Test Summary Report – Face Recognition Attendance System

1. Project Name:

Face Recognition Attendance System

2. Prepared By:

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3. Objective:

To verify that the application correctly recognizes faces, logs attendance accurately, handles errors gracefully, and integrates smoothly with Firebase services.

4. Test Environment:

- **OS:** Windows 10/11
- **Tools Used:** Manual Testing, OpenCV, Firebase Console, Python IDE
- **Python Version:** 3.x
- **Libraries Used:** face-recognition, OpenCV, firebase-admin, numpy, pickle

5. Scope of Testing:

- Face recognition accuracy
- Attendance logging functionality
- Error handling and recovery
- Network and database integration
- Performance under various lighting and multiple faces
- UI responsiveness and webcam feed stability

6. Test Metrics:

Metric	Value
Total Test Cases Executed	35
Positive Test Cases	20
Negative Test Cases	15
Passed	29
Failed	6
Defects Logged	12
Critical Defects	3

Major Defects	5
Minor Defects	4

7. Summary of Defects:

Severity	Count	Example Bug IDs
Critical	3	FRAS_BR_007, FRAS_BR_011, FRAS_BR_001
Major	5	FRAS_BR_002, FRAS_BR_004, FRAS_BR_005, FRAS_BR_006, FRAS_BR_010
Minor	4	FRAS_BR_003, FRAS_BR_009, FRAS_BR_012, FRAS_BR_013

8. Exit Criteria:

- At least 85% test cases passed.
- All critical defects resolved or have mitigation plans.
- Stable attendance logging with no duplication issues.
- Smooth UI operation and webcam feed handling.
- Successful data synchronization with Firebase.

9. Conclusion:

The Face Recognition Attendance System demonstrates robust face identification and reliable attendance management under normal conditions. Several critical and major issues related to error handling, network failures, and performance under stress were identified and logged. With these issues addressed, the system will be production-ready and offer a seamless attendance tracking experience.