BUILDING A SIMPLE BAR CHART USING BIRT

REPORT DESIGNER IN ECLIPSE

BI reporting

ABSTRACT
Example report using the classic car database to show aggregations and sum of car orders for a given period.

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1. Creating a Data source

The first step in building a report in BIRT is to open the "Report Design" perspective in your eclipse IDE. To create a project in eclipse, select "File" then "New Project" and choose "report". Once created we will see a new .rptdesign file located in the outline tab as we can see from the bottom left of the screen shot below.

To connect to an existing data source, we need to right click on Data Sources and a choose to add new data source. This will give an option to connect to a JDBC Data Source.
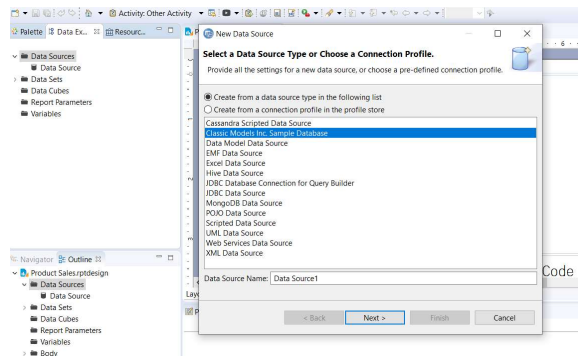

2. Building a data set using SQL query

We can use the query editor to building SQL code that will extract the information we need from the database to build our data set for this analysis. The SQL query below selects the Order Number, Product Code and Order Quantity from the ORDERDETAIL table. Next, we do an INNER JOIN with the ORDERS and PRODUCTS table to extract the Order Date and Product Name.
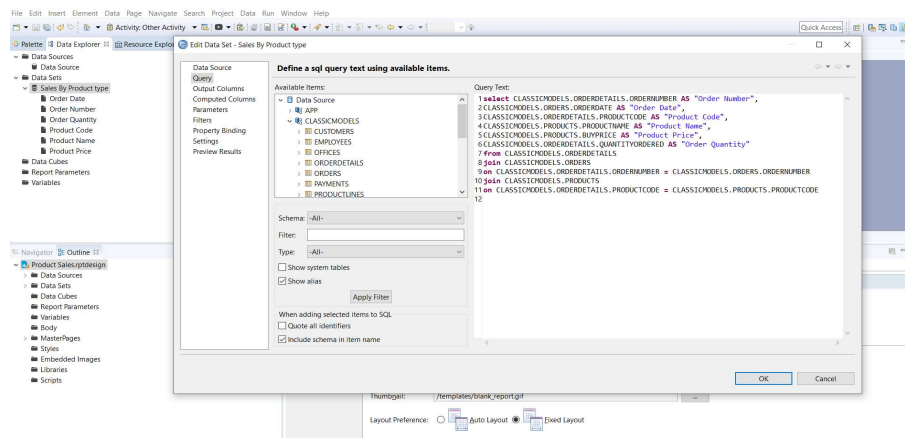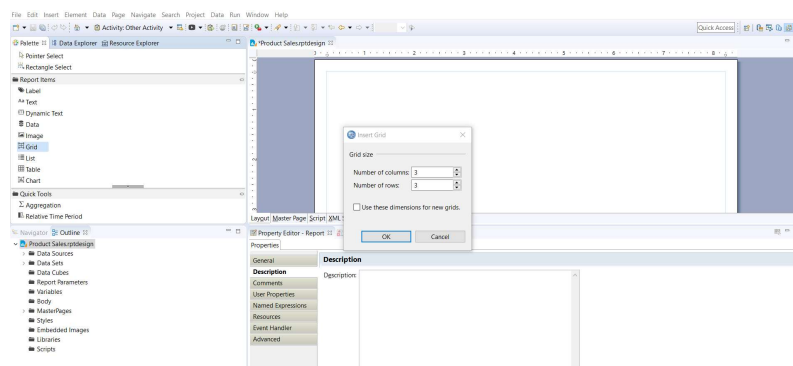

Once the query is ready, we can "Preview results "

