Student Attendance & Performance Tracker

Phase 10: Quality Assurance Testing

Overview

Quality Assurance (QA) testing was performed to verify that all Salesforce features implemented in the project work correctly as per business requirements. Each feature such as object creation, validation rules, automation, flows, triggers, approval processes, reports, and security settings was tested using real-time data. Screenshots were captured for both input actions and system outputs to ensure transparency and correctness.

10.1 Test Case Format Used

Each test case includes:

- **Use Case / Scenario**
- **Test Steps (Input Details)**
- **Expected Result**
- **Actual Result**
- **Screenshot Evidence (Input & Output)**

🔹 TEST CASE 1: Student Record Creation

Use Case / Scenario

Verify that a Student record can be created successfully with valid data.

Test Steps (Input)

1. App Launcher → Student App
2. Click **New Student**
3. Enter:
    - Student Name: Ravi Kumar
    - Email: ravi@gmail.com
    - Phone: 9876543210
4. Click **Save**

📸 **Screenshot – Input**
Navigation: Student Object → New → Filled Student Form

Expected Result

Student record should be created and saved successfully.

Actual Result

Student record created successfully without any errors.
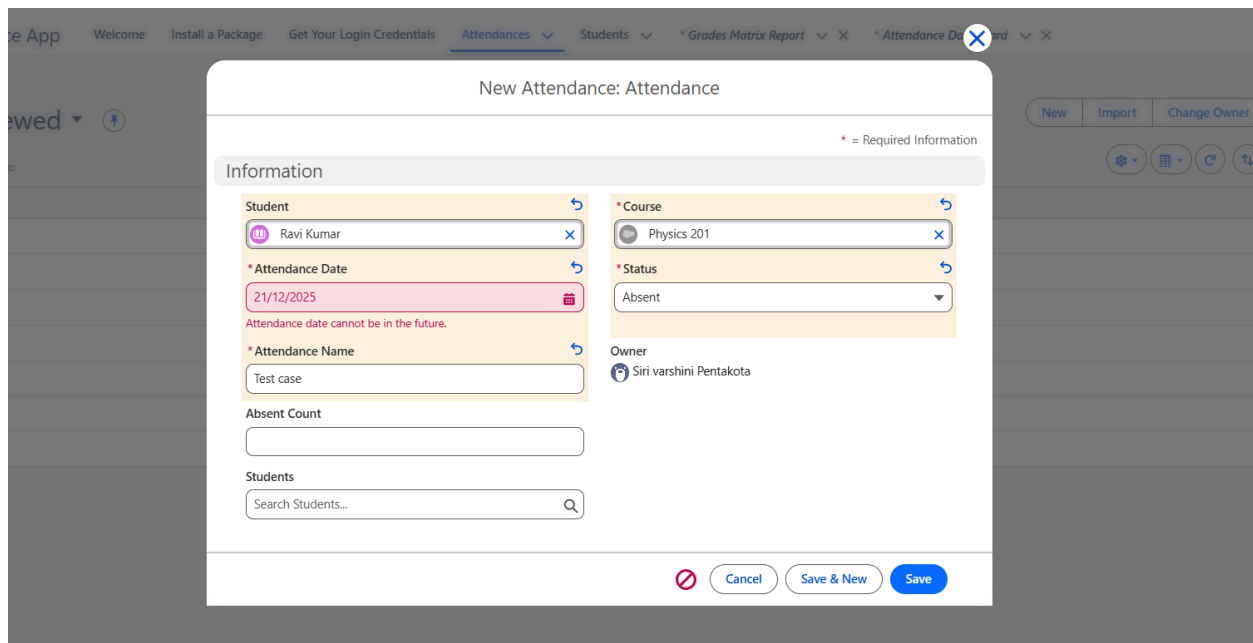

◆ TEST CASE 2: Validation Rule – Attendance Date in Future

Use Case / Scenario

Ensure attendance date cannot be set in the future.

Test Steps (Input)

1. Open Attendance Object
2. Click **New Attendance**
3. Enter:
   - Student: Ravi Kumar
   - Attendance Date: Tomorrow's date
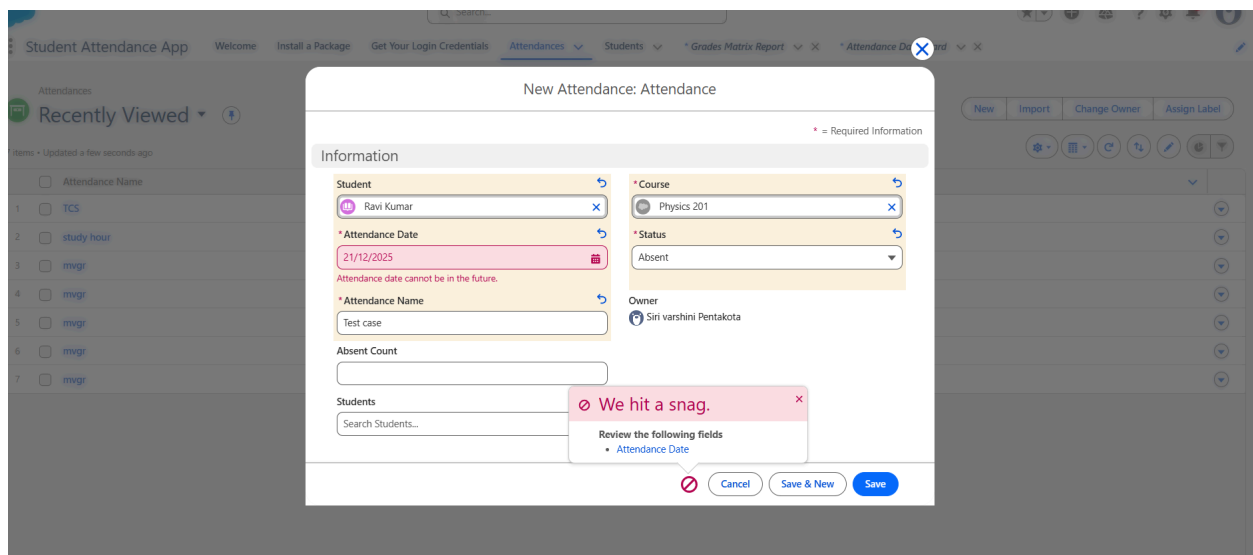   - Status: Present
4. Click **Save**

