Relational Database Schema

UserCredentials | credential_id | member_id | username | password_hash | last_login |

Member | member_id | first_name | last_name | email | phone | date_of_birth | emergency_contact |

HealthHistory | member_id | record_date | weight | height | blood_pressure |

Billing | billing_id | member_id | billing_date | due_date | amount | description | status |

Room | room_id | room_name | capacity | facilities |

RoomFacility | room_id | facility_id |

Facility | facility_id | facility_name |

Trainer | trainer_id | first_name | last_name | email | phone | specialization |

Availability | availability_id | trainer_id | start_time | end_time |

GroupClass | class_id | class_name | description | max_capacity | price | duration |

Session | session_id | trainer_id | room_id | class_id | schedule_time | status |

Booking | booking_id | member_id | session_id | status |
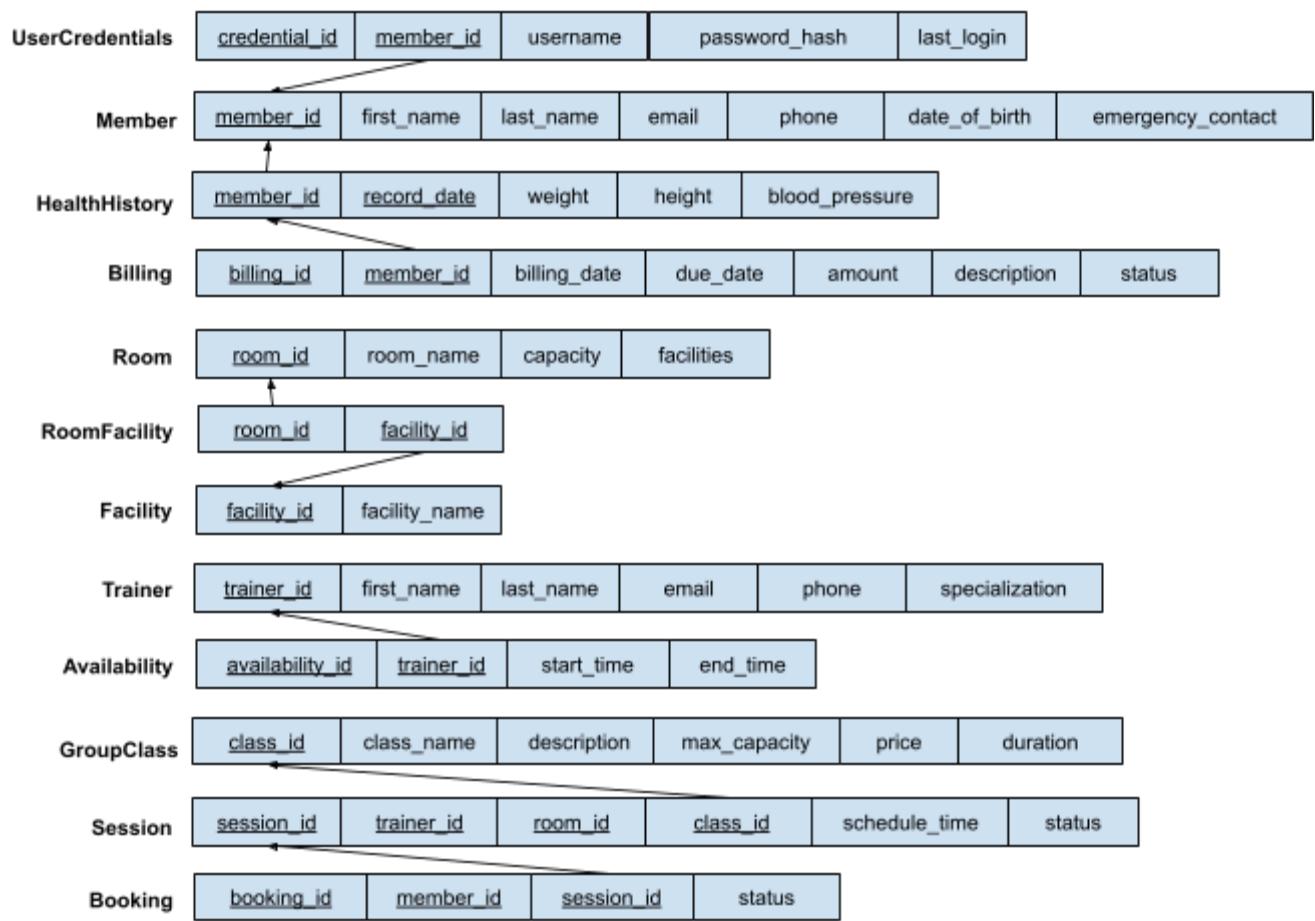
Decomposition to 3NF:

Member:
- member_id (PK)
- first_name
- last_name
- email
- phone
- date_of_birth
- emergency_contact

UserCredentials:
- credential_id (PK)
- member_id (FK → Member)
- username
- password_hash
- last_login

HealthHistory:
- history_id (PK)
- member_id (FK → Member)
- record_date
- weight
- height
- blood_pressure

Billing:
- billing_id (PK)
- member_id (FK → Member)
- billing_date
- due_date
- amount
- description
- status

Room:
- room_id (PK)
- room_name
- capacity

RoomFacility:
- room_id (FK → Room)
- facility_id (FK → Facility)

Facility:
- facility_id (PK)
- facility_name

Trainer:
- trainer_id (PK)
- first_name
- last_name
- email
- phone
- specialization

Availability:
- availability_id (PK)
- trainer_id (FK → Trainer)
- start_time
- end_time

GroupClass:
- class_id (PK)
- class_name
- description
- max_capacity
- price
- duration

Session:
- session_id (PK)
- trainer_id (FK → Trainer)
- room_id (FK → Room)
- class_id (FK → GroupClass)
- schedule_time
- status

Booking:
- booking_id (PK)
- member_id (FK → Member)
- session_id (FK → Session.session_id)
- status