Previewed SQL Query Results
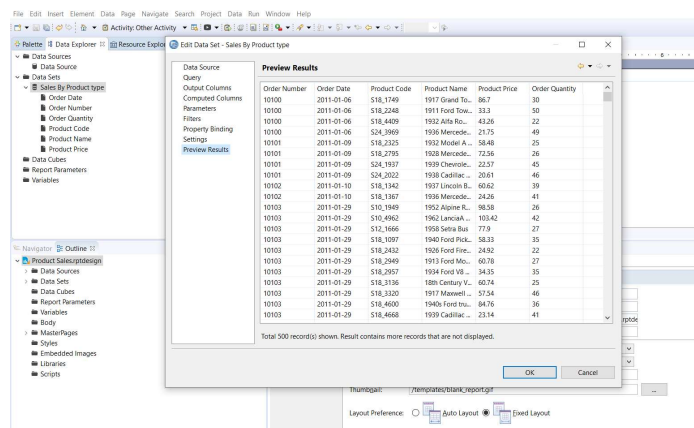
3. Building a Report

Add a Grid to help categorize the data and structure the components of the report. Drag and drop the Grid icon on the left from the palette to the report sheet. Choose how many columns and number of rows are required for the report.
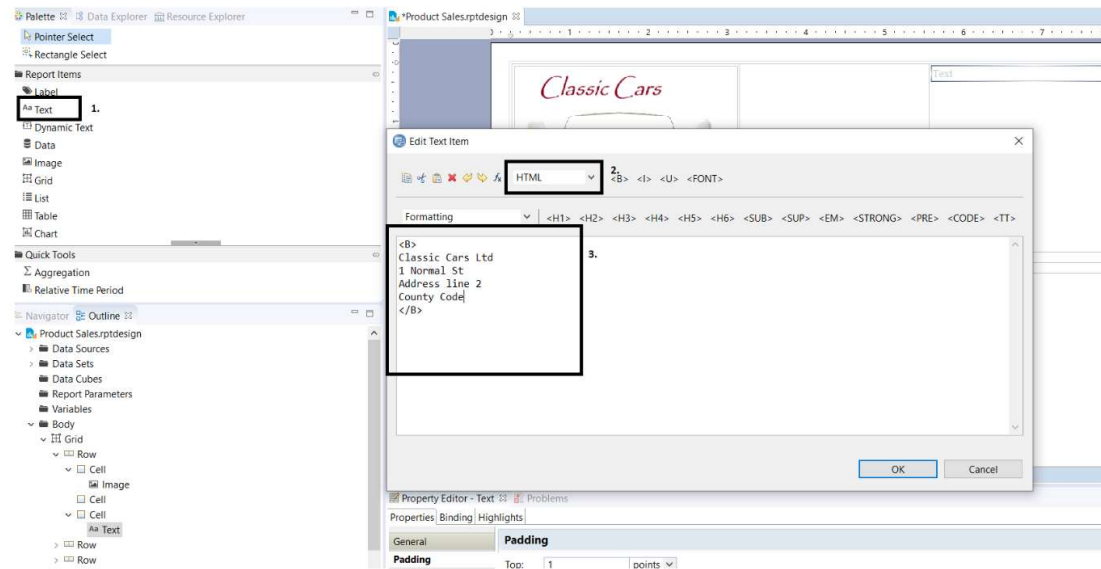

The below screenshot shows how you can add company logo to report.

- Drag and drop the Image icon from the pallet to the Grid
- Choose an embedded Image to embed a PNG image to the report.
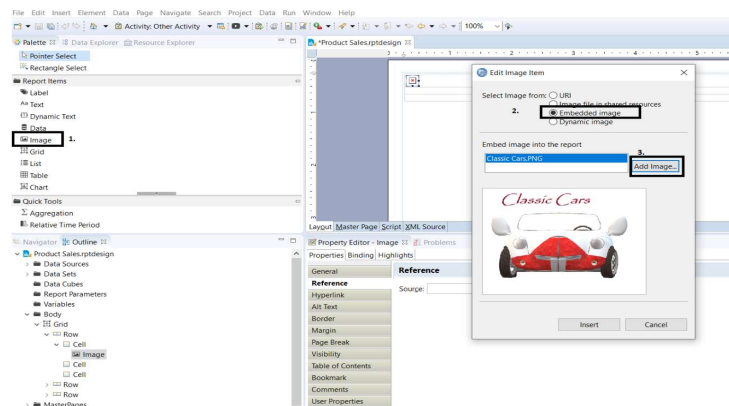
Add HTML text field to the layout by dragging and dropping the text icon from the palette to the Grid.