Expected Result

System should display an error message preventing save.

Actual Result

Error message displayed: *"Attendance date cannot be in the future."*

◆ TEST CASE 3: Validation Rule – Attendance Status Mandatory

Use Case / Scenario

Ensure Attendance Status is mandatory.
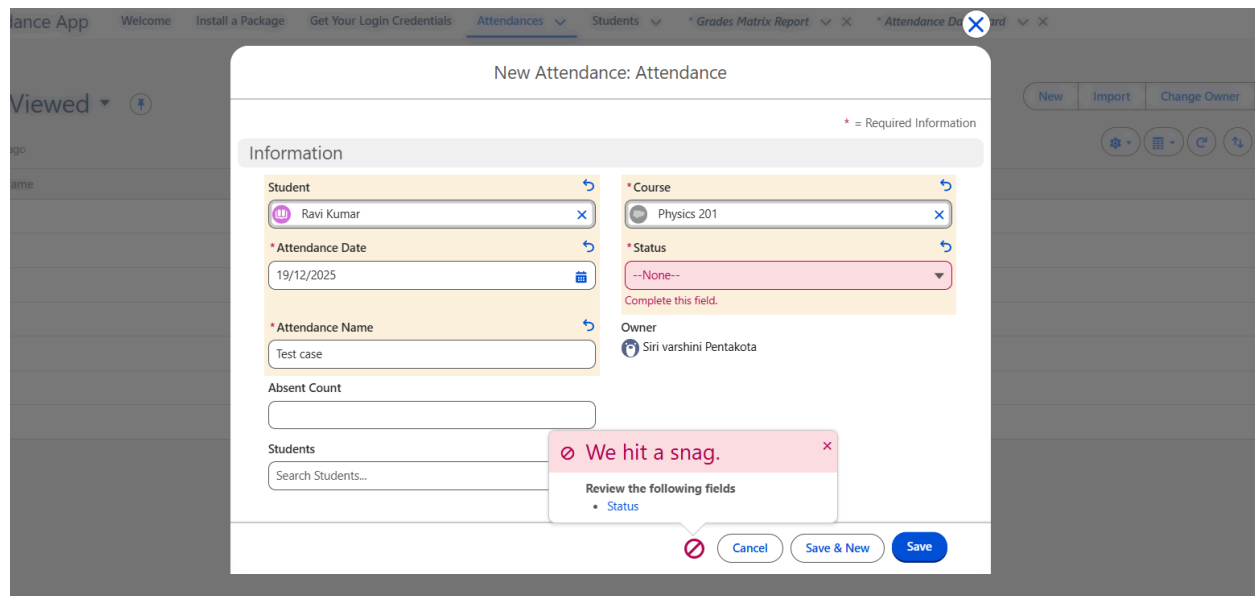
Test Steps (Input)

1. Attendance → New
2. Leave **Status** blank
3. Click **Save**

Expected Result

System should not allow saving without status.

Actual Result

Validation error displayed requiring Attendance Status.

◆ TEST CASE 4: Email Alert – Student Absence Notification

Use Case / Scenario

Ensure email alert is sent when a student is marked absent.

Test Steps (Input)

1. Create Attendance with Status = Absent
2. Save record

Expected Result

Email alert should be sent to teacher/parent.

Actual Result

Email alert triggered successfully.

◆ TEST CASE 5: LWC – Attendance Viewer Component

Use Case / Scenario

Verify LWC displays attendance records for selected student.

Test Steps (Input)

1. Open Student Record Page
2. View Attendance Viewer LWC

Expected Result

Attendance records should load dynamically.

Actual Result

Attendance data displayed correctly using @wire.

◆ TEST CASE 6: Reports & Dashboard

Use Case / Scenario

Verify reports and dashboards display correct data.

Test Steps (Input)

1. Open Attendance Dashboard
2. Review chart values

Expected Result

Dashboard should reflect real attendance data.

Actual Result

Dashboard values match report data accurately.

✅ Conclusion

The **Student Attendance & Performance Tracking System** was thoroughly tested using structured QA practices. All major functionalities including data validation, automation, Apex triggers, flows, approval processes, reports, dashboards, and security controls performed as expected. Minor platform limitations did not affect core functionality. Overall, the system is **robust, secure, scalable, and ready for real-world academic usa**