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Space Museum Final Project:

Our database project, inspired by art museums and space institutions like NASA, features the Milky Way Galaxy where the system will catalog planets, moons, stars, and celestial phenomena (like black holes), integrating scientific data (such as orbital parameters, and composition) with multimedia (images, URLSs) for educational exhibits. The database will support three user roles with interfaces and reports.

1. **Administration Interface**
2. **Employee Interface**
3. **Visitor Interface**

Administration Interface:

The administration serves as the central hub for managing all museum operations. This interface oversees exhibit curation, digital experience design, and visitor management. The administration team offers new exhibits each season, while ensuring all prerequisites are met before launch. To launch an exhibit, a minimum of 10 visitors is required, with a maximum of 50 per session; sessions are canceled if registrations fall below 10 within 24 hours. Curators can oversee 2-5 exhibits quarterly, while Digital Experience Managers (DEMs) handle 3-7 tech installations monthly. Multimedia assets exceeding 5GB or Rs. 100k in cost require special approval. Exhibits should cite more than or equals to 3 sources at least, and multimedia should render at 1080p/60fps. A key feature is the integration with NASA and other space agencies' datasets, which pulls the latest celestial data and images to keep exhibits scientifically accurate.

- **Exhibit Performance Report:** Tracks exhibit id and name, type, visitor count, average duration, and capacity utilization. Additionally, sorts exhibit by popularity or revenue.
- **Staff Allocation Report:** Lists employee names, roles, assigned exhibits, and weekly hours worked.
- **Maintenance Alert Report:** Flags specific type of equipment (AR/VR headset/projector) nearing usage thresholds (vs. max hours) with last maintenance dates.
- **Financial Summary Report:** Summarizes revenue per exhibit, expenses, (maintenance/staffing), and quarterly profit/loss (Rs. 100k+ approvals would be highlighted).

Employee Interface:

Employees handle day-to-day operations, including ticketing, exhibit maintenance, and visitor support. They monitor exhibit capacity in real-time, ensuring popular installation experiences don't exceed safety limits.

The interface also includes maintenance tracking, allowing employees to quickly report technical issues, from projector failures to AR/VR headset malfunctions. Emergency protocols are integrated, providing instant access to evacuation routes when needed.

- **Daily Visitor Log**: Shows date, time slots (morning/afternoon/evening/night), visitor count per exhibit, and membership type (premium/standard).

- **Equipment Status Report**: Displays equipment ID, location, operational status (Green/Yellow/Red), temperature threshold, and last checked-by specific staff member.

- **Group Booking Summary**: Lists group names, contact number of one member from the group, booked exhibits/time slots, and payment status (pending/paid).

Visitor Interface:

For museum guests, this interface delivers an engaging, and personalized experience. Visitors can browse current exhibits with filters, thereby booking immersive experiences. The system remembers user preferences, suggesting new exhibits based on past visits and generating summaries that highlight time spent at an exhibit.

A feedback feature lets visitors rate exhibits and leave comments, which are funneled directly to curators and DEMs for continuous improvement.

- **Personalized Visit Summary**: Details visitor name, date, attended exhibits/duration (>=15min/session), VR usage (<=3hrs/day), and missed exhibits (based on interests).

- **Membership Benefits Report**: Outlines current membership tier, unlocked discounts (20% after 5 visits), family limits (2 adults + 3 kids), and visits needed for next tier.

- **Feedback History Report**: Shows reviewed exhibits, ratings (1–5 stars), and curator responses (if any). Requires 30sec interaction for ratings and limits comments (250 chars).

Thank You :)