# Functional and Non-Functional Requirements for the Park Management System

## Functional Requirements

These define what the system should do.

### User Management

* Admins can create, update, and delete user accounts.
* Visitors can register and log in.

### Park Entry & Ticketing

* Online and on-site ticket booking.
* QR code or RFID-based entry system.
* Different ticket categories (e.g., daily, seasonal, VIP).

### Facility Reservation

* Users can book picnic areas, event halls, or sports facilities.
* Availability calendar and payment integration.

### Maintenance Management

* Staff can log maintenance requests.
* System tracks maintenance schedules.

### Wildlife & Environmental Monitoring

* Track and log flora and fauna sightings.
* Notify authorities about environmental concerns.

### Security & Emergency Handling

* SOS feature for visitors in distress.
* Automated emergency alerts to park rangers.

### Event Management

* Admins can schedule and manage events.
* Users can register for events online.

### Reporting & Analytics

* Generate visitor statistics.
* Financial and operational reports.

### Feedback & Review System

* Visitors can rate and review park services.
* Admins can respond to feedback.

## Non-Functional Requirements

These define system quality attributes.

### Performance

* The system should handle at least 1,000 concurrent users.
* Ticket booking should be processed within 3 seconds.

### Scalability

* Ability to add new parks without major modifications.

### Security

* Data encryption for transactions and user data.
* Role-based access control for staff and visitors.

### Usability

* Intuitive UI/UX for easy navigation.
* Mobile-friendly design.

### Availability & Reliability

* 99.9% uptime to ensure seamless park operations.
* Backup mechanisms for critical data.

### Compliance

* Must adhere to environmental and safety regulations.
* GDPR compliance for user data privacy.

### Maintainability

* Modular architecture to allow easy updates.