Studyr Data Dictionary

Adam Bolton

# 1. User Management

## User Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| userId | UUID | 36 | PRIMARY KEY, NOT NULL | Unique identifier for each user |
| email | VARCHAR | 255 | UNIQUE, NOT NULL | User's email address |
| passwordHash | VARCHAR | 255 | NOT NULL | Encrypted password using bcrypt |
| username | VARCHAR | 50 | UNIQUE, NOT NULL | Display name for the user |
| firstName | VARCHAR | 50 | NOT NULL | User's first name |
| lastName | VARCHAR | 50 | NOT NULL | User's last name |
| profilePictureUrl | VARCHAR | 500 | NULL | URL to profile picture |
| studyLevel | ENUM | N / A | NOT NULL | 'high\_school', 'university', 'professional' |
| yearLevel | INTEGER | N / A | NULL | Current year of study (10N / A12 for HS, 1N / A6 for uni) |
| dateOfBirth | DATE | N / A | NOT NULL | User's DOB for age verification |
| createdAt | TIMESTAMP | N / A | NOT NULL, DEFAULT NOW() | Account creation timestamp |
| updatedAt | TIMESTAMP | N / A | NOT NULL, DEFAULT NOW() | Last profile update |
| lastLogin | TIMESTAMP | N / A | NULL | Last successful login time |
| isActive | BOOLEAN | N / A | DEFAULT TRUE | Account active status |
| isPremium | BOOLEAN | N / A | DEFAULT FALSE | Study Gold subscription status |
| emailVerified | BOOLEAN | N / A | DEFAULT FALSE | Email verification status |
| timezone | VARCHAR | 50 | DEFAULT 'Australia/Melbourne' | User's timezone |

## User Preferences Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| preferenceId | UUID | 36 | PRIMARY KEY | Unique preference ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| studyReminderEnabled | BOOLEAN | N / A | DEFAULT TRUE | Enable study reminders |
| reminderTime | TIME | N / A | DEFAULT '18:00' | Preferred reminder time |
| notificationEmail | BOOLEAN | N / A | DEFAULT TRUE | Email notifications enabled |
| notificationPush | BOOLEAN | N / A | DEFAULT TRUE | Push notifications enabled |
| matchmakingEnabled | BOOLEAN | N / A | DEFAULT TRUE | Appear in partner searches |
| theme | ENUM | N / A | DEFAULT 'dark' | 'light', 'dark', 'auto' |
| language | VARCHAR | 5 | DEFAULT 'enN / AAU' | Preferred language |

# 2. Study Planning

## Study Plans Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| planId | UUID | 36 | PRIMARY KEY | Unique study plan ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| planName | VARCHAR | 100 | NOT NULL | Name of the study plan |
| description | TEXT | N / A | NULL | Plan description |
| startDate | DATE | N / A | NOT NULL | Plan start date |
| endDate | DATE | N / A | NULL | Plan end date |
| isActive | BOOLEAN | N / A | DEFAULT TRUE | Active plan status |
| createdAt | TIMESTAMP | N / A | NOT NULL | Plan creation time |
| updatedAt | TIMESTAMP | N / A | NOT NULL | Last update time |

## Study Session Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| sessionId | UUID | 36 | PRIMARY KEY | Unique session ID |
| planId | UUID | 36 | FOREIGN KEY, NULL | References studyPlans.planId |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | Session creator |
| subjectId | UUID | 36 | FOREIGN KEY, NOT NULL | References subjects.subjectId |
| sessionTitle | VARCHAR | 200 | NOT NULL | Session title |
| sessionType | ENUM | N / A | NOT NULL | 'solo', 'partner', 'group' |
| startTime | TIMESTAMP | N / A | NOT NULL | Session start time |
| endTime | TIMESTAMP | N / A | NOT NULL | Session end time |
| durationMinutes | INTEGER | N / A | NOT NULL | Calculated duration |
| location | VARCHAR | 200 | NULL | Physical location or 'online' |
| notes | TEXT | N / A | NULL | Session notes |
| status | ENUM | N / A | NOT NULL | 'scheduled', 'inProgress', 'completed', 'cancelled' |
| isRecurring | BOOLEAN | N / A | DEFAULT FALSE | Recurring session flag |
| recurrenceRule | VARCHAR | 255 | NULL | RRULE format for recurrence |
| createdAt | TIMESTAMP | N / A | NOT NULL | Session creation time |

