**Tableau Interview**

**Questions and Answers**

**Name the file extensions in Tableau.**

**There are a number of file types and extensions in Tableau:**

* Tableau Workbook (.twb). (XML file only stores the metadata, no data sources)
* Tableau Packaged Workbook (.twbx). (XML file includes metadata and data source)
* Tableau Datasource (.tds).
* Tableau Packaged Datasource (.tdsx).
* Tableau Data extract (.tde).(Data Extract file .twb + .tde = .twbx)
* Tableau Bookmark (.tdm).
* Tableau Map Source (.tms).
* Tableau Preferences (.tps)
* **Explain the difference between .twb and .twbx**
* **.twb** is the most common file extension used in Tableau, which presents an XML format file and comprises all the information present in each dashboard and sheet like what fields are used in the views, styles and formatting applied to a sheet and dashboard. But this workbook does not contain any data. The Packaged workbook merges the information in a Tableau workbook with the local data available (which is not on server). .twbx serves as a zip file, which will include custom images if any. Packaged Workbook allows users to share their workbook information with other Tableau Desktop users and let them open it in Tableau Reader.

**What version of Tableau and Tableau server am I using?**

* Tableau desktop 2018.1.3
* Tableau Server 2018.1.2

**Calculated Measure**

* Choose create calculated field from drop down
* Looks like this =#
  + Example
    - count([Uniqueid]+str([Admit]))
    - [ReAmitted] / [Patient Visits]

**Calculated Dimension**

* Choose create calculated field from drop down
* Looks like this =ABC
  + Example
    - IF
    - DATEDIFF('year',[DOB],NOW()) <= 20 then "0 to 20"
    - ELSEIF
    - DATEDIFF('year',[DOB],NOW()) >= 21
    - and DATEDIFF('year',[DOB],NOW()) <= 40 then "21 to 40"
    - ELSEIF
    - DATEDIFF('year',[DOB],NOW()) >= 41
    - and DATEDIFF('year',[DOB],NOW()) <= 60 then "41 to 60"
    - ELSEIF
    - DATEDIFF('year',[DOB],NOW()) >= 61
    - and DATEDIFF('year',[DOB],NOW()) <= 80 then "61 to 80"
    - ELSE "Over 80"
    - END

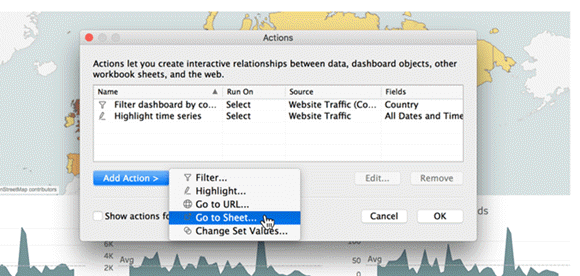
**How is date set up in a table**

* In drop down choose Exact Date
* In drop down change to discrete from continuous

**How do you build a dashboard in Tableau**

* Each chart/visual is created in it’s own worksheet
* Click on New Dashboard button
* Size dropdown – choose Automatic
* Choose **Tile** vs Floating
  + Floating has more issues for complex dashboards
* Choose Horizontal or Vertical either works to design tiled dashboard
* After all tiles and place holders are in place for the desired dashboard then move each individual worksheet into place

**What are actions used for in Tableau**



Use Case 1: Basic Chart to Chart Filtering  
Use Case 2: Pre-Filtering a Large Table  
Use Case 3: Creating a 'Cross-Blend' Filter  
Use Case 4: Showing Images  
Use Case 5: Dynamic Text or Titles  
Use Case 6: Linking Out to Web Pages  
Use Case 7: Highlighting and Labelling  
Use Case 8: Switching Dashboards  
Use Case 9: Mixing Things Up

* Allows us to drill down into details worksheet from a map

**What is the difference between a filter and a parameter?**

One big difference between parameters and quick filters is that parameters are **workbook-specific**, while quick filters are**sheet-specific**, so parameters can be applied across different data sources while quick filters cannot (note that action filters can also work across multiple data sources)

Filter is something where you can filter out multiple things that you want to see in the graph.

Parameter is something which can be created separately for certain condition based analysis. For Example, i want to filter out products which have sales between 200$ to 500$. You can create this condition in parameter. You can do the same thing with filter as well. But major difference is that we cannot use these filters in any further calculations but parameters can be used in calculations and sets.

The parameter which we are creating can be used for further calculations and be used for more detailed analysis which is not possible with filters.

**FILTERS**

* Are specific to a data source
* Created on a worksheet level
* On the filter drop down you can choose which worksheets on the dashboard you want to apply the filer to

A filter acts directly on a dimension or measure and restricts the domain of the field. For example, to only show California or New York in a State dimension or only show Sales between $100 and $200. There are a lot of options for filters. You can include or exclude members of a dimension, use a wildcard for the member name, choose the top N, given another measure, or use an condition (essentially a true/false calculation) to choose what is in and what is out. You have a fair number of UI options for filters: radio buttons, check boxes, drop down lists, sliders, and more. On top of that, you can choose what sheets that a filter applies to.

Filters are the simpler thing are straightforward. Even the more complex ones (top N and condition) are easy to reason about. Use them to restrict what rows you want to show.

**Tableau Filters**

* Extract Filters (Filters the amount of records into tableau from data source, only filtered records come into Tableau environment, better performance)
* Data Source Filter (Filters the amount of records from data source after all records are in Tableau environment)
* Quick Filters (Drop down filter for end user)
* Action Filters (click onto an area/region to filter for end user)

**PARAMETERS**

* Are not specific to a data source
* Can be reused across the entire workbook

Parameters allow users to insert their values, which can be integers, float, date, string that can be used in calculations

A parameter, like is like a variable (as was said elsewhere). You can then use that variable inside calculations to change the calculation. If you filter by a calculated field, you essentially have a parameter controlling a filter. **Parameters have almost the same UI options as filters, but they are single valued, so you have options for radio buttons, but not check boxes.** There are also sliders and drop downs. Parameters are global, so can effect calculations for all data sources and connections in a workbook. Although they can be initially populated with the domain of a field, when the database changes parameters don't pick the new domain -- this is the state of Tableau in  version 9.3. Having the domain update is one of the top customer requests on the forums (it's called Dynamic Parameters).

Parameters are more powerful and more complex. One simple use is to create a model, for example create parameters for interest rate and number of periods then create calculations for principle and interest payments. A more complex example is use a parameter to choose among three or four options, then create a calculated field with a CASE statement for each of the options. As the parameter changes, the numeric calculation being used can be very, very different. If you have two, related calculations, both can use the same parameter in a CASE statement.

**How are parameters used**

* + After creating a parameter it will do nothing unless you use it in one of the following:
    - Calculated field
    - Reference line
    - Filter
    - Set

**How To Create a Multi-Valued parameter(filter) list with ALL option**

* Cannot use the Parameter for this
* Drag the Doctor dimension into the filters pane
* Choose Show Filter
* On filter drop down choose “Multiple Values List”

**How to create a parameter list to choose from with ALL option**

* Create a parameter
  + i.e. Doctor List
  + Enter All in the first row
  + Choose “Add from Field
  + Choose appropriate field
* Create a calculated field referencing the parameter
  + Filter Doctors
    - [Doctor List] ="All"
    - OR CONTAINS([Doctor List],[Doctor])

**How do you build a dual access chart**

**What is the difference between joining, blending and using different data sources on separate worksheets**

**How do you create Top 5 and Bottom 5 in the same visual?**

* Create a set for top 5
* Create a set for bottom 5
* Create a combined set
* Drag combined set into the filters