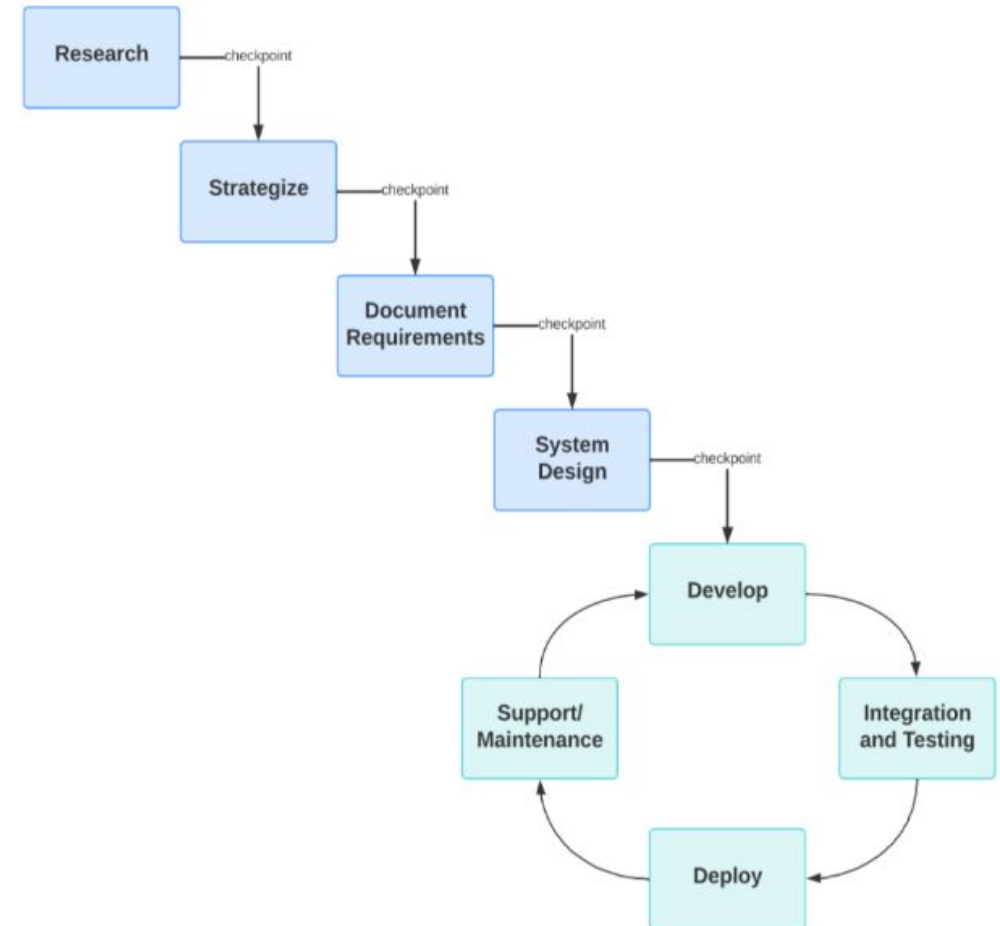
METHODOLOGY

Hybrid methodology

The hybrid methodology combines elements of both agile and waterfall approaches. Initially, we adopted the waterfall method at the project's initial phase. However, due to our limited experience, adjustments and updates were necessary during the development and testing phases.

While offering flexibility, the hybrid approach needs integration and coordination among team members. Without clear definition and communication, it risks causing confusion and inconsistency.

Agile-Waterfall Hybrid ALMADENA



STAKEHOLDERS

01

Developers

Develop the system.

02

Admin

Manage the system and the related users accounts.

03

Ministries

Receive the complaints from the reviewer and manage the contractor

04

Citizens

Submits complaints they see on the roads.

05

Contractor

responsible for fixing the issues that were submitted.

06

Reviewer

Check the submitted complaint to verify and prioritize them based on the urgency of the complaint then forward them to the ministries.

