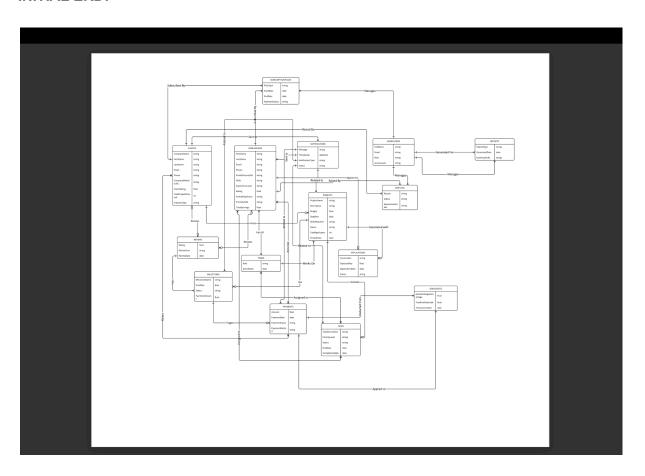
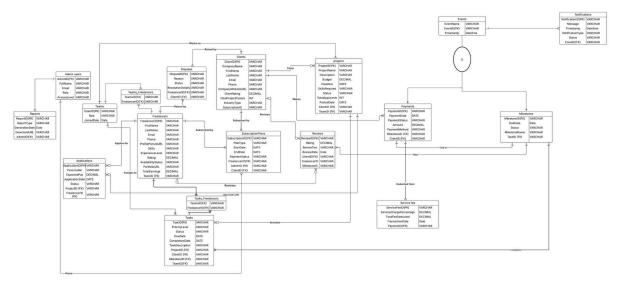
DMDD P3 - LOGICAL ENTITY - RELATIONSHIP DIAGRAM

INITIAL ERD:



UPDATED LOGICAL ERD:



Changes from P2 (Old ERD) to P3 (Updated Logical ERD)

Comparing the old P2 model with the new P3 logical ERD, the following improvements and modifications are observed:

1. Addition of Associative Entities for Many-to-Many Relationships

- New Table: Teams_Freelancers
 - Establishes a many-to-many relationship between Teams and Freelancers.
 - Previously, FreelancerID was directly linked to Teams, limiting flexibility.
 - Now, a freelancer can belong to multiple teams, and a team can have multiple freelancers.
- New Table: Tasks_Freelancers
 - Links Tasks and Freelancers as an associative entity.
 - Previously, tasks were directly assigned to freelancers.
 - Now, multiple freelancers can work on a single task, and a freelancer can work on multiple tasks.

2. Normalization and Entity Refinements

- Reports Table Updates
 - \circ Added AdminID (FK) \to Now explicitly linking reports to AdminUsers, indicating reports are generated by admins.
- SubscriptionPlans Table Updates
 - \circ Added AdminID (FK) \to Indicates an admin manages freelancer and client subscriptions.
 - Previously missing, now making admin roles more explicit.
- Tasks Table Updates
 - Now includes ClientID (FK) to show task ownership.
 - MilestoneID (FK) added to directly link tasks with milestones.

3. Strengthened Relationship Definitions

- Explicit Foreign Keys in P3
 - TeamID (FK) added to Projects, explicitly linking projects to teams.
 - TaskID (FK) added in Milestones, showing that a milestone is tied to a specific task.
 - EventID (FK) in Notifications, making notification triggers clearer.

4. Improved Payment and Fee Management

- Service Fees Now Directly Linked to Payments
 - \circ Added PaymentID (FK) in Service Fee \rightarrow Service fees are now deducted directly from payments.
 - o In P2, service fees were loosely connected to transactions.
- Milestone Payments Now Tracked More Clearly
 - \circ Added MilestoneID (FK) in Payments \to Now showing that payments are made upon milestone completion.

5. Introduction of Events Entity

- New Table: Events
 - Introduced to track system events that trigger Notifications.
 - EventID (PK) ensures structured event logging.

6. Enhanced Data Integrity

- Stronger relationships prevent orphaned records.
- Payments and fees are now linked via foreign keys instead of indirect associations.
- Normalization reduces redundancy by ensuring data is stored efficiently.

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