

# FitDB Milestone (10/1)

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**Repo:** <https://github.com/jic48-rutgers/FitDB>

**Docs:**

- docs/ERDs.md
- docs/TDD.md
- docs/architecture.md
- docs/FRD.md

**SQL:** `sql/build.sql` (main) + helpers in `sql/helpers/`

**Data:** `data/csv/*.csv` (to be bulk-loaded) · `data/generate_seed.py` (using Faker probably)

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## ER → Database Objects Mapping (overview)

- **Identity & RBAC:** `USER`, `STAFF`, role specializations (`TRAINER`, `MANAGER`, `FLOOR_MANAGER`, `FRONT_DESK`, `ADMIN`, `SUPER_ADMIN`); status lookups (`ACCOUNT_STATUS_IND`); audits (`*_AUD`).  
**Indexes:** `k_user_status`, `k_staff_gym_status` · **Views:** `vw_member_profile`, `vw_member_lookup_minimal` · **Procs:** `sp_check_in`, `sp_access_card_issue`.
  - **Gyms & Equipment:** `GYM`, `EQUIP_KIND`, `EQUIPMENT_ITEM`, `INVENTORY_COUNT`, `SERVICE_LOG`; status lookups (`GYM_STATUS_IND`, `EQUIPMENT_STATUS_IND`); audits. **Triggers:** `trg_equipment_item_clean_due`, `trg_service_log_flags`, `trg_inventory_reorder` · **Views:** `vw_equipment_status`, `vw_cleaning_due`, `vw_service_due`, `vw_equipment_demand`.
  - **Classes & Scheduling:** `CLASS_SESSION`, `TRAINER_AVAIL_DATE`, `SESSION_TRAINER`, `SESSION_EQUIP_RESERVATION`; status/lookups (`SESSION_STATUS_IND`, `AVAILABILITY_STATUS_IND`); audits. **Indexes:** `k_csession_gym_starts`, `k_tavail_tr_date` · **Views:** `vw_sessions_open`, `vw_bookable_sessions`, `vw_trainer_schedule`, `vw_trainer_class_rosters`, `vw_class_utilization` · **Procs:** `sp_set_availability`, `sp_publish_sessions`.
  - **Membership & Operations:** `MEMBERSHIP_PLAN`, `MEMBER`, `BOOKING`, `ACCESS_CARD`, `CHECK_IN`; lookups (`PLAN_STATUS_IND`, `BOOKING_STATUS_IND`, `ACCESS_CARD_STATUS_IND`); audits. **Indexes:** `k_booking_member_time`, `k_booking_status`, `k_checkin_member_time` · **Procs:** `sp_book_session`, `sp_cancel_booking`, `sp_check_in`.
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## Functional Requirements → Data Model

Requirement	Tables	Views/Procedures
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Requirement	Tables	Views/Procedures
Member registration	USER, MEMBER, MEMBERSHIP_PLAN, ACCESS_CARD	sp_access_card_issue, vw_member_profile
Plus-only class booking	CLASS_SESSION, BOOKING	sp_book_session, sp_cancel_booking, vw_bookable_sessions
Trainer availability	TRAINER_AVAIL_DATE, TRAINER, SESSION_TRAINER	sp_set_availability, vw_trainer_schedule
Session publishing	CLASS_SESSION, SESSION_TRAINER	sp_publish_sessions, vw_sessions_open
Check-ins	CHECK_IN, ACCESS_CARD, GYM	sp_check_in, vw_member_checkins, vw_cards_by_gym
Equipment tracking	EQUIPMENT_ITEM, INVENTORY_COUNT, SERVICE_LOG	triggers above, vw_equipment_status, vw_cleaning_due, vw_service_due
Utilization reporting	CLASS_SESSION, BOOKING	vw_class_utilization, vw_equipment_demand
RBAC/entitlements	roles + grants	view SELECT, proc EXECUTE