Client-Server Architecture

Client-Server Architecture:

Client-server architecture is a computing model that divides the functionality of an application into two main components:

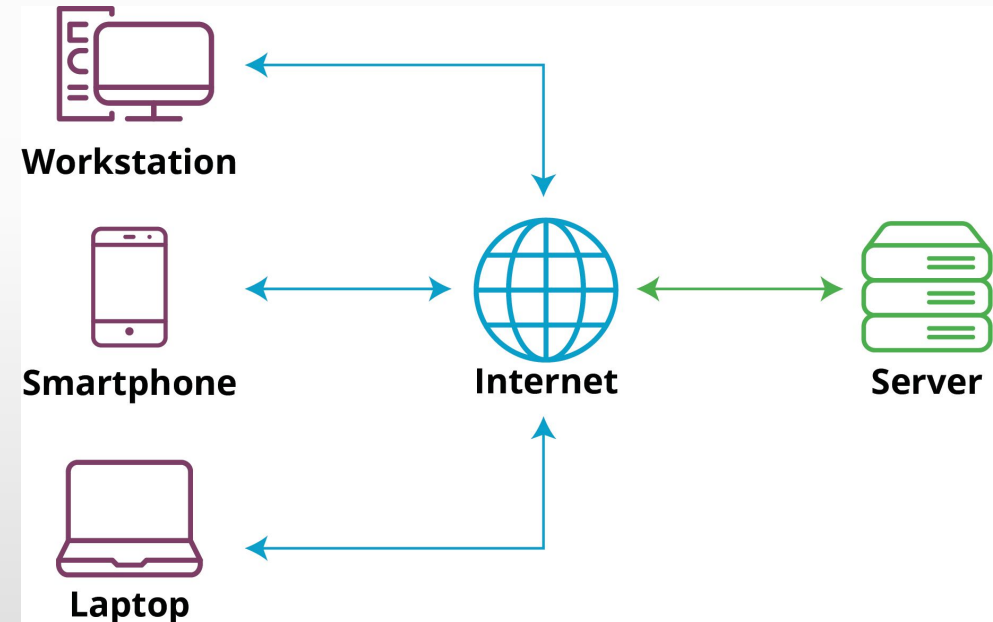
1- Client: This component is responsible for user interaction and presentation of the application's interface.

