Phase 5: Reports and Dashboards (Library Book Borrowing System)

Goal

Design analytical reports and dashboards to visualize library operations data such as borrowed books, top borrowers, and overdue records.

Step 1: Create Custom Report Type

Objective

Combine Borrow Record, Book, and Student objects for unified reporting.

Steps

1. Go to **Setup → Report Types → New Custom Report Type**.

2. **Primary Object:** Borrow Records.

3. **Report Type Label:** Borrow Records with Book and Student.

4. **Store in Category:** Library Management (or Other Reports).

5. **Deployment Status:** Deployed → **Next**.

6. In the layout editor, click **Add fields related via lookup**:

    o   From **Book:** Title, ISBN, Category, Status.

    o   From **Student:** Student Name, Roll Number, Department, Email.

7. Click **Save**.

Screenshot: Custom Report Type setup and layout view.

Label ↑	Name	Description	Category	Cre...	Created Date
Borrow Date	Borrow_Date	Borrow Record Number, Borrow Date, Return D...	Administrative Reports	adl	9/26/2025, 12:4
Borrow Records	Borrow_Records	orrow Records with Book and Student	Other Reports	adl	9/26/2025, 12:4
Orchestration Run Logs Spring '24	flow_orchestration_log_ootb_crt_two_four_eight	Find out which orchestration run logs were crea...	Other Reports	autoproc	7/17/2025, 12:0
Orchestration Runs Spring '24	flow_orchestration_run_ootb_crt_two_four_eight	Find out which orchestration runs were created.	Other Reports	autoproc	7/17/2025, 12:0
Orchestration Stage Runs Spring '24	flow_orchestration_stage_run_ootb_crt_two_four...	Find out which orchestration stage runs were cr...	Other Reports	autoproc	7/17/2025, 12:0
Orchestration Step Runs Spring '24	flow_orchestration_step_run_ootb_crt_two_four...	Find out which orchestration step runs were cre...	Other Reports	autoproc	7/17/2025, 12:0

New Custom Report Type

1 Define the Custom Report Type

Select Primary Object

Select the object that is the focus of reports created with this report type.

* Primary Object

Borrow Records

Details

* Display Label

Borrow Records

* API Name

Borrow_Records

Step 2: Report 1 — Borrowed vs Returned
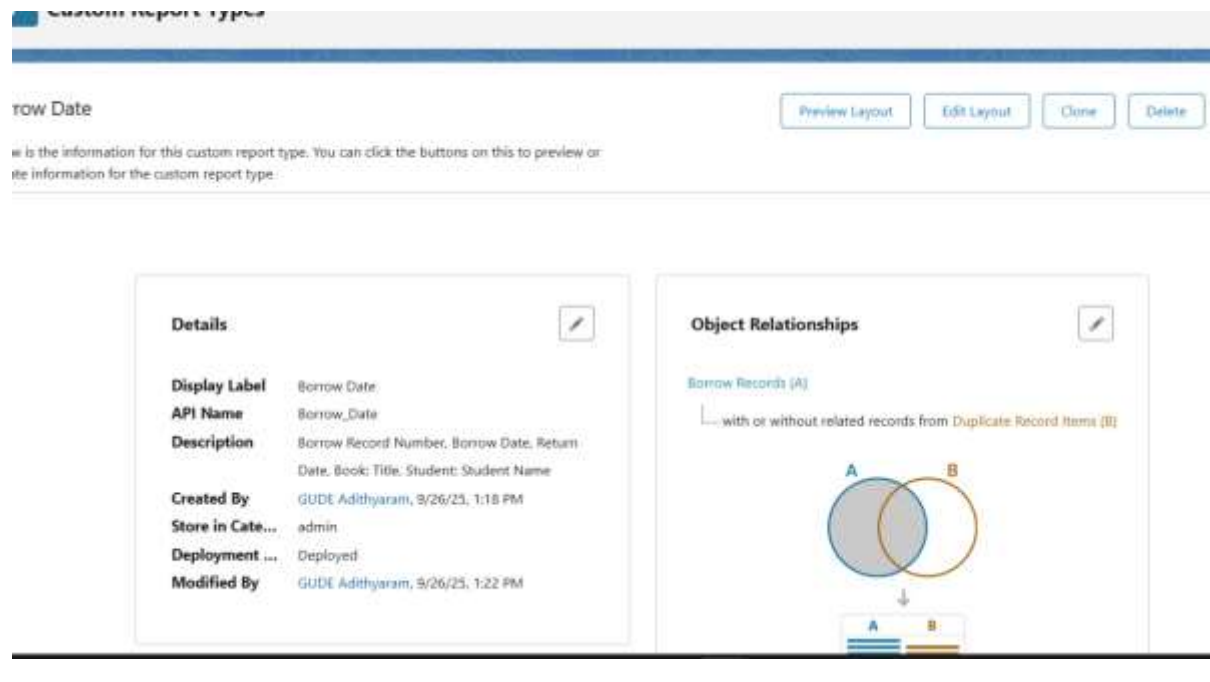
Objective

