Project Book Requirements

Group 1 Tribe 1

Roles and Personnel

- Project Manager - Faruk Avci
- Product Owner - Neha Fathima
- Scrum Master - Betselot Aderaw Miheret
- Frontend Engineers - Faruk Avci
- Backend Engineers - Neha Fathima
- Devops Engineers - Emmilliy

Technical Choices

- Language preferences:
    - Java/Kotlin for Backend development.
    - React JS for Frontend development.
    - Terraform as IaC
- Service Hosting Platform preferences:
    - Azure cloud Platform

Schedule and Milestones

1. Setup Infrastructure to host the applications- **2 Sprints**
2. Registration & Login System - **4 Sprints**
    a. User Registration & Login.
    b. Personnel/Service Provider Registration & Login.
3. Search System - **2 Sprints**
4. Handling emergency requests by requesting callback. - **2 Sprints**
5. Booking of services. - **2 Sprints**
6. Payment for services. - **3 Sprints**
7. Support for Reviews and Ratings. - **2 Sprints**
8. Profile Management for user+service provider. - **2 Sprints**

Tasks and Deliverables

All Tasks are captured in form of User stories.

Setup Infrastructure

As a Developer, I want to be able to deploy services and host the application, so that we can create the product XOMO.

Tasks:

1. Create and setup account on Azure cloud platform
    a. using Terraform build IaC to create new business account on Microsoft Azure.
    b. every team member has access to account and resources on Azure.
2. Integrate support for compute, to create and deploy new services.
    a. using Terraform build support for deploying new services to App Service on Azure.
3. Integrate API Gateway for the service .
    a. service exposed to internet must pass through API gateway.
4. Integrate Key Vault for managing secrets of services.
    a. when a service needs, it can store secrets in Key vault.
5. Setup Domain for platform.
    a. create descriptive domain name for the service exposed to internet.

Handling emergency requests by requesting callback.

As a user, I want to be able to request a callback, so that I can get help from available personnel.

Tasks:

1. Design form for Emergency service requests.
    a. accepts
        i. user name, email, address, phone number, location.
        ii. problem and impact to assess priority.
    b. give a message to user to confirm the requested service.
2. Design a backend service to process emergency requests.
    a. an interface which can accept requests from Form in #1
    b. forward request to notification service.
3. Design a notification system to alert about emergency requests
    a. whenever an emergency service is requested,
        i. notify the customer support group.

User Registration:

As a user, I want to be able to register on the XOMO platform, so that I can book services.

Tasks:

1. Design User registration Form.
    a. accepts users full name, email, address, phone number, password.
2. Design a Backend service to store registered users.
    a. Store the user data in suitable data store.
3. Design User login
    a. accepts email and password.
4. Design a Backend service to validate registered users on sign-in.
    a. validate user data against the stored data.
    b. give a clear message, when validation fails.

Service Provider Registration:

As a service provider, I want to able to register and login to the platform, so that I can join the team of service providers.

Tasks:

1. Design Registration Form.
    a. accepts full name, email-address, residence address, phone number, identification method, qualifications,
    b. previous experience.
2. Design a Backend service to store registered service providers.
    a. Store the customer data.
3. Design Backend service to store services provided.
    a. Store service provider qualification.
4. Design Qualifications assessment Form.
    a. accepts qualifications in terms of certifications, previous experience, preferred areas of interest for services.
5. Design frontend interface for customer to upload documents for identification.
    a. requires at-least one document among passport, other identification document.
6. Design a Backend service to verify user with provided identification method and document.
    a. connect with necessary 3rd party service to verify customer.

Search engine

As a user, **I want to** search for my issue / request type via search bar and see the available personnels for that type **so that**, I can see the available personnels for that type by looking to their features.

Tasks

1. Design of the search bar
    a. Accepts a string with maximum length 100
    b. Need to takes place in the top of the page and be rounded
2. Design of the available personnels page
    a. Personnels should be listed next to each other
    b. Each one has a separate grid and grid needs to include minimal information such as rating and reviews
    c. When the personnel is clicked pop-up needs to be occurred with more details
3. Search mechanism
    a. In each written letter, send query to backend to find suitable types with written text
    b. Display suitable types of requests / issues (it can be cleaning, electrician, etc.)
    c. If no results suit then show all types
4. Request Type selecting mechanism
    a. When you click to the corresponding type, available persons page should be opened in that type

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Profile Management

As a user or customer, **I want to** modify my profile **so that**, I can change my personal information such as full name, location, occupation, age, biography, and image.

Tasks

1. Design of the profile page
    a. At least need to include text areas for name and biography
    b. Can include other text areas for location, age, and occupation
    c. Need some placeholder place for image
    d. Need save button to save changes
2. Editing written information
    a. They need to be kept in the state of frontend while user entering their information
    b. Design backend API to send taken inputs from user to it
    c. Send information to backend API by clicking to save button
3. Modifying image
    a. Design backend API to update image
    b. When clicked on top of the image and the new image is selected from local, it needs to be sent to corresponding backend API.

Reviews and ratings

As a user, I want to be able to provide a review and rating for a completed service so that I can share my experience.