4. Create a Bar Chart in BIRT

Next, we add a new chart to the Report.

- Drag and drop the chart icon from the left to the report grid underneath the logo. This will give an option to choose several chart types. In this example we choose Bar Chart with a 2d with depth dimension as shown below.
- Choose next to select the data we need for the chart to display.
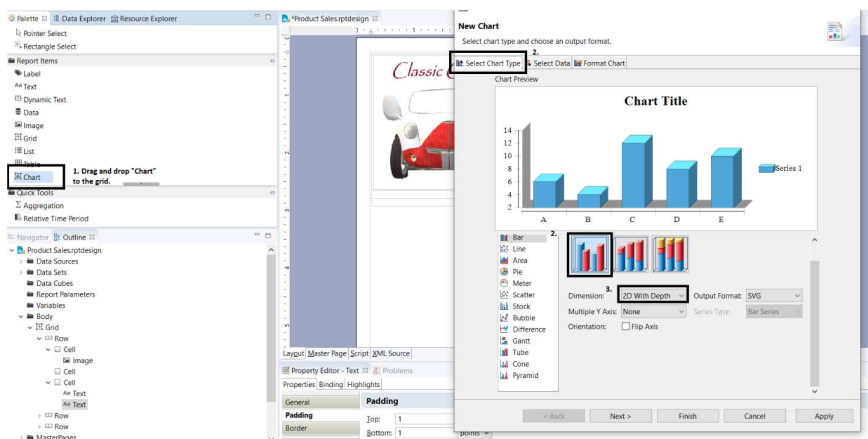