## Subject Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| subjectId | UUID | 36 | PRIMARY KEY | Unique subject ID |
| subjectName | VARCHAR | 100 | NOT NULL | Subject name |
| subjectCode | VARCHAR | 20 | NULL | Subject code (e.g., MATH101) |
| category | ENUM | N / A | NOT NULL | 'mathematics', 'science', 'humanities', 'languages', 'arts', 'other' |
| colorHex | VARCHAR | 7 | NOT NULL | Hex color for UI display |
| iconEmoji | VARCHAR | 10 | NULL | Emoji icon for subject |
| createdAt | TIMESTAMP | N / A | NOT NULL | Subject creation time |

## User Subject Association Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| userSubjectId | UUID | 36 | PRIMARY KEY | Unique ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| subjectId | UUID | 36 | FOREIGN KEY, NOT NULL | References subjects.subjectId |
| proficiencyLevel | ENUM | N / A | NULL | 'beginner', 'intermediate', 'advanced' |
| isActive | BOOLEAN | N / A | DEFAULT TRUE | Currently studying |
| addedAt | TIMESTAMP | N / A | NOT NULL | When subject was added |

# 3. Social Features & Matchmaking

## Study Partners Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| partnershipId | UUID | 36 | PRIMARY KEY | Unique partnership ID |
| requesterId | UUID | 36 | FOREIGN KEY, NOT NULL | User who sent request |
| recipientId | UUID | 36 | FOREIGN KEY, NOT NULL | User who received request |
| status | ENUM | N / A | NOT NULL | 'pending', 'accepted', 'declined', 'blocked' |
| compatibilityScore | DECIMAL | 3,2 | NULL | Calculated match score (0.00N / A1.00) |
| matchedAt | TIMESTAMP | N / A | NULL | When match was accepted |
| createdAt | TIMESTAMP | N / A | NOT NULL | Request creation time |

## Partner Session Association Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| partnerSessionId | UUID | 36 | PRIMARY KEY | Unique ID |
| sessionId | UUID | 36 | FOREIGN KEY, NOT NULL | References studySessions.sessionId |
| partnerId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| status | ENUM | N / A | NOT NULL | 'invited', 'accepted', 'declined' |
| joinedAt | TIMESTAMP | N / A | NULL | When partner joined session |

## Message Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| messageId | UUID | 36 | PRIMARY KEY | Unique message ID |
| senderId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| recipientId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| messageText | TEXT | N / A | NOT NULL | Message content |
| isRead | BOOLEAN | N / A | DEFAULT FALSE | Read status |
| readAt | TIMESTAMP | N / A | NULL | When message was read |
| createdAt | TIMESTAMP | N / A | NOT NULL | Message sent time |
| deletedAt | TIMESTAMP | N / A | NULL | Soft delete timestamp |

## User Availability Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| availabilityId | UUID | 36 | PRIMARY KEY | Unique availability ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| dayOfWeek | ENUM | N / A | NOT NULL | 'monday' through 'sunday' |
| startTime | TIME | N / A | NOT NULL | Available from time |
| endTime | TIME | N / A | NOT NULL | Available uxntil time |
| isRecurring | BOOLEAN | N / A | DEFAULT TRUE | Weekly recurrence |

# 4. Progress Tracking & Analytics

## Study Progress Tracking Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| progressId | UUID | 36 | PRIMARY KEY | Unique progress ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| sessionId | UUID | 36 | FOREIGN KEY, NOT NULL | References studySessions.sessionId |
| actualStart | TIMESTAMP | N / A | NOT NULL | Actual start time |
| actualEnd | TIMESTAMP | N / A | NOT NULL | Actual end time |
| actualDuration | INTEGER | N / A | NOT NULL | Minutes studied |
| productivityRating | INTEGER | N / A | NULL | SelfN / Arated 1N / A5 |
| topicsCovered | TEXT | N / A | NULL | JSON array of topics |
| createdAt | TIMESTAMP | N / A | NOT NULL | Record creation time |

