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# Document Description

This document contains the tables and fields that will be used to develop the Study tracker system.

# Version History

|  |  |  |
| --- | --- | --- |
| Author | Date | Description |
| James Mwerekania | 13.02.2024 | Added the tables required for the study tracker software. |
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|  |  |  |

# Database Structure

|  |  |  |  |
| --- | --- | --- | --- |
| **Table Name** | Column Name | Data Type | Description |
| users | user\_id | INT (Auto Increment, PK) | Unique identifier for each user. |
|  | full\_name | VARCHAR(255) | Full name of the user. |
|  | email | VARCHAR(255) (Unique) | Email address of the user. |
|  | password\_hash | VARCHAR(255) | Hashed password of the user. |
|  | registration\_date | TIMESTAMP (Default: Current) | Date and time of user registration. |
|  | is\_verified | BOOLEAN (Default: FALSE) | Indicates whether the user's email address has been verified. |
| user\_sessions | session\_id | INT (Auto Increment, PK) | Unique identifier for each session. |
|  | user\_id | INT (FK) | Foreign key referencing the user who owns the session. |
|  | session\_token | VARCHAR(255) (Unique) | Token associated with the session. |
|  | expiration\_time | TIMESTAMP | Timestamp indicating the expiration time of the session. |
| courses | course\_id | INT (Auto Increment, PK) | Unique identifier for each course. |
|  | course\_name | VARCHAR(100) | Name of the course. |
|  | user\_id | INT (FK) | Foreign key referencing the user who owns the course. |
| subjects | subject\_id | INT (Auto Increment, PK) | Unique identifier for each subject. |
|  | subject\_name | VARCHAR(100) | Name of the subject. |
|  | course\_id | INT (FK) | Foreign key referencing the course associated with the subject. |
| assignments | assignment\_id | INT (Auto Increment, PK) | Unique identifier for each assignment. |
|  | title | VARCHAR(255) | Title of the assignment. |
|  | subject\_id | INT (FK) | Foreign key referencing the subject associated with the assignment. |
|  | user\_id | INT (FK) | Foreign key referencing the user who owns the assignment. |
|  | due\_date | DATE | Due date of the assignment. |
|  | priority | ENUM('High', 'Medium', 'Low') | Priority level of the assignment. |
|  | description | TEXT | Description of the assignment. |
|  | created\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the assignment was created. |
|  | updated\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the assignment was last updated. |
| recurrence\_options | option\_id | INT (Auto Increment, PK) | Unique identifier for each recurrence option. |
|  | option\_name | VARCHAR(50) (Unique) | Name of the recurrence option (e.g., Daily, Weekly). |
| revision\_sessions | session\_id | INT (Auto Increment, PK) | Unique identifier for each revision session. |
|  | user\_id | INT (FK) | Foreign key referencing the user who owns the revision session. |
|  | subject\_id | INT (FK) | Foreign key referencing the subject associated with the revision session. |
|  | subject\_topic | VARCHAR(255) | Topic of the revision session. |
|  | start\_datetime | DATETIME | Date and time when the revision session starts. |
|  | duration\_minutes | INT | Duration of the revision session in minutes. |
|  | description | TEXT | Description of the revision session. |
|  | recurrence\_option\_id | INT (FK) | Foreign key referencing the recurrence option for the revision session. |
|  | recurrence\_end\_date | DATE | End date for recurring revision sessions. |
|  | created\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the revision session was created. |
|  | updated\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the revision session was last updated. |
| revision\_session\_notifications | notification\_id | INT (Auto Increment, PK) | Unique identifier for each notification. |
|  | session\_id | INT (FK) | Foreign key referencing the revision session associated with the notification. |
|  | user\_id | INT (FK) | Foreign key referencing the user who received the notification. |
|  | notification\_datetime | DATETIME | Date and time when the notification was sent. |
|  | message | TEXT | Content of the notification message. |
|  | is\_read | BOOLEAN (Default: FALSE) | Indicates whether the notification has been read. |
|  | created\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the notification was created. |
| study\_materials | material\_id | INT (Auto Increment, PK) | Unique identifier for each study material. |
|  | user\_id | INT (FK) | Foreign key referencing the user who owns the study material. |
|  | subject\_id | INT (FK) | Foreign key referencing the subject associated with the study material. |
|  | material\_type | ENUM('Text', 'Document', 'Link', 'Image') | Type of the study material (e.g., Text, Document). |
|  | title | VARCHAR(255) | Title of the study material. |
|  | file\_path | VARCHAR(255) | File path for uploaded documents or image files. |
|  | link\_url | VARCHAR(255) | URL for web links. |
|  | created\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the study material was created. |
|  | updated\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the study material was last updated. |
| material\_tags | tag\_id | INT (Auto Increment, PK) | Unique identifier for each tag. |
|  | material\_id | INT (FK) | Foreign key referencing the study material associated with the tag. |
|  | tag\_name | VARCHAR(100) | Name of the tag. |
| material\_versions | version\_id | INT (Auto Increment, PK) | Unique identifier for each version. |
|  | material\_id | INT (FK) | Foreign key referencing the study material associated with the version. |
|  | version\_number | INT | Version number of the material. |
|  | file\_path | VARCHAR(255) | File path for storing different versions of documents. |
|  | created\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the version was created. |
| task\_timers | timer\_id | INT (Auto Increment, PK) | Unique identifier for each timer entry. |
|  | user\_id | INT (FK) | Foreign key referencing the user who owns the timer. |
|  | task\_id | INT (FK) | Foreign key referencing the task associated with the timer (e.g., assignments, revision sessions). |
|  | start\_time | DATETIME | Timestamp indicating when the timer was started. |
|  | end\_time | DATETIME | Timestamp indicating when the timer was stopped. |
|  | total\_duration\_minutes | INT | Total duration of the task in minutes. |
|  | is\_paused | BOOLEAN (Default: FALSE) | Indicates whether the timer is currently paused. |
|  | created\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the timer entry was created. |
|  | updated\_at | TIMESTAMP (Default: Current) | Timestamp indicating when the timer entry was last updated. |
| user\_feedback | feedback\_id | INT (Auto Increment, PK) | Unique identifier for each feedback entry. |
|  | user\_id | INT (FK) | Foreign key referencing the user who submitted the feedback. |
|  | feedback\_text | TEXT | Text of the feedback provided by the user. |
|  | contact\_email | VARCHAR(255) | Contact email provided by the user for follow-up communication. |
|  | is\_anonymous | BOOLEAN (Default: FALSE) | Indicates whether the feedback was submitted anonymously. |
|  | status | ENUM('Submitted', 'In Progress', 'Resolved') (Default: 'Submitted') | Status of the feedback submission. |
|  | submission\_timestamp | TIMESTAMP (Default: Current) | Timestamp indicating when the feedback was submitted. |
|  | resolution\_timestamp | TIMESTAMP | Timestamp indicating when the feedback was resolved. |
|  | resolution\_notes | TEXT | Notes or details regarding the resolution of the feedback. |

