Situation Under Study:

Create Event: Allows a leader or event manager to add new events to their society's page.
Platforms: Mobile and Desktop Web

- Users sign in via login page; roles: Leader, EventManager, Member, Guest
- Typical load: time peaks around society fairs and weekly meetings
- Backend is hosted on a cloud Database and REST API with role-based access control.

Stakeholders, Assets and Risks:

Stakeholders: Society Leader(main), EventManager(secondary), Member/Guest(unauthorised)
Assets: Event records, Member roles/identities, Society details
Risks: Unauthorised event creation, leak of information, slow responses, duplicate entries.

Security, Performance, Reliability and Scalability:

Security: Unauthorised Member attempts to create/manage an event

Requirement:	Target:	Verification:
API must return error message 401/403; no event created	All unauthorised requests remain unsuccessful	API test, manually and automated.
All app-server communication must be secure	100% of data transmission uses HTTPS	Check network settings and perform a basic security scan.
Only authorised roles can access the "Create Event" page	Access restricted correctly for all user roles	Role-based testing. Making sure authorised roles are able to access the page, and unauthorised roles are not.
Event data to be stored securely in the database, and inaccessible to users who don't have permission	No unauthorised access to personal info or event records.	Database access tested using non leader accounts
Error messages and system logs should not show personal or society details	0 sensitive data found in system logs	Inspecting the log files and error outputs to make sure.

Performance: Society Leader creates an event

Requirement:	Target:	Verification:
When an authorised user clicks “Create” the event should be saved and confirmed quickly	Confirmation appears within 2 seconds	Manual timing test when creating event
Even during busy times, the system should still create events without freezing or errors	Response time<4s even with many users active	Load test with multiple users simulated
The “Create Event” page should open smoothly on both mobile and desktop devices	Page becomes ready within 3 seconds	Manual test on normal laptop and phone
The app should show a visible progress indicator after the “Create” button is pressed	Indicator appears within 0.5 seconds	Manual front end test
The system should handle many event creations per minute without slowing down	At least 200 successful event creations per minute	Automated stress test using many users or a tool/bot.

Reliability: A Society Leader submits a new event. The feature should keep working reliably during brief faults and must not create duplicates or lose saved data.

Requirement:	Target:	Verification:
The event must be saved to replicated storage before the server confirms success	100% of confirmed events are permanently saved	Check database replication and make sure all events exist
When the same event is submitted twice within 60 seconds, it should not create duplicates	0 duplicate event in test runs; <0.01% in production	Send identical requests twice, verify only one event is stored
If the create process fails, no partial data should be stored	0 partial or incomplete records after failure	Transactional Integrity Test

Create Event feature maintains ≥ 99.5% uptime per month. Auto-failover recovers ≤ 5 min; major outage ≤ 60 min.	≥ 99.5% availability; auto-recovery ≤ 5 min; manual ≤ 60 min.	Monitor uptime dashboard and measure failover duration.

Scalability: Society Leader creates an event

As the number of societies, and events grow over time, multiple users may create or edit events at the same time. The system should maintain its normal performance levels even with higher user activity

Requirement	Target	Verification
The system should continue to perform normally with user growth	Maintain the response time of <4s with up to 1000 users	Load test with 1000 users at once
The backend should handle many event creations per minute without failure	Support 200 or more event creations per minute	Stress test and monitor success rate
Even when the database holds many events, the performance shouldn't deteriorate	Database stores more than 10,000 events without performance issues	Automated event additions, and measure event retrieval times
When the system detects high load, it should add more resources	New instance within 5 minutes of scale trigger. Uptime maintained above 99.5%	Review cloud auto-scaling logs and uptime logs