## User Study Streak Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| streakId | UUID | 36 | PRIMARY KEY | Unique streak ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| currentStreak | INTEGER | N / A | DEFAULT 0 | Current day streak |
| longestStreak | INTEGER | N / A | DEFAULT 0 | Best streak record |
| lastStudyDate | DATE | N / A | NULL | Last study session date |
| streakStartDate | DATE | N / A | NULL | Current streak start |
| updatedAt | TIMESTAMP | N / A | NOT NULL | Last update time |

## Achievement Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| achievementId | UUID | 36 | PRIMARY KEY | Unique achievement ID |
| achievementName | VARCHAR | 100 | NOT NULL | Achievement title |
| description | TEXT | N / A | NOT NULL | Achievement description |
| badgeIcon | VARCHAR | 50 | NOT NULL | Icon identifier |
| pointsValue | INTEGER | N / A | DEFAULT 10 | Achievement points |
| category | ENUM | N / A | NOT NULL | 'streak', 'hours', 'social', 'subject' |
| criteriaJson | JSON | N / A | NOT NULL | Achievement criteria |

## User Achievement Association Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| userAchievementId | UUID | 36 | PRIMARY KEY | Unique ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| achievementId | UUID | 36 | FOREIGN KEY, NOT NULL | References achievements.achievementId |
| earnedAt | TIMESTAMP | N / A | NOT NULL | When achievement was earned |
| progressPercentage | INTEGER | N / A | DEFAULT 0 | Progress towards achievement |

# 5. Subscription & Payments

## User Subscription Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| subscriptionId | UUID | 36 | PRIMARY KEY | Unique subscription ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| planType | ENUM | N / A | NOT NULL | 'free', 'studyGoldMonthly', 'studyGoldYearly' |
| status | ENUM | N / A | NOT NULL | 'active', 'cancelled', 'expired', 'pastDue' |
| startDate | DATE | N / A | NOT NULL | Subscription start date |
| endDate | DATE | N / A | NULL | Subscription end date |
| paymentProvider | ENUM | N / A | NULL | 'stripe', 'paypal', 'square' |
| providerSubscriptionId | VARCHAR | 255 | NULL | External subscription ID |
| createdAt | TIMESTAMP | N / A | NOT NULL | Record creation time |

## Transaction Class

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| transactionId | UUID | 36 | PRIMARY KEY | Unique transaction ID |
| subscriptionId | UUID | 36 | FOREIGN KEY, NOT NULL | References subscriptions.subscriptionId |
| amount | DECIMAL | 10,2 | NOT NULL | Transaction amount in AUD |
| currency | VARCHAR | 3 | DEFAULT 'AUD' | Currency code |
| status | ENUM | N / A | NOT NULL | 'pending', 'completed', 'failed', 'refunded' |
| providerTransactionId | VARCHAR | 255 | NULL | External transaction ID |
| processedAt | TIMESTAMP | N / A | NOT NULL | Transaction time |

# 6. Notifications

## User Notification Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| notificationId | UUID | 36 | PRIMARY KEY | Unique notification ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| type | ENUM | N / A | NOT NULL | 'reminder', 'achievement', 'match', 'message', 'system' |
| title | VARCHAR | 200 | NOT NULL | Notification title |
| message | TEXT | N / A | NOT NULL | Notification content |
| dataJson | JSON | N / A | NULL | Additional data |
| isRead | BOOLEAN | N / A | DEFAULT FALSE | Read status |
| sentVia | ENUM | N / A | NOT NULL | 'push', 'email', 'inApp' |
| createdAt | TIMESTAMP | N / A | NOT NULL | Notification creation time |
| readAt | TIMESTAMP | N / A | NULL | When notification was read |

# 7. System & Analytics

## User Analytics Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name | Data Type | Size | Constraints | Description |
| analyticsId | UUID | 36 | PRIMARY KEY | Unique analytics ID |
| userId | UUID | 36 | FOREIGN KEY, NOT NULL | References users.userId |
| date | DATE | N / A | NOT NULL | Analytics date |
| totalStudyMinutes | INTEGER | N / A | DEFAULT 0 | Daily study time |
| sessionsCompleted | INTEGER | N / A | DEFAULT 0 | Sessions finished |
| subjectsStudied | JSON | N / A | NULL | Array of subject IDs |
| productivityAverage | DECIMAL | 3,2 | NULL | Average productivity |
| createdAt | TIMESTAMP | N / A | NOT NULL | Record creation time |