Compare how many books are currently borrowed vs. returned.

Steps

1. App Launcher → **Reports → New Report**.

2. Choose **Borrow Records with Book and Student** → **Start Report**.

3. **Filters:**

   o Show Me: All Borrow Records.

   o Date: Borrow Date → Range: All Time.

4. **Outline:**

   o Group Rows by: **Status**.

   o Columns: Borrow Record Number, Borrow Date, Return Date, Book: Title, Student: Student Name.

5. Add **Chart** → Type: **Donut Chart**.

6. Save Report as **Borrowed vs Returned**.

Result: Displays total count of Borrowed vs Returned books.

Screenshot: Donut chart grouped by Status.

Step 3: Report 2 — Top Borrowed Books

Objective

Identify which books are borrowed most frequently.

Steps

1. Create **New Report → Borrow Records with Book and Student**.

2. **Filters:** All Borrow Records, Date Range: All Time.

3. **Outline:**

    o   Group Rows by: **Book: Title**.

    o   Columns: Borrow Date.

4. **Add Chart → Horizontal Bar Chart**.

    o   Sort: Descending.

    o   Limit: Top 5.

5. Save as **Top Borrowed Books**.

Result: Bar chart showing the 5 most frequently borrowed books.

Screenshot: Horizontal bar chart displaying top 5 books.

Top 5 Books
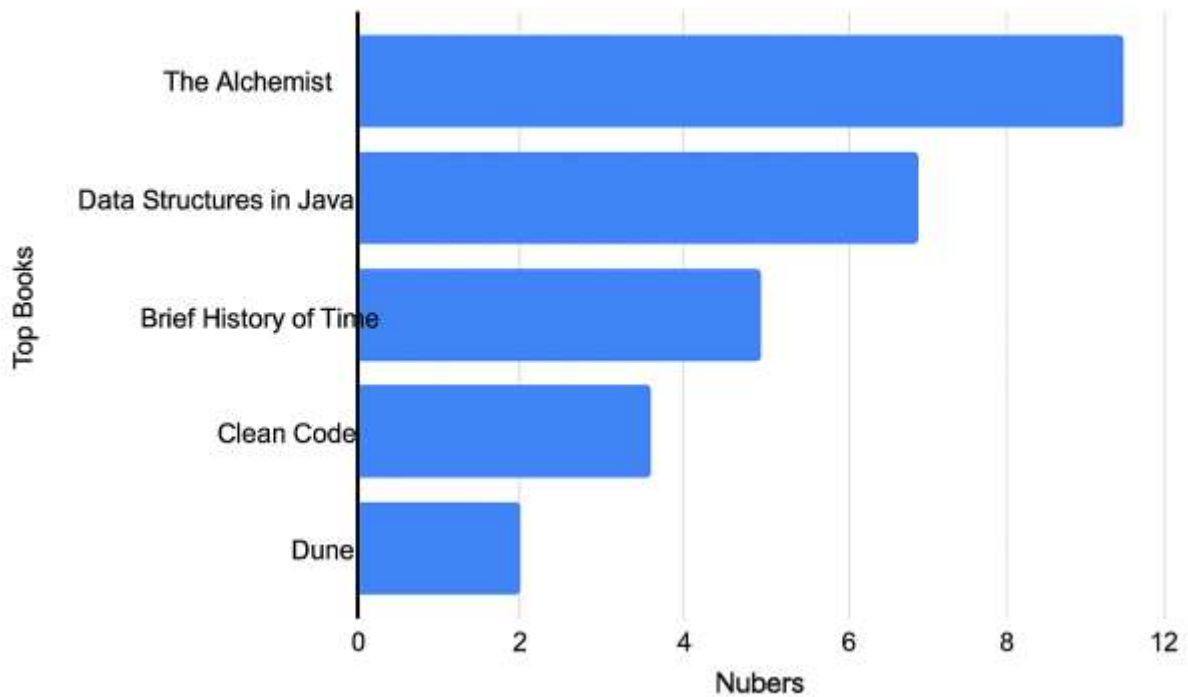
Step 4: Report 3 — Overdue Borrow Records