- The next step is to add the data set the chart will use to display the data, this can be done via the select data tab.
- Since we have predefined our data set as "Sales by Product Type" we can choose this subset of data to build our report.
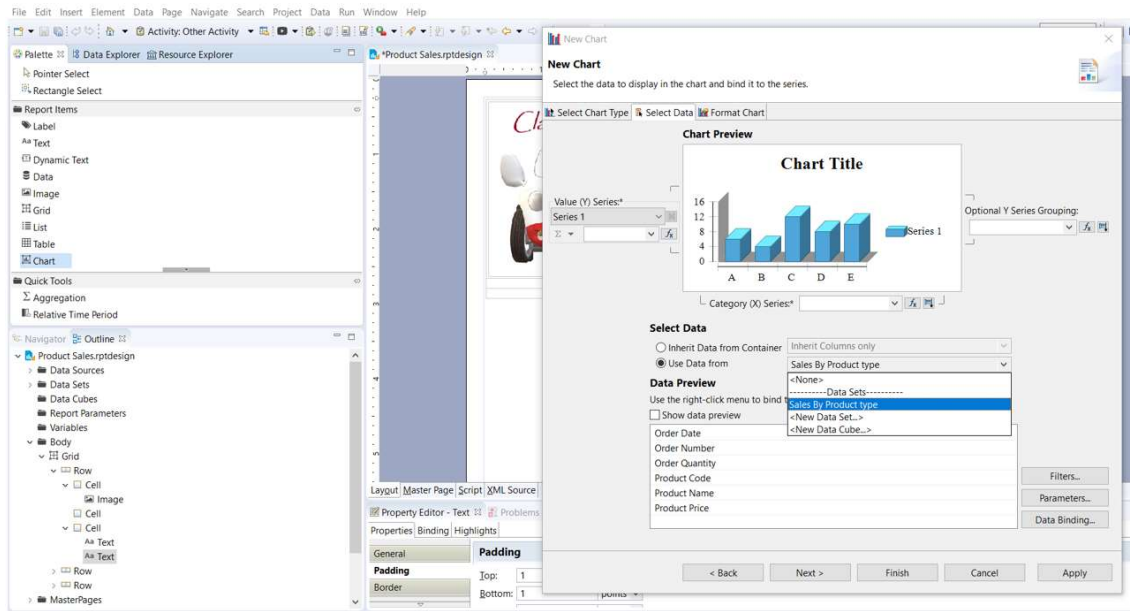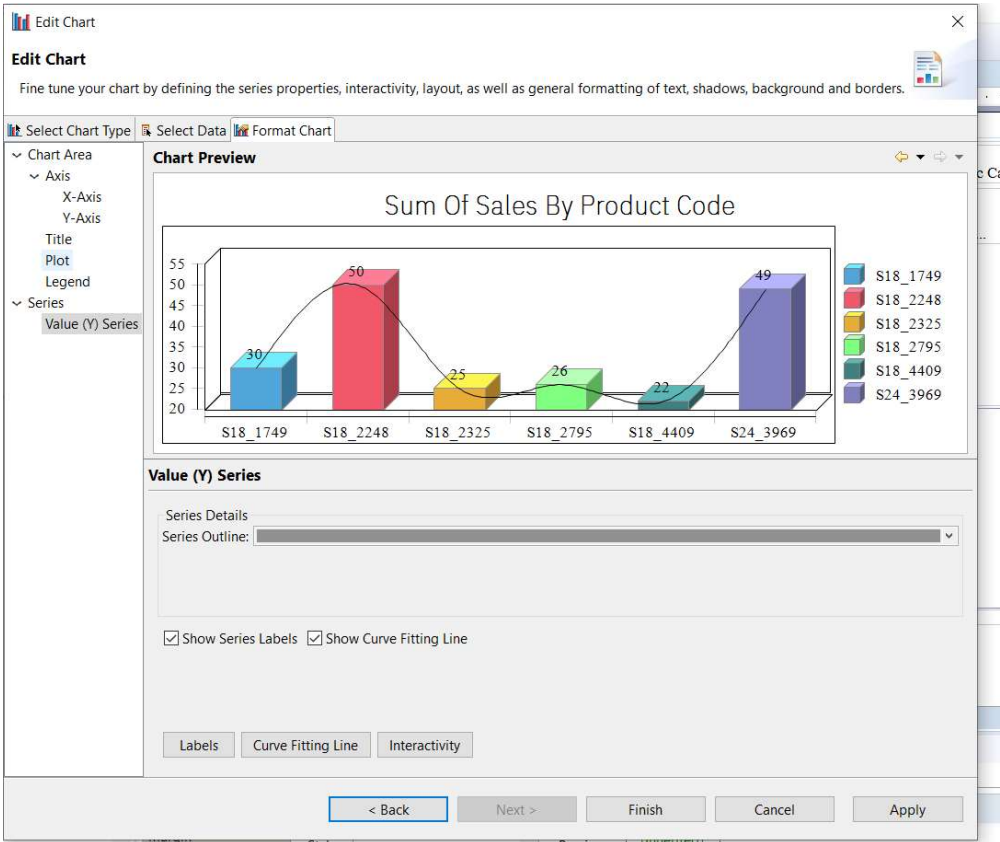
Choose what column you require for the X and Y axis. In this