2- Server: The server component handles the processing of client requests, execution of business logic, and storage/retrieval of data.

Client-server advantages:

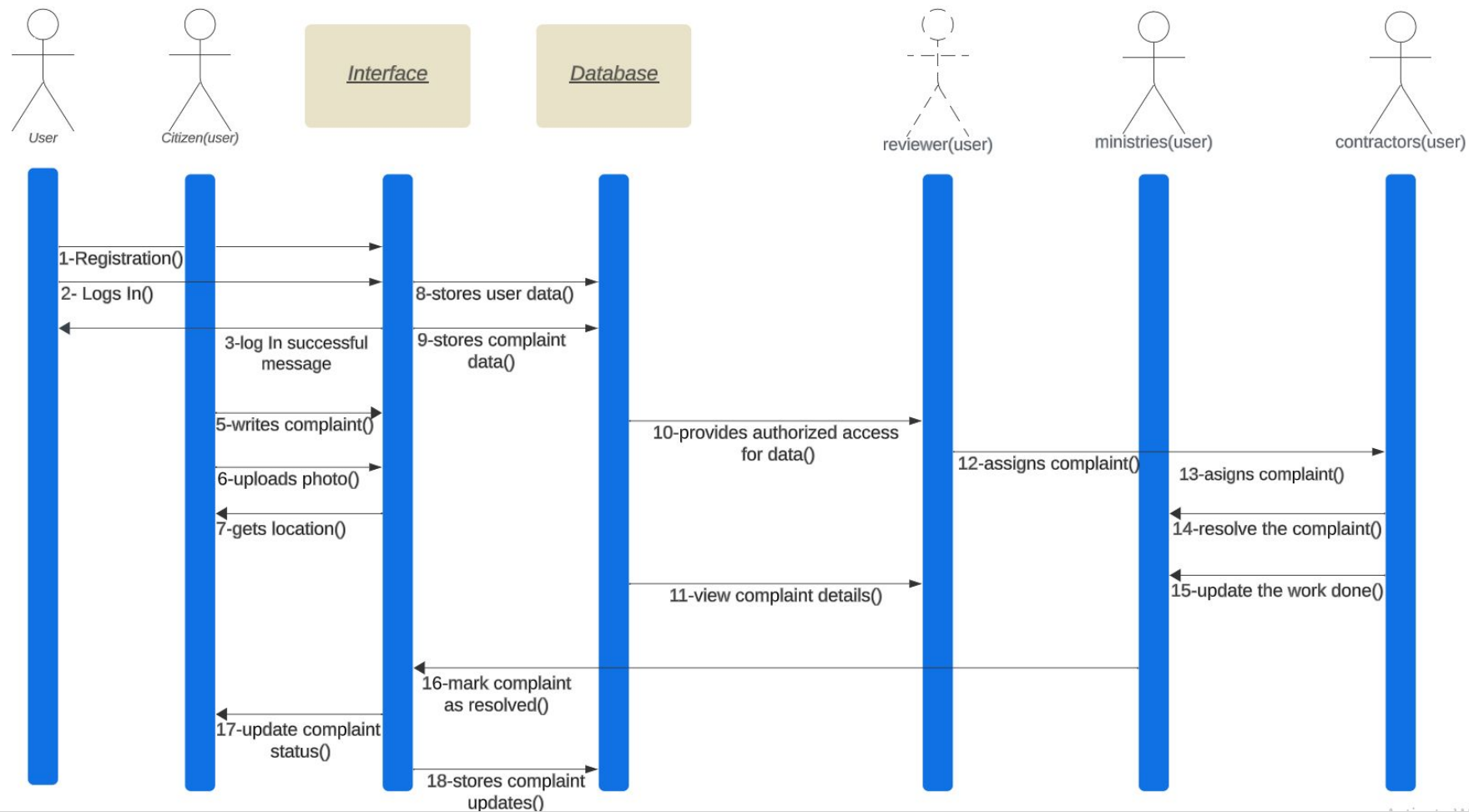
Scalability: Allows for easy scaling by adding more servers to handle increased demand.

