Interview Case Study: Tableau & Web Front-End Development

Project Title

XYZ Retail Chain – Sales & Quality Analytics Portal

1. Business Context

XYZ is a retail chain based in **Bangalore**, operating **10 outlets** across the city. The leadership team wants a unified analytics solution that:

- Provides clear visibility into **sales performance** and **quality metrics**
- Is visually aligned with the **XYZ brand**
- Can be accessed through a **react based web application**, not just Tableau alone

You have been provided raw datasets and brand assets to design, build, and publish this solution end-to-end.

2. Files Provided

You will receive the following files:

1. **xyz_Sales** – Sales data for all outlets
2. **xyz_Quality** – Quality / operational metrics for all outlets
3. **xyz_Colours** – Brand color palette
4. **xyz_Logo** – XYZ logo

⚠️ Assumption: Data is clean enough to start with, but light data modeling, calculated fields, and KPI derivations are expected.

3. Project Objectives

A. Tableau Analytics

- Design **interactive dashboards** that answer key business questions for:
    - Sales performance
    - Quality performance
- Apply best practices in:
    - Data modeling
    - KPI creation
    - Dashboard layout
    - Performance and usability
- Publish dashboards to **Tableau Public**

B. Web Application

- Build a **simple front-end web application using react**
- Embed the published Tableau Public dashboards
- Provide intuitive navigation and consistent branding

4. Tableau Requirements

4.1 Data Modeling & Preparation

- Use **xyz_Sales** and **xyz_Quality** datasets appropriately
- Create:
    - Calculated fields where required
    - Aggregated KPIs (monthly, outlet-wise, etc.)
- Ensure correct relationships or joins (if applicable)

4.2 Dashboards to Create

1. Sales Dashboard

Should include (but not limited to):

- Overall sales KPIs (e.g., Total Sales, Avg Sales, Growth trends)
- Outlet-wise comparison
- Time-based trends (monthly)
- Filters for:
    - Outlet
    - Time period

2. Quality Dashboard

Should include (but not limited to):

- Quality KPIs (defect rates, scores, incidents, etc. — based on data)
- Outlet-wise quality comparison
- Trend analysis
- Relevant filters

💡 You may add additional insights or dashboards if you feel it improves storytelling.

4.3 Design Expectations

- Use **xyz_Colours** consistently
- Include **xyz_Logo** in dashboards
- Use **one consistent font** across all dashboards
- Clear visual hierarchy
- Avoid clutter; focus on business readability

5. Tableau Publishing Requirements

- Publish **all dashboards to Tableau Public**
- Ensure:
    - Dashboards are accessible via public URLs
    - Filters and interactions work as intended
    - Dashboards are optimized for embedding

6. Web Application Requirements

6.1 Structure & Navigation

The web app should include:

- **Sidebar Navigation** with:
    - Home
    - Sales Dashboard
    - Quality Dashboard
    - Info / About Page
- **Tabbed or Routed Layout** for smooth navigation

6.2 Pages

Home Page

- Brief introduction to XYZ analytics portal
- Use brand colors and logo
- Clean, welcoming layout

Sales Page

- Embedded Tableau Sales Dashboard
- Proper sizing and responsiveness

Quality Page

- Embedded Tableau Quality Dashboard

- Proper sizing and responsiveness

Info / About Page

- Short description of:
    - The project
    - Data sources
    - Assumptions made

6.3 UI & Branding

- Use **xyz_Colours** throughout the web app
- Include **xyz_Logo**
- Maintain:
    - Consistent font (same as Tableau if possible)
    - Uniform spacing, alignment, and design language
- Responsive design is a plus

🔧 Technology stack is open (HTML/CSS/JS, React, Angular, etc.)—choose what you're most comfortable with.

7. Submission Requirements

Candidates should submit:

1. **Tableau Public links** to all dashboards
2. **Tableau twb / twbx files**
3. **Web application URL** (if hosted) and **Source Code**
4. A short **README** explaining:
    - Design choices
    - Assumptions
    - How to run the web app using the source code

8. Evaluation Criteria

8.1 Tableau Skills

- Data modeling & calculated fields
- KPI design and relevance
- Dashboard usability and interactivity
- Performance and best practices
- Visual clarity and storytelling

8.2 Front-End Development Skills

- Clean, maintainable code
- Proper embedding of Tableau dashboards
- Navigation and layout structure
- Responsiveness and accessibility

8.3 UI / UX & Design

- Consistent use of brand colors and logo
- Font consistency across Tableau and web app
- Visual harmony between dashboards and web pages
- Attention to spacing, alignment, and hierarchy

8.4 Overall Quality

- End-to-end cohesiveness
- Professional finish
- Smart usage of react
- Homogeneity across:
    - Dashboards
    - Web app
    - Branding
    - User experience

9. Bonus (Optional)

- Additional dashboards or insights
- Advanced Tableau interactions
- Mobile-friendly design
- Thoughtful UX enhancements