Test Plan for Employee Management System (EMS)

1. Objective

The purpose of this test plan is to outline the scope, approach, resources, and schedule of testing activities for the Employee Management System (EMS). The objective is to validate that all features of the EMS are functioning correctly and meet the specified requirements for usability, reliability, and performance.

2. Scope of Testing

The Employee Management System will manage employee information, attendance, leave, payroll, and performance reviews. Testing will cover all modules, including:

1. **Employee Information Management**

   - Add, edit, and delete employee records.
   - View employee profile details.

2. **Attendance Management**

   - Record daily attendance.
   - Track late arrivals and early departures.

3. **Leave Management**

   - Apply, approve, and track leave requests.
   - Calculate available leave balances.

4. **Payroll Management**

   - Process salary calculations.
   - Generate payroll reports.

5. **Performance Management**

   - Record performance reviews.
   - Set and track performance goals.

3. Testing Types

- **Functional Testing:** To verify all functions in each module meet the requirements.
- **User Interface (UI) Testing:** To ensure the UI is intuitive and user-friendly.
- **Integration Testing:** To check the interaction between various EMS modules.
- **Performance Testing:** To ensure the system performs well under expected load.
- **Security Testing:** To verify data privacy and protection within the system.
- **User Acceptance Testing (UAT):** To confirm the system meets end-user expectations.

4. Test Environment

- **Operating System:** Windows, macOS
- **Browsers:** Chrome, Firefox, Safari, Edge

- **Devices:** Desktop and mobile versions for responsive design testing.
- **Test Data:** Dummy employee records, attendance logs, leave requests, etc.

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5. Test Cases

5.1 Employee Information Management

Test ID	Test Case Description	Expected Outcome
TC1	Add new employee record	Employee record added successfully
TC2	Edit existing employee record	Employee record updated successfully
TC3	Delete employee record	Employee record deleted successfully
TC4	View employee details	Correct employee details displayed

5.2 Attendance Management

Test ID	Test Case Description	Expected Outcome
TC5	Record daily attendance	Attendance recorded and stored
TC6	Track late arrivals	Late arrival marked in attendance records
TC7	Generate attendance report	Accurate attendance report generated

5.3 Leave Management

Test ID	Test Case Description	Expected Outcome
TC8	Apply for leave	Leave request submitted successfully
TC9	Approve leave request	Leave status updated to "Approved"
TC10	Calculate available leave balance	Correct leave balance calculated and displayed

5.4 Payroll Management

Test ID	Test Case Description	Expected Outcome
TC11	Process salary calculation	Salary calculated accurately
TC12	Generate payroll report	Payroll report generated with correct details

5.5 Performance Management

Test ID	Test Case Description	Expected Outcome
TC13	Record performance review	Performance review recorded successfully
TC14	Track performance goals	Performance goals updated and tracked correctly

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6. Roles and Responsibilities

- **Test Manager:** Define the testing strategy, manage test resources, and track testing progress.
- **Test Engineers:** Execute test cases, document results, and report defects.
- **Business Analyst:** Validate test cases and support UAT.
- **Developers:** Address issues and retest resolved defects.

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7. Test Schedule

Testing Phase	Start Date	End Date
Requirement Analysis	5-09-2024	7-09-2024
Test Case Development	8-09-2024	10-09-2024

Testing Phase	Start Date	End Date
Test Execution	11-09-2024	12-09-2024
User Acceptance Testing	13-09-2024	15-09-2024
Report and Documentation	16-09-2024	17-09-2024

8. Entry and Exit Criteria

- **Entry Criteria:**

  - Requirements are clearly defined and approved.
  - Test cases are reviewed and finalized.
  - Test environment is set up.

- **Exit Criteria:**

  - All critical and high-priority test cases pass.
  - No unresolved critical defects.
  - UAT is complete with end-user sign-off.

9. Defect Management

Defects will be logged in the defect tracking system with clear descriptions, priority, severity, steps to reproduce, and screenshots. Defects will be assigned to developers for resolution and retested upon resolution.

10. Risk and Mitigation

Risk	Mitigation Strategy
Delays in test environment setup	Set up environment early in the project
Insufficient test data	Generate ample test data in advance
Requirement changes	Establish a process for quick test case updates

11. Approval

This test plan will be reviewed and approved by all relevant stakeholders before proceeding to test execution.