example we choose product code as the x axis and Order Quantity as sum using the aggregation function as below.
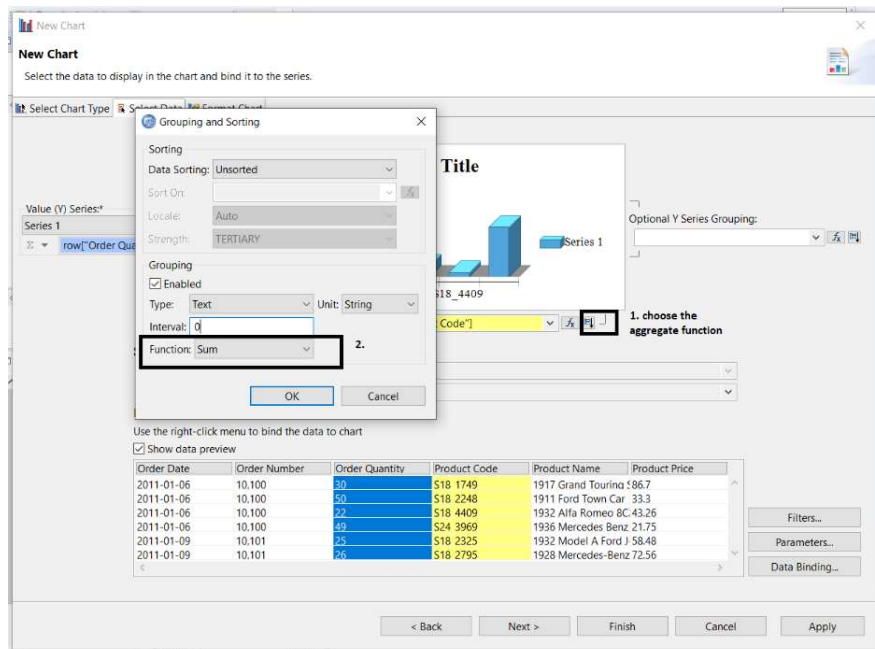
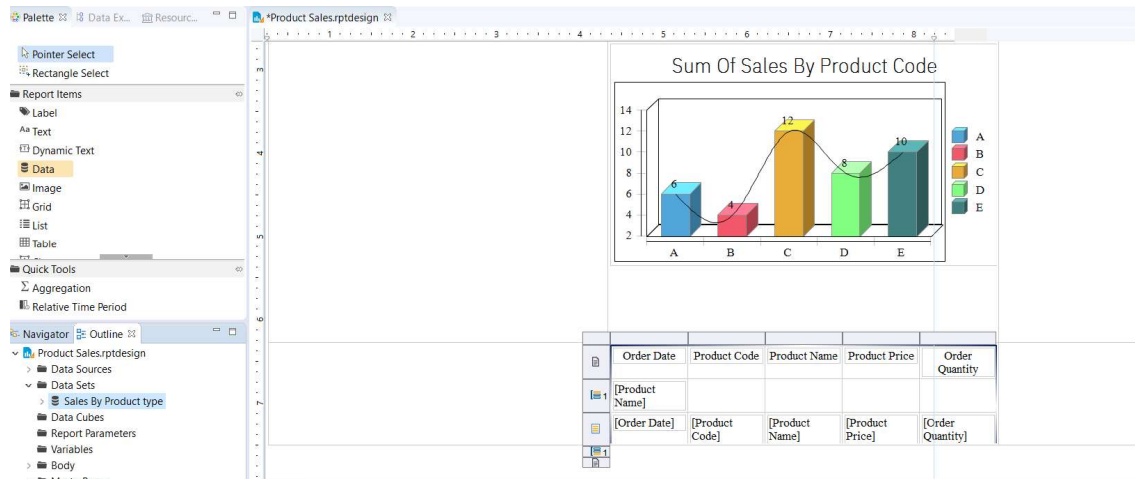The format chart tab allows you to add a title and x or y axis labels as you require.
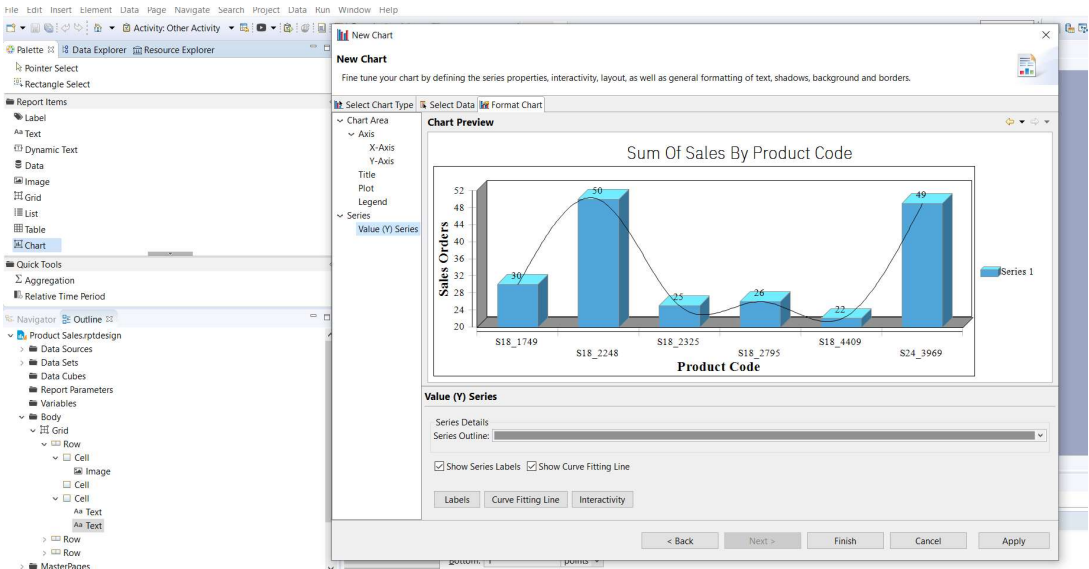
The final layout and style of the report looks like the below:

