Strength Research Online Database v3.3

Table: User

The User table holds information about each individual user. Users can be administrators, trainers, or clients. There is a natural hierarchy of trainers who work with multiple clients and clients who employ different trainers for different disciplines. The application provides functionality that allows trainers to bring on-board new clients, manage their coaching programs, and transfer them to other associated trainers.

Verification rules are applied in the React maintenance application in the front-end ensure that only valid combinations of these attributes are allowed to be specified for each user.

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| ***Attribute Name*** | | ***Description*** | ***Data Type*** | ***Format*** | ***Range*** | ***Req*** | ***Key*** |
| user\_ID | | Unique six-digit code to identify each user. A user can be an administrators, trainers, or clients. This ID is automatically assigned when the user record is created and can be used to log-in to the site. | smallserial |  | 1 to 999999 | Y | PK |
| user\_authority | | The authority level of this user:   |  |  | | --- | --- | | **S** | A super-user or administrator who has access to all functionality. Administrators can bring on-board new coaches as well as being coaches themselves.. | | **C** | Coaches manage the training plans for clients. They have full access to the information of all the clients that they manage. | | **U** | A User, who is a Client of a Coach. They can manage their own identity and contact information, but cannot create their own training plans. | | **A** | AI who can use a restricted set of Back-End APIs to access anonymised client information to assist a coach. | | char |  |  | Y |  |
| password | | Case-sensitive password. The stored password is hash-encrypted when it is created or changed with a one-way **bcrypt()** salted hashing algorithm.  During password verification, the bcrypt library provides a function to verify the plain-text password entered against the encrypted one. | character varying(70) | 60 |  | Y |  |

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| ***Attribute Name*** | | ***Description*** | ***Data Type*** | ***Format*** | ***Range*** | ***Req*** | ***Key*** |

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| user\_status | Tracks the current status of the user and their password:   |  |  | | --- | --- | | **A** | The user has a valid, active password and can access the site. | | **R** | The user is currently in the process of  resetting their password, possibly because they forgot it. | | **N** | The used is new and in the process of registering. | | | char |  |  |  |  |

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| registration \_token | The registration activation or password reset token sent to the user by email. | | character varying(500) |  |  |  |  |
| verification\_code | The numeric verification code the client needs to enter when resetting their password or registering a new account | | character varying(10) |  |  |  |  |
| token\_date\_time | The date and time the registration or reset token was created. This is used during the password reset process to invalidate expired tokens. The current token lifetime is set to 15 minutes | | date |  |  |  |  |
| last\_sign\_in\_date | Date and time of the registrant’s last sign in to the system. | | date |  |  |  |  |
| current\_block |  | | smallint |  |  |  |  |
| current\_week |  | | smallint |  |  |  |  |

Name and contact information

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Attribute Name*** | ***Description*** | | ***Data Type*** | | ***Format*** | ***Range*** | ***Req*** | ***Key*** |
| salutation | Salutation including Mr, Mrs, Sir, Dr, Lady, Lord, and Rev. | | character varying(10) | |  |  |  |  |
| first\_name | First name | | character varying(30) | |  |  | Y |  |
| middle\_name | Middle name or initial | | character varying(30) | |  |  |  |  |
| last\_name | Last name or surname | | character varying(50) | |  |  | Y |  |
| alias | Short alias name for the user (e.g. LukeS). It must be unique because it can be used to log in with the password instead of entering the user\_ID or email\_address. It is checked for uniqueness during maintenance before being accepted. | | character varying(30) | |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Attribute Name*** | ***Description*** | | ***Data Type*** | | ***Format*** | ***Range*** | ***Req*** | ***Key*** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Gender. Not currently used but reserved for future use. Valid options include:   |  |  | | --- | --- | | **M** | Male. | | **F** | Female. | | **O** | Other. | | **N** | Not specified. | | | char | |  |  |  |  |
| pronouns | Pronouns for specifying gender including him/he, she/her. This is a free-form field that is not validated. Not currently used but reserved for future use. | | character varying(20) | |  |  |  |  |
| phone\_number | Mobile phone number or landline number. Maximum length is based on the ITU-T E164 standard recommendation available from here: <https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=E.164> | | character varying(15) | |  |  | Y |  |
| email\_address | Email address. Validated using the RFC 5322 standard such that:   * The local part is no more than 64 characters long. * The @ sign is present. * The domain part is no longer than 255 characters.   <https://datatracker.ietf.org/doc/html/rfc5322>  The email address can also be used to sign-in since it is unique on the system. It is validated at sign-on time. | | character varying(320) | | #@#.# |  | Y |  |
| address\_1 | Address line one. | | character varying(30) | |  |  | Y |  |
| address\_2 | Address line two. | | character varying(30) | |  |  |  |  |
| address\_3 | Address line three. | character varying(30) | |  | |  |  |  |
| suburb | Suburb. | character varying(30) | |  | |  | Y |  |
| city | City name. | character varying(30) | |  | |  | Y |  |
| postcode | Postcode. | character varying(30) | |  | |  | Y |  |
| state\_province | State or province. | character varying(30) | |  | |  |  |  |
| country | Country name | character varying(30) | |  | |  | Y |  |
| ***Attribute Name*** | ***Description*** | ***Data Type*** | | ***Format*** | | ***Range*** | ***Req*** | ***Key*** |
| date\_of\_birth | Date of birth | DATE | |  | |  | Y |  |
| gym\_name | Name of the gym the user is registered at or the trainer operates out of. This could be a foreign key to a list of gyms the trainers are associated with. | character varying(30) | |  | |  |  | FK |
| user\_image | The file name of the image the user has uploaded to the sites Public userImages directory on the server. This image is displayed on the top of the page after they authenticate and in other places like their Block training schedule. | character varying(50) | |  | |  |  |  |

Payment plan information

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Attribute Name*** | ***Description*** | ***Data Type*** | ***Format*** | ***Range*** | ***Req*** | ***Key*** |
| payment\_type | The current payment plan of this user: | char |  |  | Y | FK |

Emergency contact information

This section carries the details of the assigned guardian of a juvenile dancer. If the calculated registrant age is less than or equal to seven, then guardian information must be supplied. Reserved for future use and not implemented at the moment.