# 

# Create Tables Code (SQL)

CREATE TABLE users (

    user\_id INT AUTO\_INCREMENT PRIMARY KEY,

    full\_name VARCHAR(255) NOT NULL,

    email VARCHAR(255) NOT NULL UNIQUE,

    password\_hash VARCHAR(255) NOT NULL,

    registration\_date TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    is\_verified BOOLEAN DEFAULT FALSE

);

CREATE TABLE user\_sessions (

    session\_id INT AUTO\_INCREMENT PRIMARY KEY,

    user\_id INT NOT NULL,

    session\_token VARCHAR(255) NOT NULL UNIQUE,

    expiration\_time TIMESTAMP NOT NULL,

    FOREIGN KEY (user\_id) REFERENCES users(user\_id)

);

CREATE TABLE courses (

    course\_id INT AUTO\_INCREMENT PRIMARY KEY,

    course\_name VARCHAR(100) NOT NULL,

    user\_id INT,

    FOREIGN KEY (user\_id) REFERENCES users(user\_id)

);

CREATE TABLE subjects (

    subject\_id INT AUTO\_INCREMENT PRIMARY KEY,

    subject\_name VARCHAR(100) NOT NULL,

    course\_id INT,

    user\_id INT,

    FOREIGN KEY (course\_id) REFERENCES courses(course\_id),

    FOREIGN KEY (user\_id) REFERENCES users(user\_id)

);

CREATE TABLE assignments (

    assignment\_id INT AUTO\_INCREMENT PRIMARY KEY,

    title VARCHAR(255) NOT NULL,

    subject\_id INT,

    user\_id INT,

    FOREIGN KEY (subject\_id) REFERENCES subjects(subject\_id),

    FOREIGN KEY (user\_id) REFERENCES users(user\_id),

    due\_date DATE NOT NULL,

    priority ENUM('High', 'Medium', 'Low') NOT NULL,

    description TEXT,

    created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    updated\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP

);

