

5 Visualise – scenario tasks

Part 1 – design your dashboard

- I. In the lesson we worked to recreate a simple high-level sales dashboard from the Superstore data. Your challenge now is to design a dashboard (one page or multi page) which tells a visual data story about customers in this dataset. You want to delve into the database and present information back in a dashboard to answer:
 - a. Who are our top customers? Your definition can either be those customers who order a lot of products, order frequently, spend a lot of money with us or produce the most profit on their orders because of the products they buy. You also need to decide how many customers to include in the ‘top’ definition.
 - b. In which geography do those customers live? Your definition can be any level of geographical detail
 - c. For those top customers you identified take the analysis further into either:
 - i. what are their most popular products (category/subcategory/product)?
 - ii. how much do they spend per month and in which months have they spent the most?
 - iii. What ship mode do they prefer and in which geographical location?
 - d. how much have our top customers given us in terms of profit, sales overall?
- II. You may wish to start with a sketch (pen and paper/ digital) of your target dashboard design to help you with the layout as you start working on the visuals
- III. You should list out all the fields you want to return from the data set and elements of the visuals / interactivity that will be needed, including filters.

Part 2 – create data set in QuickSight (RDS SQL connections only)

- I. As you saw in the lesson, QuickSight data sets can be single tables from a SQL database, or a custom SQL query. Depending on the design of your dashboard, you will likely need to connect to more than one SQL table.
- II. Create your new QuickSight data set from the RDS database with that custom SQL query (TIP: test your query in SSMS beforehand to check it returns the right data!)
- III. Test the custom SQL query data set by creating an analysis from the data set and reviewing the field list to see that the fields you want to use are present OR closing the data set before editing it to see the preview below the custom SQL query.

The screenshot shows the Amazon QuickSight interface. On the left, the 'Fields' pane shows 'All fields included'. The 'Data source' is 'rds_superstore_joined' and the 'Table' is 'dim_cust'. The 'Custom SQL' pane contains the following query:

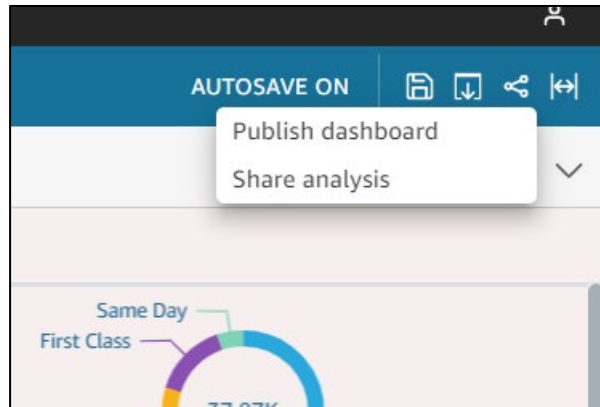
```
1 SELECT o.quantity,o.sales,o.profit,c.segment,
2 s.shipmode, g.state, g.city, p.category, p.sub_category
3 FROM [superstore].[dbo].[fact_orderitem] AS o
4 INNER JOIN [superstore].[dbo].[dim_cust] AS c
5 ON o.cust_key=c.cust_key
6 INNER JOIN [superstore].[dbo].[dim_date] AS d
7 ON o.orderdate_key=d.date_key
8 INNER JOIN [superstore].[dbo].[dim_geog] AS g
9 ON o.geog_key=g.geog_key
```

The 'Data source' is 'rds_superstore_joined' and the 'Table' is 'dim_cust'. The 'Dataset' is 'join tables and select fields'. The 'Columns' pane shows the following fields:

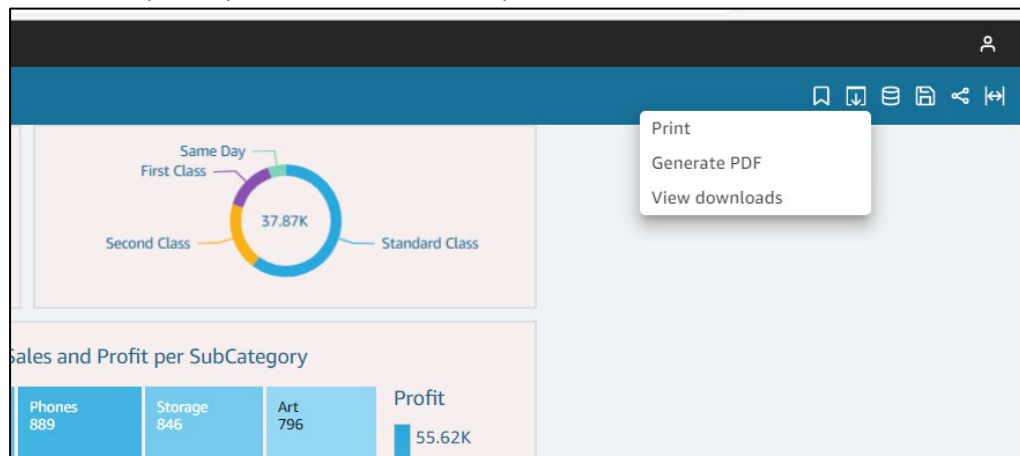
quantity	sales	profit	segment	shipmode	state
Integer	Decimal	Decimal	String	String	State
2	261.96	41.9136	consumer	second class	kentucky
3	731.94	219.582	consumer	second class	kentucky
2	14.62	6.8714	corporate	second class	california

Part 3 – build your analysis and publish the dashboard in QuickSight

- I. Using the ingredients indicated above and drawing on your QuickSight experience as well as what you saw in class, or using these handy QuickSight tutorials from [AWS](#) and [Adam](#) , create your QuickSight analysis that will become the dashboard (snapshot)
- II. This analysis should be carefully designed to include visual type and value formatting choices which are apt for the data and the available space, a theme which is unique to you, a layout that is logical and intuitive, filters actions or parameters as appropriate.
- III. Once your analysis is completed, use the share options to publish your dashboard.



- IV. Generate a pdf of your dashboard to complete this course!



Part 4 – share the dashboard with your class

1. take a screenshot image of your dashboard and share it (Ctrl+V) to the MIRO Board