Tasks

1. Design a rating page to show after task is finished
    a. Design the layout to ensure clarity and ease of use.
    b. Allow users to rate the service using a star system (5 highest, 1 lowest).
    c. Provide a text box for users to add comments on the personnel.
    d. Implement a restriction to allow users to rate only after payment and task completion.
    e. Consider implementing tooltips or hints for users to understand the rating scale.
2. Design review section under the personnel
    a. Display stars for each review .
    b. Show comments for each review to provide detailed feedback.
3. Implement Rating Mechanism
    a. Develop the backend functionality to store and calculate ratings for each personnel.
    b. Implement logic to restrict rating eligibility based on payment and task completion.
4. Implement Review Mechanism
    a. Develop the backend functionality to store and display user reviews for personnel.
5. Display Review History for Users
    a. Design and implement a section for to view users own review history.
    b. Design and implement a section to view personel review history.
6. Enable Flagging or Reporting of Review
    a. Implement a system for users to flag or report inappropriate reviews.
    b. Develop a mechanism for platform administrators to review and take appropriate action

Booking a service

As a user, I want to see a "Book Now" button next to the profile of a service provider so that I can easily initiate the booking process

Tasks

1. Design a booking button on a particular personel
    a. it needs to be put beside personel name for easy acess
2. Design a booking page
    a. Show a price for the personnel
    b. Show available dates
    c. Allow user pick a date
3. Design review booking dialog/page
    a. Add a "Confirm Booking" button for users to finalize their booking.
4. Implement Notification to Personnel
    a. Design and implement a system to send notifications to personnel when a user makes a booking.
    b. Include relevant details in the notification, such as the user's name, booked service, and date.
5. Enable user cancellation
    a. Design a user-friendly interface for canceling bookings.
6. Implement reminder Notifications
    a. Develop a system to send reminder notifications to users about their upcoming booked services.

Payment of a service

As a user, I want to see a "Proceed to Payment" button after confirming my booking so that I can initiate the payment process

Tasks

1. Design a payment page to show after confirm booking
    a. Display the total price for the booking.
    b. Allow the user to input card details, including card number, CVV, and cardholder's name.
2. Design review payment dialog/page
    a. Show a summary of the booking details, including the total price and card details.
    b. Add a "Confirm Payment" button for users to finalize the payment.
3. Implement Payment Processing
    a. Develop the functionality to proceed with money transfer form the user's account.
    b. Integrate a secure payment gateway for processing payments securely.
4. Enable user Receipt Download
    a. Design and implement the option for users to view and download a payment receipt for their records.
5. Notify Users of Payment Issues
    a. Implement a system to notify users if there are any issues with the payment process and provide guidance on resolving them.

Required Technology Elements

1. Cloud Platform: Suitable, Cost effective, Highly available.
2. Storage Service: Suitable, Cost effective, Highly available data store.
3. Location Service: Available Geo location APIs.

Risk and Mitigation Analysis

New table

Risk Id	Risks	Severity	Probability	Measures
1	Cannot finishing tasks before deadline due to workload of students in the team	Medium	High	Some project management tools need to be used such as Jira to control whether we are on the schedule or behind of it
2	Users' requests can much more exceed the available personnel amount	High	Medium - High	From the beginning, we should contact with lots of reliable personnels and we need to observe request amount, whenever it increases a lot, we can supply more personnels
3	Payment system may fail for some duration	Medium - High	Low	We can use reliable payment methods, in case of rare failures delayed payments can be possible by notifying the users/personnels
4	Selected personnel may not go to the place where issue / request has happened	Medium	Low	Some mechanisms can be placed into app if some personnels don't come after some minute, users can directly announce to us and we can redirect other personnel directly
5	Emergence callbacks can exceed more than 1 day	High	Low - Medium	At the back, we need to have many personnels and emergence callback amounts can be tracked to set personnel counts
6	Personnels can requests additional fees from users other than we are giving to them	Medium	Medium	We need to specify this issue while making contract with the personnels and with reviews and ratings user can announce this issue to us
7	Team motivation can be reduced	Low - Medium	Low - Medium	Scrum master continuously try to motivate team members when they are not enough motivated
8	Personnel and user informations can be stolen due to security attacks	High	Low	Security implementation advices should be followed. Also, we can sign an agreement with many security companies to guarantee security of the app
9	Fake users can use app and create non-real requests via app	Medium	Low	Request counts can be constrained and fake users / devices can be banned if we decided that this request is fake
10	Some members can against with a technical difficulty in the development phase	Low	Low - Medium	Other people can directly help to him / her to solve the issue. Also, scrum master will help to find support from another one

P7 - Requirements Process & Report

For requirements elicitation, initially we met with many personnels (technicians, plumbers, electricians, and so on) by scheduling and preparing interviews with them. Before passing to the interviews, a common question pool had been prepared to collect answers to the similar questions. Until now, interviews have been finished in 10-15 minutes at most by preparing ourselves beforehand.

Currently, lots of requirements are elicited from many customers, users, and stakeholders. After now, we planned the requirement elicitation in the same way as we have made before. Throughout the process we will put our users & customers in the center and try to meet with them by interview mechanism. We will contact with same people more to observe how they feel about product and also we will contact with different people to enlarge our requirements.

Even though workshops our beneficial in eliciting requirements, we will only go with interviews since we have not enough network yet and team is separated to the world that leads to virtual workshops which is not very effective compared to the face-to-face workshops.