

Normalisation of Relation Schemas

Members table

- **Functional dependencies:** FirstName, LastName, Email and Password are all dependent on MemberID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of MemberID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of MemberID
- **3NF Relations:** No change to table

Trainers table

- **Functional dependencies:** FirstName, LastName, Email, Password and Certified are all dependent on TrainerID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of TrainerID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of TrainerID
- **3NF Relations:** No change to table

Admins table

- **Functional dependencies:** FirstName, LastName, Email, Role and Password are all dependent on AdminID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of AdminID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of AdminID
- **3NF Relations:** No change to table

Health Metrics table

- **Functional dependencies:** MemberID, DateRecorded, Weight, Height, BloodPressure and HeartRate are all dependent on MetricID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of MetricID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of MetricID
- **3NF Relations:** No change to table

Rooms table

- **Functional dependencies:** RoomName and Capacity are both dependent on RoomID
- **Partial dependencies:** No partial dependencies because both attributes are dependent on the single key attribute of RoomID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they both depend on the single key attribute of RoomID
- **3NF Relations:** No change to table

Training Sessions table

- **Functional dependencies:** MemberID, TrainerID and Date are all dependent on SessionID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of SessionID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of SessionID
- **3NF Relations:** No change to table

Group Sessions table

- **Functional dependencies:** ClassName, TrainerID, Room, Date, Time are all dependent on ClassID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of ClassID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of ClassID
- **3NF Relations:** No change to table

Group Sessions Members table

- **Functional dependencies:** MemberID, TrainerID are both dependent on RegistrationID
- **Partial dependencies:** No partial dependencies because both attributes are dependent on the single key attribute of RegistrationID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they both depend on the single key attribute of RegistrationID
- **3NF Relations:** No change to table

Workshops table

- **Functional dependencies:** Name, Description, Room, Date, Time are all dependent on WorkshopID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of WorkshopID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of WorkshopID
- **3NF Relations:** No change to table

Workshop Members table

- **Functional dependencies:** WorkshopID and MemberID are both dependent on RegistrationID
- **Partial dependencies:** No partial dependencies because both attributes are dependent on the single key attribute of RegistrationID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they both depend on the single key attribute of RegistrationID
- **3NF Relations:** No change to table

Equipment table

- **Functional dependencies:** Name, Description, status are all dependent on EquipmentID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of EquipmentID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of EquipmentID
- **3NF Relations:** No change to table

Loyalty Points table

- **Functional dependencies:** MemberID and Points are both dependent on PointsID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of PointsID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of PointsID
- **3NF Relations:** No change to table

Admin Pay table

- **Functional dependencies:** AdminID and Salary are both dependent on SalaryID
- **Partial dependencies:** No partial dependencies because all attributes are dependent on the single key attribute of SalaryID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - they all depend on the single key attribute of SalaryID
- **3NF Relations:** No change to table

Guests table

- **Functional dependencies:** MemberID is dependent on GuestID
- **Partial dependencies:** No partial dependencies because the attribute is dependent on the single key attribute of GuestID
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - the attribute depends on the single key attribute of GuestID
- **3NF Relations:** No change to table

Dependants table

- **Functional dependencies:** Relationship is dependant on FirstName
- **Partial dependencies:** No partial dependencies because the attribute dependent on on the single key attribute of FirstName
- **2NF Relations:** No change to table
- **Transitive Dependencies:** No transitive dependencies because no non-key attributes depend on any other non-key attribute - it depends on the single key attribute of FirstName
- **3NF Relations:** No change to table