Separation of Concerns: Clearly separates the user interface concerns on the client-side from the data storage and processing concerns on the server-side, promoting modularity and maintainability.

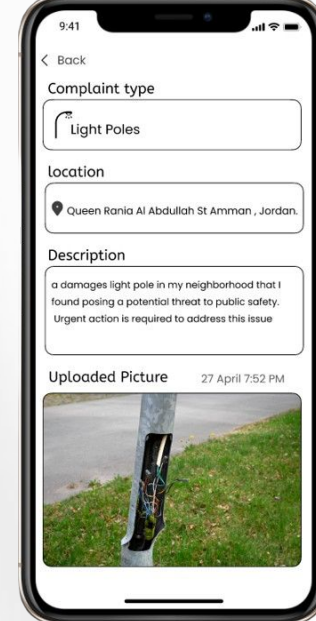
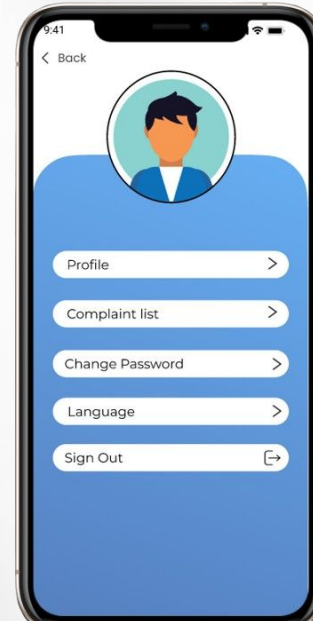
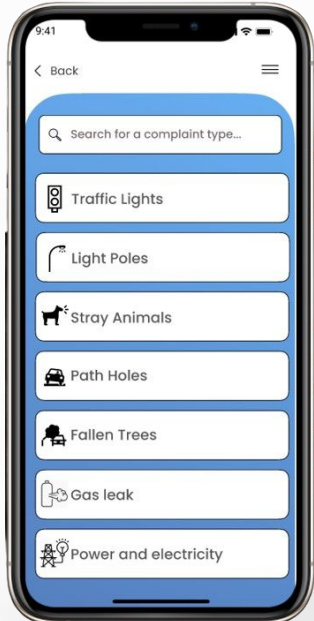
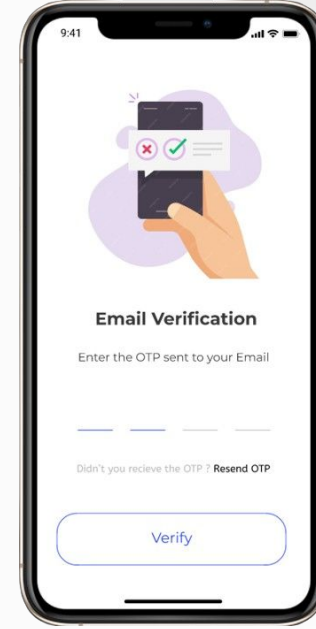
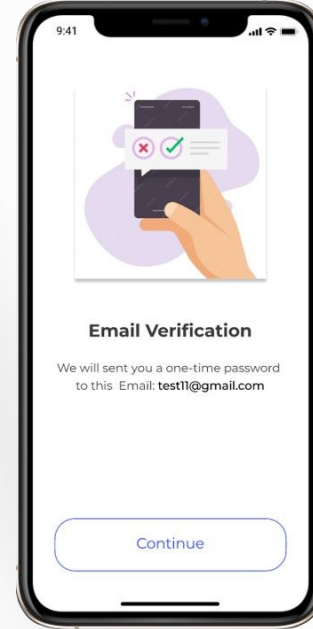
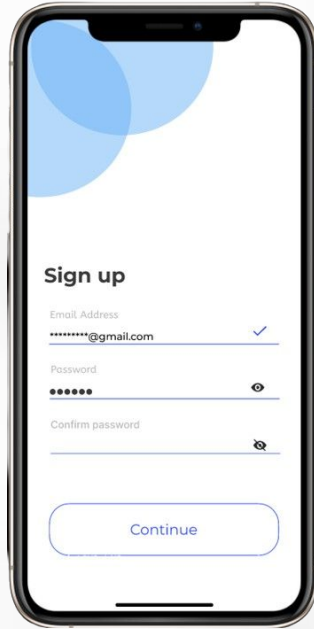
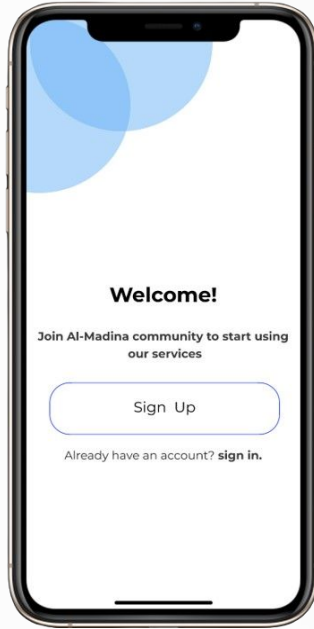


