detailed requirements

Stakeholders in the Application:

1. Application Managers -
Responsible for the development and management of the app, initiators of the project, aiming to promote tourism in the Tavor Trail area.

2. Local Authorities and Regions Interested in Tourism Promotion -
For example, Lower Galilee Regional Council, which seeks to market the Tavor Trail and attract more visitors to the area.

3. App Users -
Target audience includes tourists and hiking lovers planning visits to the area, as well as local residents seeking information about the region.

4. Environmental and Nature Organizations -
Organizations interested in monitoring the condition of the area, receiving alerts about hazards, and preserving the local environment through user involvement in the app.

functional requirements:

1. The ability to integrate and display maps of a specific area -
The system will allow local authorities or relevant organizations to upload maps of their area, such as hiking trails, tourist attractions, or points of interest.
After uploading the map, the app will integrate the data into its database and update the user interface accordingly.
For example, a Lower Galilee Regional Council could upload a map of the Tavor Trail, and the app would use this data to display the trail, relevant information, and related services like restaurants and overnight stays.
The system will ensure that the newly uploaded data is accurately integrated into the app, with interactive features like zoom options, clickable points of interest for additional details, and trail markers to guide users.
The app's recommendations will also be updated to include the newly added area, thus providing a seamless and focused user experience for those visiting the area.

The relevant stakeholders are:
App users.

Local authorities – They will be responsible for uploading and managing the maps of their area.

App administrators – They will ensure the process of integrating maps into the database is done correctly and that the user experience displays the maps properly.

2. **Registration to the system** –
Upon the first login to the app, the user will be required to register.

The relevant stakeholders are:
App Users – Users are the primary group affected by this requirement, as they are required to go through the registration process in order to access the app's services.

Local Authorities – They will have a user account through which they can update data and perform special actions.

App Administrators – Registration is important for them to collect data, manage users, and tailor the user experience to specific needs.

Environmental and Nature Organizations – Through registration, these organizations can receive information on usage patterns and alerts reported by users, enabling them to monitor the situation in the field more effectively.

3. Personalized Tour Route Display
The system will implement user-provided data, such as interests, activity preferences (allowing users to choose from categories such as culture, archaeology, nature, and more), and group size, along with real-time weather updates and availability of attractions in the area, to generate customized route suggestions.
Additionally, the system will receive navigation data from the local authorities and display relevant advertisements from the app's database, selecting which ads to show based on proximity to specific locations on the route.
These routes will consider various factors, such as difficulty levels, estimated duration, and points of interest along the way.
Users will be able to view detailed route descriptions, including maps, photos, and reviews from other users. Additionally, the system will provide alternative routes in case of weather disruptions or area closures, ensuring a seamless and enjoyable experience for the users.

The relevant stakeholders are:
App Users – they will receive personalized route suggestions based on their preferences and the weather.

App Administrators – This feature is important for administrators to ensure the system provides tailored recommendations and updates based on user data.

4. Environmental Hazard Reporting System
App users will be able to report environmental hazards or tourist congestion.

The relevant stakeholders are:
App Users – they will be able to report environmental hazards or congestion that could impact their experience.

Environmental and Nature Organizations – These organizations will benefit from the reports submitted by users, enabling them to monitor and address environmental issues and congestion more effectively.

5. Ability to Communicate with Nearby Users
The system will let users connect and interact with others nearby, helping to create a sense of community and teamwork.
This feature allows users to share their experiences, recommend places to visit, and plan trips together with people in the same area.
Users will be able to communicate through options like private messages, group chats, or discussion boards focused on specific locations or activities.
They can share helpful tips, such as advice about local attractions, updates about the weather, suggestions for nearby restaurants or accommodations,

and even alert others about disruptions or obstacles on the way.
Using location technology, the system will match users with others close by, making it easy to have meaningful and timely conversations.
This feature will improve the experience for everyone and help build a friendly and connected community for travelers and locals.

Relevant stakeholders:
App Users – They will benefit from the ability to communicate with other users, share experiences, and consult about attractions.

App Administrators – They will oversee user communication and ensure that content and interactions are positive and safe by deleting inappropriate comments and removing users if necessary.

Non-Functional Requirements

System Login:
User registration and login will be done via email, phone, or Google account.

Performance and Scalability:
The app must be capable of handling a large number of users simultaneously, especially during peak tourist seasons.

The system should load user data, personalized recommendations, and nearby locations within 3 seconds.

The system should be easily scalable to accommodate future growth, particularly if new areas or tourist attractions are added.

Permissions:
The app must include authentication and authorization mechanisms to ensure that only authorized users can access certain features.
For example, only administrators or local authorities should be able to make changes to routes, delete comments, etc.

Future Scalability for Maps:
The system must be flexible for future scalability so that when additional maps or upgrades to existing maps are added, the upload and display process will be automated and efficient, without affecting the system's performance or the presentation of data to users.