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| --- | --- | --- | --- | --- | --- | --- |
| ***Attribute Name*** | ***Description*** | ***Data Type*** | ***Format*** | ***Range*** | ***Req*** | ***Key*** |
| emg\_contact\_name | The name of the person who is to be contacted in the event of an emergency. | character varying(60) |  |  | Y |  |
| emg\_contact \_phone | The emergency contact phone number | character varying(15) |  |  | Y |  |
| emg\_contact email\_address | The email address of the contact. | character varying(60) |  | #@#.# | Y |  |

 Table: Configuration

Holds the configuration settings used by the application.

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| --- | --- | --- | --- | --- | --- | --- |
| ***Attribute Name*** | ***Description*** | ***Data Type*** | ***Format*** | ***Range*** | ***Req*** | ***Key*** |
| config\_ID | The key to the configuration file. This is always 1. | smallint | N | 1 to 1 | Y | PK |
|  | *More to come ….* |  |  |  |  |  |

Table: Block

This is the primary table from the set of linked tables that contain the training plans for an individual client. This   
data can be planned for future work, current plans being worked on by the client, or historical completed records.

A Block record uniquely identifies the block and links together the Exercise and Schedule line records together to   
form the training plan for the specified block.

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| --- | --- | --- | --- | --- | --- | --- |
| ***Attribute Name*** | ***Description*** | ***Data Type*** | ***Format*** | ***Range*** | ***Req*** | ***Key*** |
| block\_ID | The unique key to the block this plan is for. | smallint serial |  |  | Y | PK |
| user\_ID | Unique six-digit code to identify each user. | smallint |  | 1 to 999999 | Y |  |
| block | Numeric block number. This is an incrementing sequence that is unique for each client. | smallint |  |  |  |  |
| block\_start\_date | The date the block started or is scheduled to start. | date |  |  |  |  |
| block\_end\_date | The date the block is scheduled to end after n weeks of exercises. | date |  |  |  |  |
| max\_week | The maximum number of weeks this block is scheduled to run for, It is precalculated from the block\_start\_date and block\_end\_date. | smallint |  |  |  |  |
| current\_week | The current week number the client is in for the exercises specified in this block. | smallint |  |  |  |  |
| current\_day | The current day number the client is in for the exercises specified in this block. Monday = 1, Tuesday = 2, etc. | smallint | 1 - 7 |  |  |  |

Table: Schedule

The Schedule table holds lines of information containing sets of exercises a User has been assigned or “scheduled” for a particular week number within a numbered Block.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Attribute Name*** | | ***Description*** | ***Data Type*** | ***Format*** | ***Range*** | ***Req*** | ***Key*** |
| schedule\_ID | | Unique numeric identifier for this schedule line. This ID is automatically assigned when the schedule record is created. | smallint serial |  |  | Y | PK |
| seq\_ID | | The sequence line number that determines the order the line will be displayed to the user. | smallint |  |  |  |  |
| block\_ID | | The block number that this schedule has been created for, | smallint |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Attribute Name*** | | ***Description*** | ***Data Type*** | ***Format*** | ***Range*** | ***Req*** | ***Key*** |
| exercise\_ID | | The ID of the exercise that is to be performed in the set this line defines. This provides a key to a unique record in the Exercise table that provides more information about this exercise. | smallserial |  |  |  | FK |
| sets | | The number of recommended sets specified by the coach for this exercise | smallint |  |  |  |  |
| actual\_sets | | The number of sets the client actually performed during this session. | smallint |  |  |  |  |
| reps | | The number of recommended reps (repeats) for this set specified by the coach for this exercise | smallint |  |  |  |  |
| actual\_reps | | The number of repeats of this set the client actually performed during this session. | smallint[ ] |  |  |  |  |
| rpe | | Rating of perceived exertion | numeric |  |  |  |  |
| actual\_rpe | | The Rating of perceived exertion estimated by the client. | numeric |  |  |  |  |
| lower\_weight | | The lower range of the weight, recommended by the trainer. | numeric |  |  |  |  |
| upper\_weight | | The upper range of the weight, recommended by the trainer. | numeric |  |  |  |  |
| actual\_weight | | The array of actual weights used by the client during this exercise. | numeric [ ] |  |  |  |  |
| velocity\_based\_metrics | | Notes from the trainer about this exercise | character varying(200) |  |  |  |  |
| notes | | Notes from the client about this exercise | character varying(200) |  |  |  |  |
| E1RM | | The estimate of their 1RM made by the client. | numeric |  |  |  |  |

Table: Exercise

The Exercise table contains information about individual exercises. These are referenced in the Schedule records to specify which exercise is applicable to each scheduled set for the client.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Attribute Name*** | | ***Description*** | ***Data Type*** | ***Format*** | ***Range*** | ***Req*** | ***Key*** |
| exercise\_ID | | Unique numeric identifier for this exercise. This ID is automatically assigned when the exercise record is created. | smallint |  |  | Y | PK |
| name | | The name of the exercise e.g. “*Low Bar Squat TS1*” | character varying(30) |  |  |  |  |
| video\_link | | The name of the training video that explains how to perform this exercise e.g. *Low\_Bar\_Squat\_TS1.mp4* Videos are served from the web server from the site directory *aaaaaaaaa* | character varying(50) |  |  |  |  |