# Practices for Lesson 6:
# Create a Dashboard Page

## Overview

In these practices, you will:

- Add a dashboard page to display KPIs and a chart using the Dashboard Landing Page Template

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# Practice 6-1: Create a Dashboard Landing Page

## Overview

In this practice, you create a dashboard page to display summary information using the Dashboard Landing Page Template. You will display summary values as well as corresponding bar and pie charts.

## Assumptions

You have successfully completed Practice 2–1.

## Tasks

1. Log in to **Visual Builder Studio** and select your project name on the **Projects** tab. Your project name will be **OrderMgt_<your initials>**, where **<your initials>** corresponds to your initials.

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2. The Project Home page opens. Right-click the **OrderMgt_<your initials>** workspace and select **Open in New Tab**.

3. Close the **Getting Started** tab if it's open.
4. Select the **Web Apps** tab in the Navigator. Expand **ordermgt-<your initials>**. Expand **main**. Click the **Create Page +** for the **main** flow to create a new page named **main-dashboard**. Use the **Dashboard Landing Page Template**.

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5. Select the **Dashboard Landing Page Template** and set its **Page Title** to `Redwood Dashboard`.

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6. Next, you need to set the text and titles e.g., **KP_1_title**, **KPI_1_metric,** and **KPI_1_meta**, in the scoreboard. This is stored in an array. Click the **Variables** tab to enter the data for the KPIs array. Select the predefined **kpisArray**.

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7. Delete the current **Default Value** and paste the following code in its place.

**Before:**

```
[
    {
        "id": "KPI_1_id",
        "title": "Total Number of Orders",
        "metric": "---",
        "meta": "This month"
    },
    {
        "id": "KPI_2_id",
        "title": "Total Items in Stock",
        "metric": "---",
        "meta": "Year to date"
    },
    {
        "id": "KPI_3_id",
        "title": "Number of Customers",
        "metric": "---",
        "meta": "Year to date"
    }
]
```

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**After:**

Default Value

```
[
  {
    "id": "KPI_1_id",
    "title": "Total Number of Orders",
    "metric": "---",
    "meta": "This month"
  },
  {
    "id": "KPI_2_id",
    "title": "Total Items in Stock",
    "metric": "---",
    "meta": "Year to date"
  },
  {
    "id": "KPI_3_id",
    "title": "Number of Customers",
    "metric": "---",
    "meta": "Year to date"
  }
]
```

8. Click the **Page Designer** tab to return to the page. Notice the scoreboard has been updated to reflect your changes. Now, you will set the values for each of the KPIs. KPI values are loaded using an action chain.

9. Click the **Action Chains** tab to build the action chains that will load the data.

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Notice there is one action chain created for you: **loadKpisDataChain**. This action chain calls the individual action chains to load the data values for each part of the scoreboard component.

10. Click the loadKpisDataChain to open it in the Action Chain editor.

11. Drag a **Run in Parallel** action to the action chain canvas.

12. Drag a **Call Action Chain** action to the Block 1 Add Action area.

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13. With the Call Action Chain action selected, click its **Create** link in the Proprieties panel to create the new action chain.

14. Set its **ID** to `load_KPI_1_data` and click **Create**.

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15. In the interest of time and not doing too much redundant work, you will configure just this action chain. Click the **Go to Action Chain** link for the new action chain. The action chain opens in its editor.

16. Drag a **Call REST** action to the canvas.

17. With the Call REST action selected, click the **Select** link for its endpoint in the Properties pane.

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18. Expand **Business Objects > rraOrders** and select the first **GET rraOrders** and click **Select**.

19. By default, only 25 records are returned. Override this by setting the **limit** to `1000`. This will ensure all the records are returned and you receive a more accurate count. **Note**: The **limit** controls how many records are retrieved in a REST call.

20. Click the **limit** Input Parameter.

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21. Select **limit** in the list of UriParams.

22. Enter `1000` and click **Save**.

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23. Add an **Assign Variable** action after the Call REST action.

