

Normalization

Title: Q_Project Milestone 2

Profile Table

- **Attributes:**
 - ProfileID (PK)
 - UserID (FK)
 - Bio
 - Education
 - Job
 - Interests
 - PrivacySettings
 - ProfilePicture
 - CoverPhoto
 - JoinDate
 - LastActive
- **Normalization Level:** 3NF
- **Justification:** The Profile table was designed in 3NF from the outset. All attributes are fully functionally dependent on the primary key (ProfileID), and there are no transitive dependencies present. Each column contains atomic values, and there are no repeating groups.

User Table

- **Attributes:**
 - UserID (PK)
 - Username
 - Password
 - Email
 - PhoneNumber
 - DateOfBirth
- **Normalization Level:** 3NF
- **Justification:** Similar to the Profile table, the User table follows 3NF principles. All non-prime attributes are fully functionally dependent on the primary key (UserID), and there are no transitive dependencies present. Each column contains atomic values without any repeating groups.

Group Table

- **Attributes:**
 - GroupID (PK)
 - UserID (FK)
 - GroupName
 - Description
 - MemberCount
 - CreationDate
- **Normalization Level:** 3NF
- **Justification:** The Group table is in 3NF. All attributes are fully functionally dependent on the primary key (GroupID), and there are no transitive dependencies present. Each column contains atomic values, and there are no repeating groups.

GroupUser Table

- **Attributes:**
 - GroupUserID (PK)
 - UserID (FK)
 - GroupID (FK)
- **Normalization Level:** 3NF
- **Justification:** The GroupUser table adheres to 3NF principles. The primary key (GroupUserID) uniquely identifies each record, and the foreign keys (UserID, GroupID) establish relationships between users and groups. There are no transitive dependencies present.

Plant Table

- **Attributes:**
 - PlantID (PK)
 - GoalID (FK)
 - ProfileID (FK)

- StreakAlive
 - StreakDuration
 - DaysStreakDead
 - DaysStreakKeptAlive
 - **Normalization Level:** 3NF
 - **Justification:** The Plant table is in 3NF. The primary key (PlantID) uniquely identifies each record, and the foreign keys (GoalID, ProfileID) establish relationships with the Goal and Profile tables, respectively. All attributes are fully functionally dependent on the primary key.
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Message Table

- **Attributes:**
 - MessageID (PK)
 - UserIDSender (FK)
 - UserIDReceiver (FK)
 - Content
 - Timestamp
 - Status
 - **Normalization Level:** 3NF
 - **Justification:** The Message table is in 3NF. The primary key (MessageID) uniquely identifies each message, and the foreign keys (UserIDSender, UserIDReceiver) establish relationships with the User table. All attributes are fully functionally dependent on the primary key, and there are no transitive dependencies present.
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Goal Table

- **Attributes:**
 - GoalID (PK)
 - UserID (FK)
 - ProfileID (FK)
 - Content
 - DatePosted
 - Frequency
 - Score
 - PrivacySettings
 - **Normalization Level:** 3NF
 - **Justification:** The Goal table follows 3NF principles. The primary key (GoalID) uniquely identifies each goal, and the foreign keys (UserID, ProfileID) establish relationships with the User and Profile tables. All attributes are fully functionally dependent on the primary key without any transitive dependencies.
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Comment Table

- **Attributes:**
 - CommentID (PK)
 - UserID (FK)
 - GoalID (FK)
 - Content
 - Timestamp
 - **Normalization Level:** 3NF
 - **Justification:** The Comment table adheres to 3NF principles. The primary key (CommentID) uniquely identifies each comment, and the foreign keys (UserID, GoalID) establish relationships with the User and Goal tables. All attributes are fully functionally dependent on the primary key without any transitive dependencies.
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Like Table

- **Attributes:**
 - LikeID (PK)
 - GoalID (FK)
 - UserID (FK)
 - Timestamp
 - **Normalization Level:** 3NF
 - **Justification:** The Like table is in 3NF. The primary key (LikeID) uniquely identifies each like, and the foreign keys (GoalID, UserID) establish relationships with the Goal and User tables. All attributes are fully functionally dependent on the primary key, and there are no transitive dependencies present.
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Media Table

- **Attributes:**
 - MediaID (PK)
 - GoalID (FK)
 - UserID (FK)

- Content
- DateUploaded
- PrivacySettings
- **Normalization Level:** 3NF
- **Justification:** The Media table follows 3NF principles. The primary key (MediaID) uniquely identifies each media entry, and the foreign key (GoalID) establishes a relationship with the Goal table. All attributes are fully functionally dependent on the primary key without any transitive dependencies