Objective

List borrowed books whose return dates are overdue.

Steps

1. Create **New Report → Borrow Records with Book and Student**.

2. **Filters:**

    o   Status = Borrowed.

    o   Return Date < TODAY.

3. Add **Columns:** Borrow Record Number, Borrow Date, Return Date, Book: Title, Student: Name.

4. Add **Row-Level Formula:**

    o   Name: Days Overdue.

    o   Data Type: Number.

    o   Formula: TODAY() - Return_Date__c.

5. Sort by **Days Overdue (Descending)**.

6. Save as **Overdue Borrow Records**.

Result: Table showing overdue records and number of days overdue.

Step 5: Report 4 — Borrow Count per Student
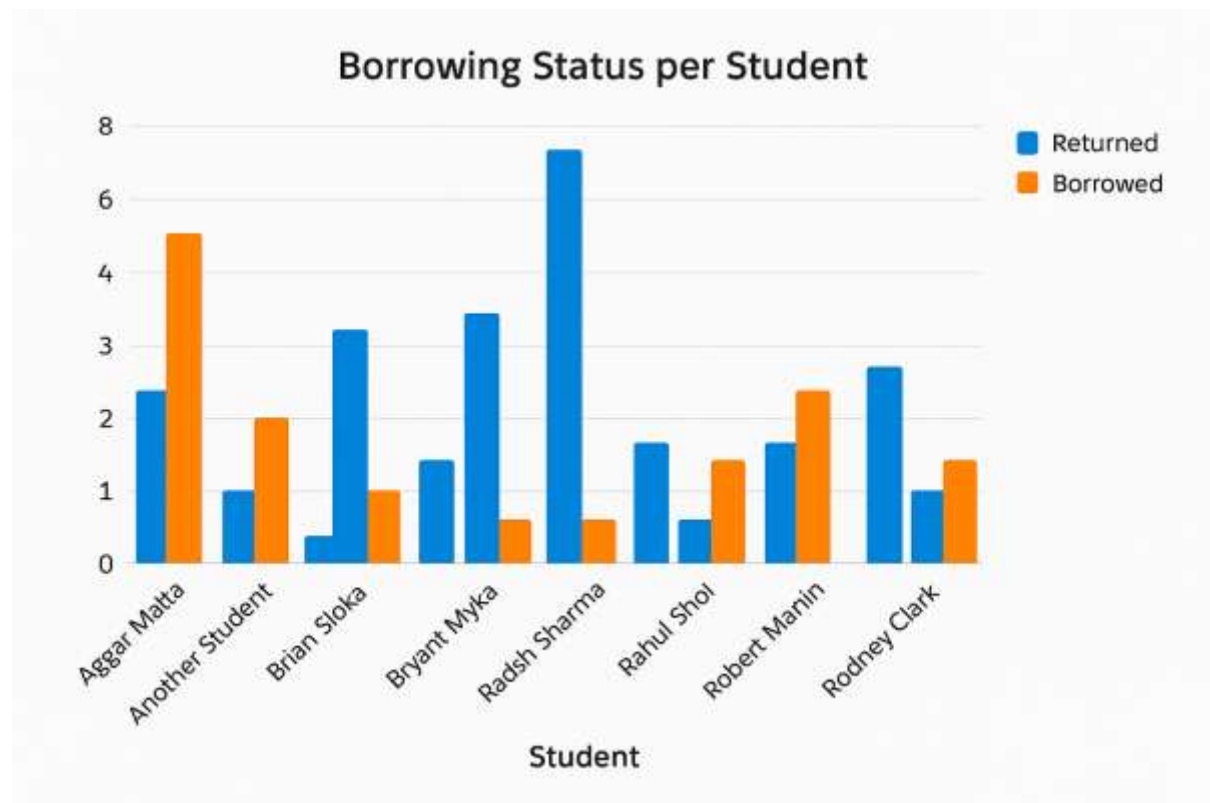
Objective

