**Business logic for the Museum database**

The Museum Database is a sophisticated, purpose-built system designed to bring the museum’s world of art and culture to life through seamless data management. It is the digital backbone of the museum, connecting artists, collections, exhibitions, and visitors in a well-orchestrated symphony of information.

**Key entities and their roles**

**Artists:** The creative heart of the museum. Their details, legacies, and contributions are carefully preserved and connected to collections and exhibitions.

**Collections:** A treasure trove of art pieces—each with its story. These items are tracked for provenance, valuation, and exhibition history.

**Exhibitions:** The stage for storytelling. Exhibitions bring collections to life, with dates, themes, and artist collaborations dynamically managed.

**Visitors:** The lifeblood of the museum. Their engagement is tracked to enhance their experience and build loyalty.

**Tickets:** Every ticket sold is a bridge between the visitor and the art, forming the foundation for revenue tracking.

**Transactions:** The financial pulse of the museum. Transactions provide insights into earnings and visitor trends.

**How it all works**

**Artists and Collections:** Artists contribute works that are carefully cataloged and valued. Their legacies become a part of the museum’s story.

**Exhibitions:** Curators plan events, linking collections and artists to themes that captivate audiences. Dates and constraints ensure seamless scheduling.

**Visitors:** Every visitor is a unique record in the system, connected to their ticket purchases and preferences.

**Transactions:** Ticket sales generate actionable data—fueling financial reports and strategic decisions.

**Insights:** Quarterly analytics spotlight the museum’s successes and guide its future.

**Guiding rules**

Artists and exhibitions share a dynamic many-to-many relationship, enabling creative flexibility.

Collections maintain integrity with verified artists, acquisition dates, and non-negative valuations.

Visitor information is secure yet accessible for tailored engagement.

Ticket pricing and sales data adhere to strict validations to ensure accuracy and reliability.

**Security**

**Manager Role:** A dedicated read-only role empowers decision-makers with full access to data, while safeguarding against unauthorized changes.

**Conclusion**

This museum database project improves how the museum runs and connects with its audience. By simplifying processes, protecting data, and providing useful insights, it helps the museum stay a lively center for art and culture.