How to add a table

- Drag and Drop the table icon from the palette to the grid.
- Then drag and drop the "Sales By product Type" date set into the table resulting in the below table.

Insert groups to summarize data

Add a Product name group to summarize data by each category. The example below shows how add an aggregated Order Quantity by Product Name. The same process is used to aggregate the Order Quantity by Product Code.
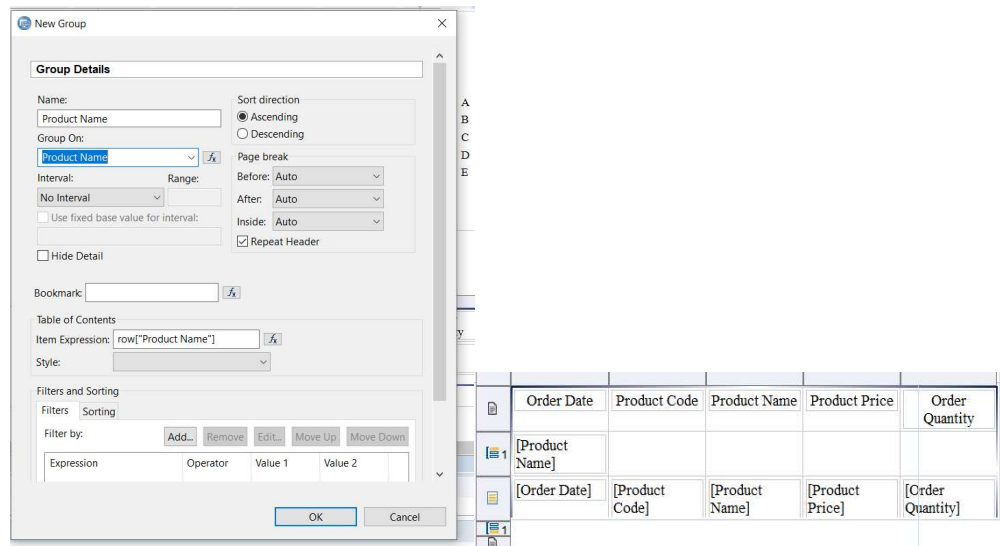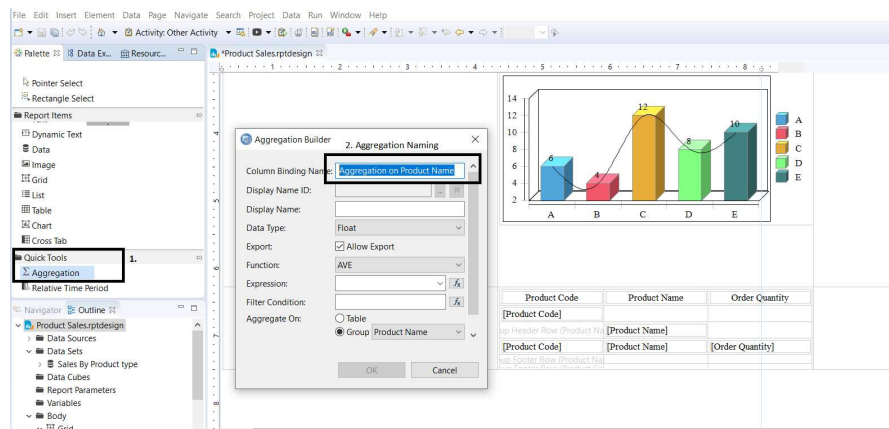
The below display now shows both groups added to the table to help us proceed to aggregate the Order Qty by each category.
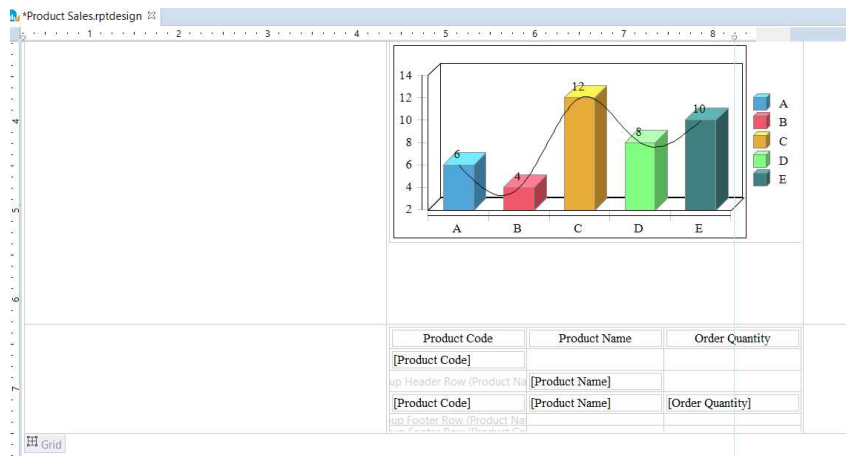