REQUIREMENT MODELING

SEQUENCE DIAGRAM



USER INTERFACES



TESTING

| Test ID | Test Case Scenario | Test Case | Pre-Conditions | Test Steps | Test Data | Post-Condition | Actual Results | Status |
|---------|------------------------------------------------------------------|------------------------------------------|----------------------------------------|-------------------------------------------------------|-----------------------------------------------|---------------------------------------------------|------------------------------------------|--------|
| _001 | User signs up with valid inputs | Sign Up - Valid Inputs | Internet connection/active system | 1.Enter valid information.2. Submit registration. | Valid Email,Password,Confirm Password | account is created/ redirected to home page. | Success Message | Pass |
| _002 | User logs in with verified account | User Valid Login | account is verified and exists | 1.Enter valid login credentials.2. Submit login form. | Log in with verified account | User authenticated /redirected to home page. | Successful login | Pass |
| _003 | attempt to sign up with mismatched passwords | Sign Up - Password Mismatch | Internet connection/active system | 1.Enter mismatched passwords.2. Submit registration. | Incorrect Confirm Password | error message about password mismatch. | Error Alert: "Passwords do not match" | |
| _004 | attempt to sign in with incorrect password | Sign In - Invalid Password | account is verified and exists | 1.Enter valid username and invalid password. | Incorrect Password | error message about invalid password. | Error Alert: "Incorrect Password" | |
| _005 | attempt to sign in with empty fields | Sign In - Empty Fields | account is verified and exists | 1.Submit login form with empty fields. | Empty Email, Empty Password | error message about empty fields. | Error Alert: "Please fill in all fields" | |
| _006 | attempt to change password with incorrect old password | Change Password-Incorrect Old Password | User logged in | 1.Enter incorrect old password and new password. | Incorrect Old Password | error message about incorrect old password. | Error Alert: "Incorrect Old Password" | |
| _007 | attempt to change password with a weak new password | Change Password-Weak New Password | Internet connection/active system | 1.Enter valid old password and a weak new password. | Weak New Password | error message about a weak new password. | Error Alert: "Password is too weak" | |
| _008 | attempt to create profile with missing information | Create Profile - Missing Information | Internet connection/active system | 1.Enter incomplete personal information. | Incomplete Personal Information | error message about missing information. | Error Alert: "Please fill in all fields" | |
| _009 | attempt to edit profile with no modifications | Edit Profile - Empty Changes | User logged in | 1.Submit the form without making any changes. | No modifications to Personal Information | No changes made to the profile. | No profile changes made | Pass |
| _010 | Attempt to view profile not logged in | View Profile - Unauthorized Access | User's profile is not created | 1.Attempt to access profile without logging in. | Not logged in | User redirected to login page | Redirect to login page | Pass |
| _011 | User attempts to submit incomplete complaint | Submit a complaint - Missing Information | profile created/user logged in | 1.Enter incomplete complaint details. 2. Submit form. | Incomplete complaint details | error message "missing complaint information" | No changes made | |
| _012 | Attempt to view complaint with non-existent ID | Non-Existent complaint ID | User is not logged in | 1. Attempt to view a complaint with a non-existent ID | Non-Existent complaint ID | error message "complaint ID does not exist." | Error Alert: "Report not found" | |
| _013 | Attempt to edit complaint after time limit | Edit complaint - Unauthorized Access | User is logged in | 1. edit a complaint after the allowed time limit. | Edit after time limit | error message "time limit exceeded." | Error Alert: "Unauthorized." | |
| _014 | Attempt to delete complaint after time limit | Delete complaint - Unauthorized Access | User logged in/complaint exist | 1. delete a complaint after the allowed time limit. | Delete after time limit | error message "time limit exceeded." | Error Alert: "Unauthorized." | |
| _015 | Upload image with valid format | Image Upload | User has submitted a complaint | 1.Upload an image with a valid format. | Valid image formats | Image successfully uploaded | image accepted | Pass |
| _016 | Attempt to register a ministry with missing details | Registration Missing Details | User has submitted a complaint | 1. Enter incomplete details. 3. Submit form. | Missing Ministry id | error message about missing information. | Error Alert: "Please fill in all fields" | |
| _017 | Attempt to receive a complaint without an assigned ministry | No Assigned Ministry | User is logged in | 1.receive a report without assigning a ministry. | Complaint without an assigned ministry | error message about complaint. | Pending Status | Pass |
| _018 | Submit a valid complaint with all necessary details | Complaint Submission | User has required privileges | 1.Enter valid complaint details. 3. Submit form. | Valid complaint with all required information | Complaint is successfully submitted | Complaint successfully submitted | Pass |
| _019 | Submit a complaint with missing information or without a picture | Missing Information in Complaint | User has the role to receive complaint | 1.Enter incomplete details or submit without picture. | Complaint without a picture | error message about missing information | Error message for missing picture | Pass |
| _020 | Reviewer forwards a complaint to a ministry | Complaint Forwarding | User is logged in | 1.Review complaint.2.Forward complaint to ministry. | Complaint forwarded by reviewer to ministry | System logs the action, complaint is forwarded | Ministry receives complaint Successfully | Pass |
| _021 | contractor confirms the resolution of a complaint | Complaint Fix Confirmation | User is logged in | 1.Access complaint.2. Confirm fix of complaint. | Contractor marks the complaint as resolved | System logs the action, complaint marked resolved | Complaint successfully resolved | Pass |
| _022 | Attempt to assign a complaint with no maintenance team | Assigning Complaint | User with necessary privileges | 1.assign Complaint without a maintenance team. | No team assigned to a Complaint | error message "maintenance team not selected." | Pending Status | Pass |
| _023 | Attempt to upload image with invalid format | Image Upload | Users in different roles registered | 1.upload an image with an invalid format. | invalid image formats | error message "invalid image format." | Error message for missing picture | Pass |

Conclusion And Future Work

Future Work:

- Expand Complaint Categories
- Phone number verification
- Multilingual Support
- Integration with Emergency Services
- Offline Functionality
- Collaboration with Third-Party Services (GAM)

References:

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THANK YOU!