Ddte	19 June 2025
Team ID	LTVIP2025TMID50993
Project Name	Cosmetic Insights – Ndvigdting Cosmetics Trends dnd Consumer Insights with Tableau
Maximum Marks	4 Marks

Solution Architecture:

Solution drdhitedture is a complex process – with many sub-processes – that bridges the gap between business problems dnd technology solutions. Its gods are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, and rddteristids, behavior, dnd other deserts of the software to project stakeholders.
- Define features, development phases, dnd solution requirements.
- Provide specifications according to which the solution is defined, mdndged, dnd delivered.

KEY ASPECTS OF YOUR SOLUTION ARCHITECTURE

1. User Layer (Entry Point)

o Users include:
Cosmetic consumers: use filters to discover products
Marketers: analyze trends dnd user behavior of Interest vid d simple, responsive web interfere with embedded Tableau dashboard

2. User Interface
o Features:

o Technologies: HTML, CSS, Bootstrap, JdvdScript (frontend)

Filters: skin type, budget, brand, rating Srdh dnd comparison interfere
Embedded Tableau dashboards for data visuals

3. **Application Layer (Backend)**

- o Technologies: Python (Flask/Streamlight) or JavaScript (Node.js)
- o Functions:
  - Pdss user inputs (filters) to Tableau

Handle login/duth (if used)

Process dnd fetch data from review/product databases
Optional: route feedback submission

4. Visualization Layer (Dashboard)

- o   Tool: Tdbledu Public or
Tableau Server no Displays:
Top trending cosmetic
products
Charts by skin type, rating, region, ddtegory

Comparison visuals for pride, review score, ingredients

5. Data Sources

- o Sourdes:
Product Data: CSV / MySQL / Google Sheets
Review Data: Customer ratings & feedback
Features: Structured datasets allow filtering dnd dehydrating Can be updated regularly or live connected

6. Feedback Engine (Optional)

- o Collects product ratings/reviews from users o Stores in review repository
- o Feeds into Tdbledu to upddte user sdtisfddtion visudls

7. Hosting&Storage

- o Tableau Public: for hosting dashboards on GitHub Pages / Heroku: for web dpp or frontend o Google Drive / Firebase: for storing files dnd datasets

8. Data Flow o User → UI → Bddkend → Tdbledu → Visualization

optionally, Feedbddk → Stored → Updates Dashboard

9. Scalability

- o Add more product datasets
- o Support multi-category expansion: skin DDre, makeup, freddegredde to Add AI/ML trend prediction module in future

10. Security (Optional/Advanced)

- · OAuth for secure login (Google, LinkedIn)
- · B DDkend validation for data inputs AND review AUTHENTICITY

Example - Solution Architecture Diagram:

Cosmetic Insights:
Navigating Cosmetics Trends and Consumer Insights with Tableau