To create the aggregation of the quantity by Product Name follow the steps below:

- Drag and Drop the aggregation icon from the quick tools section to the table under the heading Order Quantity and product name group row we just created.
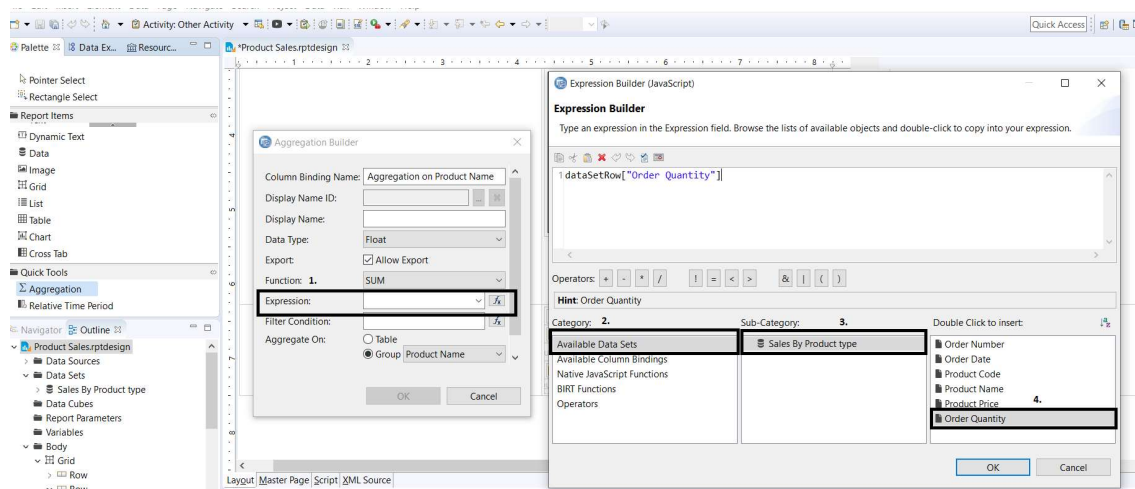

