TABLEAU AFTER STUDY ADVANCED STUDY MATERIAL LINKS, QUESTIONS, etc

All SQL command syntax in one place

https://www.edureka.co/blog/sql-commands

Normalization

https://www.guru99.com/database-normalization.html

1NF (First Normal Form) Rules

- Each table cell should contain a single value.
- Each record needs to be unique.

2NF (Second Normal Form) Rules

- Rule 1- Be in 1NF
- Rule 2- Single Column Primary Key

3NF (Third Normal Form) Rules

- Rule 1- Be in 2NF
- Rule 2- Has no transitive functional dependencies

4NF (Fourth Normal Form) Rules

If no database table instance contains two or more, independent and multivalued data describing the relevant entity, then it is in 4th Normal Form.

5NF (Fifth Normal Form) Rules

A table is in 5th Normal Form only if it is in 4NF and it cannot be decomposed into any number of smaller tables without loss of data.

SQL query performance improvement: Where or having which is more efficient?

https://www.sisense.com/blog/8-ways-fine-tune-sql-queries-production-databases/

Top 15 LOD expressions

https://www.tableau.com/about/blog/LOD-expressions

Tableau Performance Checklist

https://help.tableau.com/current/pro/desktop/en-us/perf_checklist.htm

How to find and delete duplicates

https://blogs.oracle.com/sql/how-to-find-and-delete-duplicate-rows-with-sql

Interpret a Performance Recording

https://help.tableau.com/current/server/en-us/perf_record_interpret_server.htm

Data Warehouse Concepts

https://www.educba.com/data-warehouse-schema/

All tableau releases

https://www.tableau.com/products/all-features

Interactivity and actions in Tableau

https://www.youtube.com/watch?v=VGFvS37LJZ4

Drill Down with parameter actions

https://tessellationtech.io/click-to-drill-down-pivot-table-in-tableau/

Data blending go through complete article

https://help.tableau.com/current/pro/desktop/en-us/multiple_connections.htm

Join your data

https://help.tableau.com/current/pro/desktop/en-us/joining_tables.htm

Go through all the links in this which includes above two links

https://help.tableau.com/current/pro/desktop/en-us/datasource_prepare.htm

Schedule extracts:

https://help.tableau.com/current/server/en-us/publish.htm

<u>Tableau Interview Questions asked in real time:</u>

1. How do you get the data? and how you proceed to develop the dashboard Ans: Steps
2. How can you represent millions of rows in one view? Ans: Drill down
3. Write down a join query & lod expression
4. How do you calculate top5 bottom5?
   Top n Bottom 10 : https://www.youtube.com/watch?v=5oa3X-y-HFk

   Sets: create set of top 10 and bottom 10 combine and display

   Index: calc field :- Index()<=10 OR Index()> size()-10

   Rank_Unique(sum(sales))<=10 OR Rank_Unique(sum(sales), 'Asc')<=10 add in filter

   First() >-10 Last() <10

5. What different type of databases you have blended together?
6. What problems you have faced while doing blending?
   https://help.tableau.com/current/pro/desktop/en-us/multiple_connections.htm
7. What is data blending and how it differs from Join?

   a. Hi, Data blending and data joining has differences as mentioned herewith:
   b. Data Joining is Used when the data set is from the same source

    c. Data blending is Used when the dataset is from a different data source

    d. Data joining has the ability to use different types of join (left join, right join, inner join, and full outer join)

    e. Data blending Uses only left join.

    f. In Data joining, data has to be maintained at the same level of granularity

    g. In data blending, Data can be available in different levels of granularity.

    h. In data joining, it Joins data at a row-level

    i. In data blending, it sends a separate query to each dataset, aggregates, and then performs blending.

8. What is LOD and where to use it
9. How many filters are there enlist?
10. Context filter and its use
    https://www.youtube.com/watch?v=vd96MJn8DJE&t=440s

11. How to implement row level security?
        a. https://www.youtube.com/watch?v=OhPq5xf9hsU
        b. https://www.youtube.com/watch?v=YB1b_TTk-t8&t=1619s
        c. https://www.youtube.com/watch?v=VpRRfYcmtQ8
        d. https://www.youtube.com/watch?v=6X0wxArnJa4

User filter or row level security:
Tableau Server:
On Tableau Desktop

    1. First login into tableau server
        Create users and groups assign users to different groups

    2. First connect (Login) to Tableau server then open workbook and open the worksheet where you would like to apply user filters. In works sheet click on

server-> create user filter option -> it will display the list of all the filters available