CREATE TABLE assignment\_audit\_log (

    log\_id INT AUTO\_INCREMENT PRIMARY KEY,

    assignment\_id INT,

    user\_id INT,

    action VARCHAR(50) NOT NULL,

    timestamp TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    FOREIGN KEY (assignment\_id) REFERENCES assignments(assignment\_id),

    FOREIGN KEY (user\_id) REFERENCES users(user\_id)

);

CREATE TABLE recurrence\_options (

    option\_id INT AUTO\_INCREMENT PRIMARY KEY,

    option\_name VARCHAR(50) NOT NULL UNIQUE

);

INSERT INTO recurrence\_options (option\_name) VALUES

('Daily'),

('Weekly'),

('Monthly'),

('Yearly');

CREATE TABLE revision\_sessions (

    session\_id INT AUTO\_INCREMENT PRIMARY KEY,

    user\_id INT NOT NULL,

    subject\_id INT,

    subject\_topic VARCHAR(255) NOT NULL,

    start\_datetime DATETIME NOT NULL,

    duration\_minutes INT NOT NULL,

    description TEXT,

    recurrence\_option\_id INT,

    recurrence\_end\_date DATE, -- New column for recurrence end date

    created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    updated\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,

    FOREIGN KEY (user\_id) REFERENCES users(user\_id),

    FOREIGN KEY (subject\_id) REFERENCES subjects(subject\_id),

    FOREIGN KEY (recurrence\_option\_id) REFERENCES recurrence\_options(option\_id)

);

CREATE TABLE revision\_session\_notifications (

    notification\_id INT AUTO\_INCREMENT PRIMARY KEY,

    session\_id INT NOT NULL,

    user\_id INT NOT NULL,

    notification\_datetime DATETIME NOT NULL,

    message TEXT,

    is\_read BOOLEAN DEFAULT FALSE,

    created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    FOREIGN KEY (session\_id) REFERENCES revision\_sessions(session\_id),

    FOREIGN KEY (user\_id) REFERENCES users(user\_id)

);

CREATE TABLE study\_materials (

    material\_id INT AUTO\_INCREMENT PRIMARY KEY,

    user\_id INT NOT NULL,

    subject\_id INT,

    material\_type ENUM('Text', 'Document', 'Link', 'Image') NOT NULL,

    title VARCHAR(255) NOT NULL,

    file\_path VARCHAR(255), -- For uploaded documents or image file paths

    link\_url VARCHAR(255), -- For web links

    created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    updated\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,

    FOREIGN KEY (user\_id) REFERENCES users(user\_id),

    FOREIGN KEY (subject\_id) REFERENCES subjects(subject\_id)

);

CREATE TABLE material\_tags (

    tag\_id INT AUTO\_INCREMENT PRIMARY KEY,

    material\_id INT NOT NULL,

    tag\_name VARCHAR(100) NOT NULL,

    FOREIGN KEY (material\_id) REFERENCES study\_materials(material\_id)

);

CREATE TABLE material\_versions (

    version\_id INT AUTO\_INCREMENT PRIMARY KEY,

    material\_id INT NOT NULL,

    version\_number INT NOT NULL,

    file\_path VARCHAR(255), -- For storing different versions of documents

    created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    FOREIGN KEY (material\_id) REFERENCES study\_materials(material\_id)

);

CREATE TABLE task\_timers (

    timer\_id INT AUTO\_INCREMENT PRIMARY KEY,

    user\_id INT NOT NULL,

    task\_id INT NOT NULL,

    start\_time DATETIME NOT NULL,

    end\_time DATETIME,

    total\_duration\_minutes INT,

    is\_paused BOOLEAN NOT NULL DEFAULT FALSE,

    created\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    updated\_at TIMESTAMP DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,

    FOREIGN KEY (user\_id) REFERENCES users(user\_id),

    FOREIGN KEY (task\_id) REFERENCES tasks(task\_id)

);

CREATE TABLE user\_feedback (

    feedback\_id INT AUTO\_INCREMENT PRIMARY KEY,

    user\_id INT,

    feedback\_text TEXT NOT NULL,

    contact\_email VARCHAR(255),

    is\_anonymous BOOLEAN NOT NULL DEFAULT FALSE,

    status ENUM('Submitted', 'In Progress', 'Resolved') NOT NULL DEFAULT 'Submitted',

    submission\_timestamp TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

    resolution\_timestamp TIMESTAMP,

    resolution\_notes TEXT,

    FOREIGN KEY (user\_id) REFERENCES users(user\_id)

);