- Provide a name for the aggregation as per number 2. Here we aggregate on the group Product name.
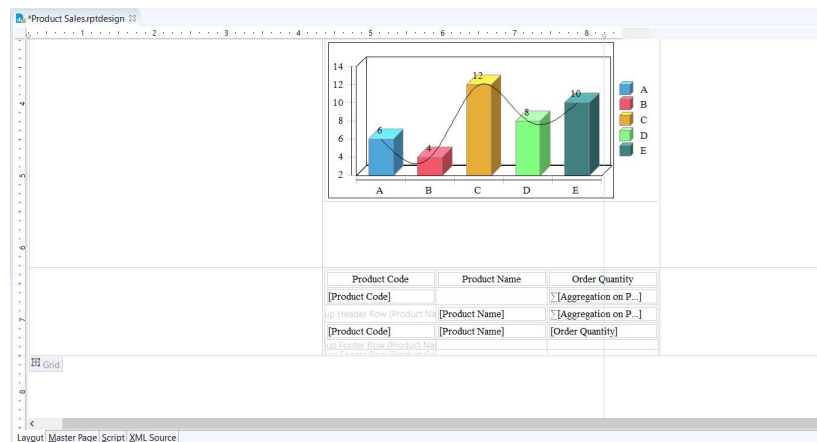- Next select the aggregation function to be applied, in this case we choose SUM.
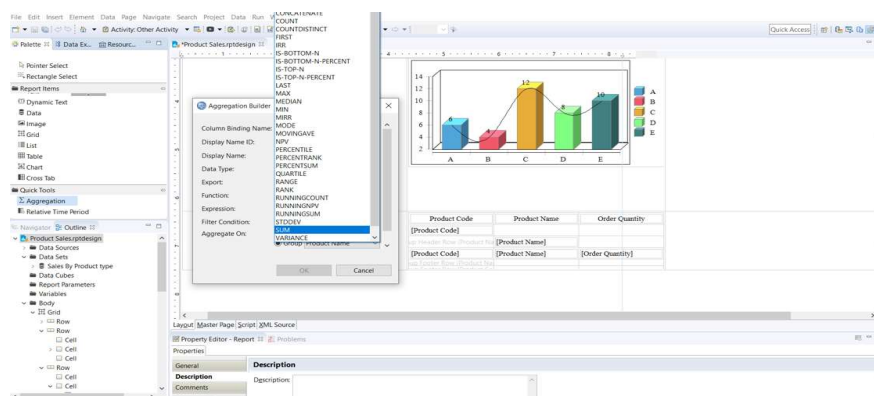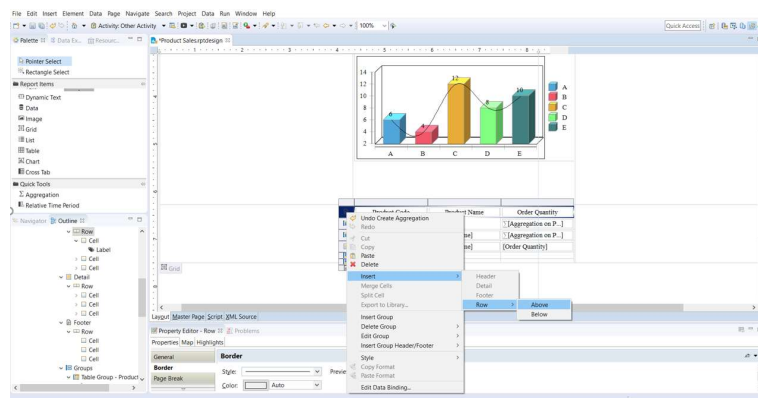
- Next open up the Java Script expression builder
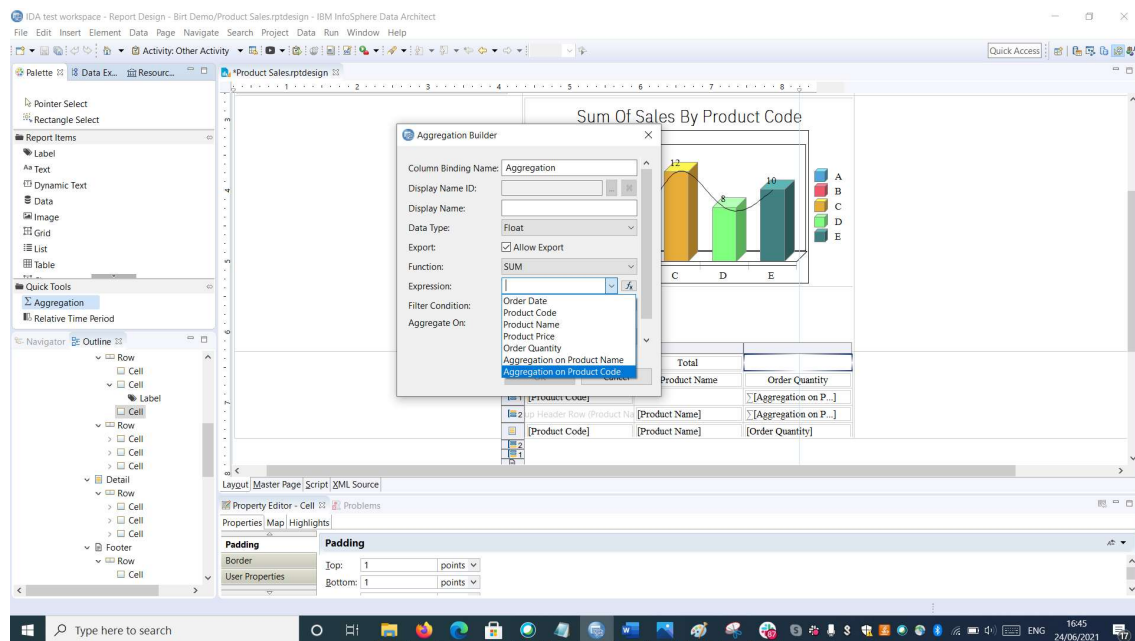- Choose the available data set then what data set row you want to insert.

The below shows the final table ready for formatting.

Create a Header Detail and Title for the table

Add a grand Total amount at the top of the table

- Click on the table tab at the bottom of the created table and use the Property editor to add colour, font styles and any background colour you want.