



# Aror University of Art, Architecture, Design & Heritage Sukkur

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## Department of Artificial Intelligence and Multimedia Gaming

### CS-207 Database Systems (BS-AI & MMG)

#### LAB # 02

##### **Lab Manual: Exploring Gallery and Creating Various Forms Reports in Oracle APEX**

##### **Objective:**

To familiarize students with Oracle APEX's Gallery and its applications, and to guide them in creating Faceted Reports, Master-Detail Reports, and other report types.

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##### **Lab Activity 1: Exploring Oracle APEX Gallery**

**Purpose:** Understand the Oracle APEX App Gallery and its features to accelerate application development.

##### **Steps:**

1. **Login to Oracle APEX:**
    - o Open Oracle APEX and log in using your workspace credentials.
    - o Navigate to the "App Builder" section.
  2. **Explore the App Gallery:**
    - o Click on **Gallery** under the "App Builder" menu.
    - o Browse through sample applications like Sample Database Application, Sample Charts, or Sample Interactive Grid.
    - o Select one application, open its details, and run it to understand its functionalities.
  3. **Analyze Features:**
    - o Note the pre-built reports, dashboards, and forms in the sample app.
    - o Discuss how these elements can be reused or customized.
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##### **Lab Activity 2: Creating a Faceted Report**

**Purpose:** Learn to design dynamic faceted reports for effective data filtering.

##### **Steps:**

1. **Setup:**
    - o From the App Builder, create a new application.
    - o Select a data source (e.g., a table from your database).
  2. **Add a Faceted Search Page:**
    - o While creating the application, choose "Faceted Search" as one of the pages.
    - o Configure the facets (e.g., filtering by category, region, or status).
  3. **Customize Facets:**
    - o Go to the "Page Designer."
    - o Modify the facets by adjusting filters (e.g., slider for numeric values or dropdown for categories).
  4. **Run and Test:**
    - o Run the application.
    - o Test the functionality by filtering data using different facets.
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##### **Lab Activity 3: Creating a Master-Detail Report**



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**Purpose:** Build a report with a parent-child relationship to display detailed data based on master data selection.

**Steps:**

1. **Setup Master Table:**
  - o Use two tables with a parent-child relationship (e.g., Orders and Order Details).
2. **Add Master-Detail Pages:**
  - o In the App Builder, create a new page.
  - o Select "Master-Detail" as the page type.
  - o Configure the relationship between the two tables.
3. **Run and Test:**
  - o Run the application and navigate through the Master-Detail report.
  - o Verify the child data updates based on the selected master row.

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## Lab Activity 4: Creating Other Report Types

**Purpose:** Explore other types of reports like Interactive Reports and Classic Reports.

**Steps:**

1. **Interactive Report:**
  - o Create a new page and select "Interactive Report."
  - o Choose a table or SQL query as the data source.
  - o Customize filters, formatting, and actions.
2. **Classic Report:**
  - o Add a "Classic Report" page.
  - o Use the Page Designer to modify its appearance (e.g., headers, pagination).
3. **Charts and Dashboards:**
  - o Create a new page and select "Chart."
  - o Choose a chart type (e.g., Bar, Line, Pie).
  - o Configure the data series and labels.

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## Lab Submission Tasks:

1. Create two Apps using Customer Order and HR datasets.
2. Create a faceted report for filtering employee data by department, job title, and salary range.
3. Develop a Master-Detail report for displaying customer orders and order details.
4. Add an interactive dashboard with charts summarizing sales by region.