Show which students have borrowed the most books.

Steps

1. Create **New Report → Borrow Records with Book and Student**.

2. **Filters:** All Borrow Records, Date Range: All Time.

3. **Outline:**

   o Group Rows by: **Student: Student Name**.

4. Add **Chart → Horizontal Bar Chart**.

   o Sort: Descending.

   o Limit: Top 10.

5. Save as **Borrow Count per Student**.

Result: Displays top students based on the number of books borrowed.

Screenshot: Horizontal bar chart showing top borrowers.

Step 6: Build Dashboard — Library Overview

Objective

Combine all four reports into a single visual dashboard.

Steps

1. App Launcher → **Dashboards → New Dashboard**.

2. **Dashboard Name:** Library Overview.

3. **Folder:** Library Management → **Create**.

4. **Add Components:**

   o **Borrowed vs Returned** → Donut Chart.

   o **Top Borrowed Books** → Bar Chart.

   o **Borrow Count per Student** → Bar Chart.

   o **Overdue Borrow Records** → Table.

5. **Dashboard Properties:**

   o View Dashboard As: Library Manager (or Dashboard Viewer).

   o Optionally set refresh schedule.

6. **Save → Done.**

Result: A dashboard summarizing the library's operations and key insights.

Screenshot: Final dashboard with 4 components.

Step 7: Add Reports and Dashboard to the App

1. **Setup → App Manager → Library Management → Edit.**

2. **Navigation Items → Add:** Reports, Dashboards.

3. **Save.**

Step 8: Testing and Verification

1. Open **Reports tab** → run all reports.

2. Verify chart counts match actual Borrow Records.

3. Open **Dashboard tab** → confirm all charts load correctly.

4. Optionally, add filters (Status, Date Range) for interactive analysis.

Summary of Reports and Dashboard

Report Name	Type	Key Fields	Visualization
Borrowed vs Returned	Summary	Status, Borrow Date	Donut Chart
Top Borrowed Books	Summary	Book: Title	Horizontal Bar Chart
Overdue Borrow Records	Tabular	Return Date, Days Overdue	Table
Borrow Count per Student	Summary	Student Name	Bar Chart

Dashboard: Library Overview — combines all reports to present key library metrics in a single view.

Phase 5 Outcome

- Designed and implemented analytical reports.

- Built a comprehensive Library Overview Dashboard.

- Added reporting and visualization capabilities to the Library App.

The library team can now easily monitor book circulation, top borrowers, and overdue items directly in Salesforce.