## ****Community Event Organizer App: Requirements Document****

### ****1. Core Functionalities****

* **Event Creation:**
  + Title, description, location, date, and time.
  + Category (e.g., social, cultural, sports, etc.).
  + Image or banner upload.
  + Capacity limit.
  + Ticket pricing and payment options.
* **Event Listing:**
  + Filter and search options (category, location, date).
  + Sort options (date, popularity, etc.).
  + Detailed event information.
* **Event Registration:**
  + User registration/login.
  + Ticket purchase and payment.
  + Waiting list option.
* **Event Calendar:**
  + Visual calendar to display upcoming events.
  + Reminders and notifications.
* **Community Forum:**
  + Discussion boards for event-related topics.
  + Commenting and liking features.
* **Push Notifications:**
  + Real-time updates on event changes, reminders, and important announcements.

### ****2. Non-Functional Requirements****

* **Performance:**
  + Fast load times and responsive UI.
  + Efficient search and filtering.
* **Security:**
  + Secure user authentication and data encryption.
  + Protection against cyber threats.
* **Usability:**
  + User-friendly interface.
  + Intuitive navigation.
  + Clear and concise information.
* **Scalability:**
  + Ability to handle a growing number of users and events.
  + Scalable infrastructure.
* **Accessibility:**
  + Accessible to users with disabilities.
  + Compliance with accessibility standards.

### ****3. Requirements Documentation and Tracing****

**a. Use Case Diagrams:**

* Visual representation of user interactions with the system.
* Define actors (users) and their goals.
* Identify system responses and alternative flows.

**b. User Stories:**

* Short, simple descriptions of a user's desired outcome.
* Format: "As a [user role], I want to [goal] so that [reason]."
  + Example: "As a user, I want to create an event so that I can organize a community gathering."

**c. Requirements Traceability Matrix (RTM):**

* Link requirements to design artifacts, test cases, and code.
* Track the implementation and verification of each requirement.

**d. Requirements Management Tool:**

* Use a tool like Jira or Azure DevOps to manage requirements.
* Create requirements, link them to tasks and test cases.
* Track changes and version control.

By following this approach, we can ensure that the development team builds the right product and meets the needs of the users.