24. With the Assign Variable action selected, enter `$page.variables.kpisArray[0].metric` for its **Variable**.

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25. For the Value, click the **(x)** to select a variable. Expand **Local > response > body** and select **count**.

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26. Confirm that this worked. Click the **Page Designer** tab. After a moment, you should see **500** displayed for the **Total Number of Orders**.

    **Note:** You are setting the value for the **metric** key in the object in the **kpisArray**. You can provide this value in other ways depending on your needs and data. We're using a simple count of the records returned for this example so you can focus more on how to configure the **Dashboard Landing Page Template** rather than performing business-related calculations, but the idea is the same.

You could repeat similar steps for the count of Products and Customers, but in the interest of time you don't have to do that. If you choose to do it, make sure to set the correct array element in the kpisArray:

Products would be: `$page.variables.kpisArray[1].metric`

Customers would be: `$page.variables.kpisArray[2].metric`

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### Add Charts to the Dashboard Grid

You will add three charts in the following steps: two charts to KPI_1 and one chart to KPI_2. A **switcher** component will display the correct chart(s) based on which KPI is selected.

27. Drag a **Bar Chart** to the Dashboard Panel under the Dashboard Grid for KPI_1_id.

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28. On the Bar Chart's **Quick Start** tab, click **Add Data**.

29. Click **rraOrders and** click **Next**.

30. Select **totalAmount** for the Values and **orderDate** for the **Categories** and click **Next** and **Finish**.

The chart displays. Now, you can modify some of its properties to improve how it looks.

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31. Click **Dashboard Panel** to enter a Panel Title.

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32. Enter `Total Orders Amount by Order Date` for its **Panel Title**.

33. Click the **Bar Chart** and click its **All** tab. Set its **Time Axis Type** to **Enabled.** This will make the date more readable.

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34. Add another Dashboard Panel to the first Dashboard Grid. Select **Default** for the slot when prompted.

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**Tip**: If you don't see the new panel on the right, hide the Navigator by clicking the Web Apps icon.

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35. Drop a **Pie Chart** onto the new **Dashboard Panel**.

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36. Click the **Add Data** option under **Quick Start** for the Pie Chart.

37. Select **rraOrders,** and click **Next**.

38. Select **totalAmount** for **Slice Values** and **orderStatus** for **Slice Colors**. Slice Values are the summary amounts and are automatically calculated by the component and the Slice Colors are the direct categories. In this case, Order Status values are DRAFT or PROCESSING. Click **Next** and **Finish**.

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39. The pie chart displays. You can modify some of the properties to improve how it looks. Click **Pie Chart** and, on the **General** tab, change its **Style** to **3D On**.

40. Lastly, you'll add a **Bar Chart** to the **KPI_2_id** area. Drag a **Bar Chart** onto the **Dashboard Panel** for **KPI_2_id**.

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41. It worked, but you don't see anything. Why? Because the switcher component is displaying the Dashboard for KPI_1_id by default. Switch to **Live** mode and click the **Total Items in Stock** KPI at the top the page. The screen changes and now KPI_2 displays.

42. The bar chart you just added is now visible. Return to **Design** mode to complete configuring the new pie chart.
43. Select the **Bar Chart**, click its **Quick Start** tab, and click **Add Data**.

44. Select **rraProducts** and click **Next**.

45. Select **numOfItems** for the **Values (Y Axis)** and **categoryName** for **Categories (X Axis)** and click **Next** and **Finish**.

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46. Test whether this works by entering **Live** mode and click each KPI at the top in turn. The display at the bottom changes to show the correct charts. What happens if you click Number of Customers? Nothing is displayed because you didn’t add the needed **Defer, KPI_3_id,** and related components.

    The Defer component delays applying bindings to its children until it is activated. It “defers” adding the children to the DOM until the parent activates the subtree. This can be used with content as in the case of the switcher here. It can also be used with large pages when you don’t want to bind and process children when they’re not displayed on the page, and you want to wait to activate the child subtree until that portion of the page is visible. The Structure pane supports this by rendering the font and icons of the deferred components in lighter text if they're not currently visible on the screen.
47. Close all tabs.

This completes this practice.

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