Click on the require filter like region or state -> you will get the user filter window for **mapping** regions(groups created on server) from server to regions from desktop (selected filter members)

->Give name to the filter and click ok and you will get under sets the name of user filter just created

-> Drag this set into the filter field and the data will disappear as filter is applied

Now publish the workbook on tableau server Server->publish workbook -> give name select thumbnail etc…

After publishing open the published workbook…

Go to users and of not assigned to groups assign it (From groups click 3 dots and click check box you can assign it to many groups)

Row level security user functions:
Create calculated fields with user functions:

Like: ex. Fullname()=[Person] condition to check server username with name in table and accordingly it filters the data. (User should be there in table and view)

    Username() use it always for RLS

    Ismemberof("manager") member of group or not? It will give group level permissions

    Isusername("ABC") – not restricting data but just checking whether user is there or not

    Isfullname("XYZ")-

Publish and check?

12. How many parameters you can pass dynamically from user?
13. Is there any option to send multiple parameters dynamically?
14. If your dashboards take time to load, what do you do? How you will rectify it?
15. How you will boost the performance of dashboard?
    a. https://www.youtube.com/watch?v=D2dzCp9CBy0
    b. Custom SQL correction instead add data source filters for null
    c. Remove unnecessary sorts like having countd and fields with long descry
    d. Don't show all rows in tableau data sheet filter it top100 or so
    e. In filters just use exclude Nulls option and you go really fast…..
    f. Minimize number of joins or unnecessary joins
    g. Instead adding filtering option with drop down etc. use view for filtering
    h. Use only relevant values option if t it is absolutely required or else use filter
    i. Cascading filters have huge impact instead we can go for visual filters and guided navigation
    j. Indexing on date etc which is filter will improve performance
    k. Minimize the number of marks

        Don't retrieve the data you don't need

        Don't render the data you don't see

    l. Don't use huge crosstabs for listing data
    m. Avoid Polygon marks, donut, Sankey, sigmoid etc. maps if you don't really need it
    n. Avoid Large, enumerated filters, parameter lists, legends, large high-resolution images, complex embedded web parts
    o. Global filters, Filters that apply to all sheets, filters with show relevant values
    p. Set dashboards ad stories to fixed size, use client side rendering where possible
    q. Use visual drill down instead quick filters

Analytics:

    r. Minimize data type casting and convert at the data source if possible
    s. Use context filters
    t. Countd, Percentile, Min Max, Attr is a if expr actually so we can use min or max instead
    u. LOD : create subqueries where ever possible avoid, use table calcs
    v. Use predefined function over calc fields as much as possible
    w. Case can be more efficient instead if if   if
    x. Elseif instead else if
    y. Regex for strings big diff
    z. Sets
    aa. Blending: Aggregate then join
    bb. Don't blend on high cardinality dimensions consider a cross database join instead
    cc. Create primary groups or Edit primary aliases by right clicking the pill and use it to eliminate blending
    dd. Put indexes on joining/ filtering dimensions
    ee. Define columns as NOT NULL when possible
    ff. Referential integrity = join culling
    gg. If no hard RI then assume RI on data menu

16. How do you deal with Null or duplicates?
    https://blogs.oracle.com/sql/how-to-find-and-delete-duplicate-rows-with-sql

17. Where do you publish your work?
    https://help.tableau.com/current/pro/desktop/en-us/publish_overview.htm

18. How do you sort hierarchical fields?
19. What are different types of functions in Tableau?
20. Do you know Data warehousing concepts?
    https://www.youtube.com/watch?v=J326LIUrZM8&list=PL9ooVrP1hQOEDSc5QEbI8WYV
    V_EbWKJwX
21. Explain fact and dimension table and schemas
    https://www.educba.com/data-warehouse-schema/
22. What is Tableau Bridge:
23. How to connect local database from cloud / server?

24. How your day starts … daily routine?
25. How do you get work? What is the methodology?
26. Are you ready to learn other technologies related to cloud ETL database side?
27. What is your current CTC and expected CTC?
28. Why you are leaving your current company?

29. Aliasing or grouping at data source level… how to avoid data blending?
    https://help.tableau.com/current/pro/desktop/en-
    us/multipleconnections_edit_primary_aliases.htm
30. Extracts Scheduling
    https://help.tableau.com/current/server/en-us/publish.htm
31. What is data validation
    a. Cross checking the measures from the viz or dashboard with the help of SQL or Excel
       or any other tool to validate the results.
    b. For example we get **sum of sales subcategory wise** in Tableau to cross verify these
       sum of sales write a SQL query to display the same result that is sum of sales
       subcategory wise