**Group Worksheet: Neighborhood Watch Application**.

### **1. Users and Roles**

**1.1 Who are the three types of users of the system?**

The three types of users are Administrators, Security Officers, and Neighborhood Watch Members.

**1.2 What platform(s) does each user primarily use (web, mobile, both)?**

1. Administrator**:** Web-based application. Why? For complex system management and oversight.
2. SecurityOfficer**:** Mobile application. Why? For on-the-go patrol logging.
3. Neighborhood Watch Member: Mobile application. Why? For immediate access and alerts

**1.3 What are the unique privileges of each user?**

1. Administrator**:** Can approve self-registered accounts, suspend or delete users, add/remove/suspend houses for monitoring, and modify system configurations.
2. Security Officer**:** Can log patrols, view their own patrol history, and add contextual comments during a scan.
3. Neighborhood Watch Member**:** Can view patrol statistics, receive alerts for patrol anomalies, use community interaction features, raise emergency alerts, and manage their subscription payments.

### **2. Authentication & Registration**

**2.1 How do administrators create and recover their accounts?**

Administrator accounts are created by other administrators. They can use the "forgot password" feature to reset their passwords, which sends a link to their email.

**2.2 How do security officers register and get approved?**

Security officers self-register for an account, which must then be approved by an administrator.

**2.3 How do neighborhood members register and get approved?**

Neighborhood members self-register for an account, which must then be approved by an administrator.

**2.4 What type of two-factor authentication is required for administrators?**

Administrators are required to use two-factor authentication via an OTP (One-Time Password) sent to their email.

### **3. Features by Role**

**3.1 What actions can administrators perform?**

Administrators can approve/reject user accounts, suspend or delete users, and configure and maintain the system. They can also monitor and manage the status of houses for monitoring.

**3.2 What actions can security officers perform in the mobile app?**

Security officers can log patrols by scanning QR codes, add contextual comments during a scan, and view their patrol history.

**3.3 What features are available to neighborhood watch members?**

Neighborhood members can view patrol statistics, receive automatic alerts if patrols fail, interact with the community, and raise emergency alerts. They can also manage their subscription payments and account access.

**3.4 What happens if a member does not pay for their subscription for two months?**

A member's account is automatically suspended if they fail to pay the monthly subscription fee for two consecutive months.

### **4. Patrol & Monitoring Rules**

**4.1 How do security officers log patrols?**

Security officers log their patrols by scanning unique QR codes at each gate using the mobile application.

**4.2 What details are captured during a patrol scan?**

The system captures the officer's name, the date, and the time. The officer can also add contextual comments.

**4.3 What happens if an officer scans fewer than X% of assigned QR codes?**

If an officer scans fewer than X% of their assigned QR codes, they are provisionally suspended.

**4.4 What automatic notifications are triggered for anomalies?**

The system automatically alerts administrators via SMS and email when a security officer scans fewer than X% of assigned QR codes. It also sends SMS and email notifications to neighborhood members if a security officer fails to patrol adequately.

### **5. Alerts & Community Features**

**5.1 How can members raise emergency alerts?**

Members can raise an emergency alert using the mobile application.

**5.2 What happens when an emergency alert is raised?**

When a member raises an emergency alert, the alert is visible to all other members, and an immediate, high-priority notification is sent to security officers.

**5.3 What is the purpose of the community feature?**

The community feature allows members to communicate with each other, including posting comments and responding to community discussions.

### **6. Reporting & Analytics**

**6.1 What types of reports does the system generate**

The system generates weekly, monthly, and yearly reports

**6.2 Who can access this report?**

Administrators: They have access to reports and alerts related to officer misconduct and patrol anomalies.

Security Officers: They can view their complete patrol history within the app.

Neighborhood Watch Members: They can view patrol statistics to see how frequently security officers patrol their area.

### **7. Performance & Scalability**

**7.1 What performance criteria must the system meet?**

The system must be scalable, maintain high performance as the number of users increases, and not slow down or crash under increased load.

### **8. Mobile App Offline Functionality**

**8.1 What should the mobile app be able to do offline?**

The mobile application should be capable of working when there is no internet connection.

**8.2 How does it synchronize data when the internet becomes available?**

The mobile application automatically synchronizes with the backend once an internet connection is restored.

### **9. Suspension & Deletion Rules**

**9.1 Under what conditions is a member suspended?**

A member's account is automatically suspended if they fail to pay the monthly subscription fee for two consecutive months.

**9.2 Under what conditions is a security officer suspended?**

A security officer is provisionally suspended if they scan fewer than X% of their assigned households. An administrator can also manually suspend an officer.

**9.3 How can a suspended officer be reinstated?**

An administrator can manually revoke a provisional suspension. After a 3-month suspension period, an administrator can manually reinstate the officer.

**9.4 What happens when an officer is permanently deleted?**

A deleted officer is permanently barred from accessing the mobile application.