Expense Tracker Project Report

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Project Title: Expense Tracker
Industry: Finance / Employee Management
Project Type: Custom Salesforce Application built using Lightning Web Components (LWC), Apex Classes, and Custom Objects
Target Users: Employees, Managers, and Finance Administrators

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Problem Statement

Manual expense management in organizations often leads to delays, errors, and inefficiencies. Employees struggle to submit expenses in a structured manner, managers find it difficult to track approvals, and finance teams face challenges reconciling and reporting expenses. These inefficiencies result in delayed reimbursements, reduced employee satisfaction, and administrative overhead.

Phase 10: Testing & Verification

Objective: Conduct comprehensive testing and final validation of the Expense Tracker application to ensure all functionality, security, and performance criteria are met.

Step 1: User Acceptance Testing (UAT)

As Regular User (MOHAMMAD.HIFZA):

- Successfully logged into Salesforce as a standard user.
- Created new expense requests with **Date, Category, Amount, Description, and Receipt attachment**.
- Verified the form clears after submission and new requests appear in the Expense table.
- Edited existing expense requests and confirmed updates reflected in the table.
- Verified only personal expense requests are visible to regular users.

As Manager User (FINANCE.MANAGER):

- Successfully logged in with Manager profile (Finance Team role).
- Verified all expense requests from all users are visible.
- Successfully approved or rejected pending expense requests.
- Verified real-time status updates reflected in the table.
- Added manager comments during approval/rejection process.

Step 2: Apex Controller Testing

Updated ExpenseController.cls:

- Verified getMyExpenses() for conditional retrieval based on user profile.
- Tested saveExpenseRequest() to ensure new request creation with validation.
- Confirmed updateExpenseStatus() correctly handles manager approvals/rejections.
- Verified getExpensesForApproval() retrieves pending requests for managers.

Step 3: User Management Testing

- Created **Manager User** "Robert Manager" with Finance Team role.
- Assigned **System Administrator profile** for full permissions.
- Configured email for user activation.
- Confirmed managers see all requests, while regular users see only their own.

Permission Testing:

- Object permissions verified for Expense__c (Read/Create/Edit/Delete).
- Field-level security validated for all custom fields (Amount, Category, Receipt).
- Profile-based access levels tested across user types.

Step 4: UI/UX Testing (LWC Components)

- **Data Table Display:** All expense requests display correctly in tabular format.
- **Form Functionality:** Submit Expense form works without errors.

- **Responsive Design:** Interface functions properly in Lightning Experience.
- **Real-time Updates:** Status changes reflect immediately in the UI.
- **Error Handling:** Validation messages shown for missing or invalid fields.

Navigation Testing:

- Expense Tracker app accessible via **App Launcher**.
- Tab functionality works correctly.
- Page loads smoothly with responsive interactions.

Step 5: Data Integrity Testing

- Expense requests created with correct field values (Date, Category, Amount, Description).
- Status updates from **Pending → Approved/Rejected** working correctly.
- Requests linked properly to submitting users.
- Audit Trail fields (CreatedDate, CreatedBy) populated correctly.

Sample Data Verified:

- EXP001 – Travel Reimbursement – Status: Approved
- EXP002 – Office Supplies – Status: Pending
- EXP003 – Client Meeting Lunch – Status: Pending
- EXP004 – Software Subscription – Status: Approved
- EXP005 – Training Course – Status: Approved

Step 6: Security Testing

- Role-based access: Managers see all requests; users see only their own.
- CRUD permissions verified for Expense__c.
- Profiles have correct access levels.
- Sensitive fields protected with field-level security.

Step 7: Performance Testing

- Lightning pages load quickly.
- SOQL queries execute efficiently.
- No errors detected in browser console.
- Apex methods respond promptly.

Step 8: End-to-End Workflow Testing

- **Request Submission:** User creates expense → Status: Pending
- **Manager Review:** Manager views pending requests in dashboard
- **Approval Decision:** Manager approves/rejects with comments
- **Status Update:** Request status changes to Approved/Rejected
- **Final Verification:** Updated status visible to both user and manager

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Step 9: Browser Compatibility

- **Chrome:** Full functionality verified
- **Firefox / Edge:** Basic functionality verified
- **Lightning Experience:** Performance confirmed

Step 10: Deployment Verification

- Code quality: Clean, well-documented Apex code.
- Error handling: Exception handling implemented across all Apex methods.
- User experience: Intuitive interface for both users and managers.
- Scalability: Supports multiple users and expense requests.

Project Completion Summary

Final Test Results: EXPENSE TRACKER PROJECT SUCCESSFULLY COMPLETED ✅

Project Credentials:

- Username: mohammad.hifza2601@gmail.com
- Org Type: Salesforce Developer Edition
- Project Name: ExpenseTrackerApp

Key Achievements:

- Implemented complete expense management workflow.
- Secure role-based access control for users and managers.
- Intuitive LWC interface with real-time updates.
- Comprehensive testing across all user personas.
- Achieved 100% functional requirements satisfaction.
- Delivered production-ready Salesforce application.

Technical Stack:

- Platform: Salesforce Lightning
- Frontend: Lightning Web Components (LWC)
- Backend: Apex Classes
- Database: Salesforce Custom Objects
- UI Framework: Salesforce Lightning Design System (SLDS)
- Development Environment: Visual Studio Code with Salesforce CLI