The relationship of columns in the table.

WEEK1: User Login System

**Table Name:** Users

**Description:** Now that we select MongoDB as Database, we do not have to consider much about the data type and we only have to concentrate on what the table should storage.

|  |  |
| --- | --- |
| **Column/Key** | **Description** |
| Username | The unique id of a user, will show in profile page |
| Password | 8 digits at least, for security, the passwd will be encrypted |
| Email | Use for validating account/username, reset passwd etc. Cannot be null. |
| Profile | Picture of a user |
| LastName | -- |
| FirstName | -- |
| Phone | Can be null at first (Default null) |
| SignUpTime | The 1st time a user signed up the account |
| States | Is online or offline  Online: true  Offline: false (Default) |
| IsDeleted | We just support delete logically.  True: deleted, then the time of deleting  False: still active (Default) |

**Here are some examples in Json format:**

* Front end sends Json data like below and back end processes that. The Password and Email should be validated by front end.
* If default null, front page also sends “null” to backend
* The default profile picture may not be upload by users at first, and we can select a public picture for the user, like:



* The Username is for everything about query in different tables so it is the primary key.

{

Username: “Kitty”,

Password: “Kitty123”,

Email: [123456789@iu.edu](mailto:123456789@iu.edu),

Profile: [www.pictures.com/userpicture?username=Kitty](http://www.pictures.com/userpicture?username=Kitty),

LastName: “Kitty”,

FirstName: “Cat”,

Phone: +1(010)123456,

SignUpTime: 02/14/2020,

States: true,

IsDeleted: {

Deleted: false,

Time: null

}

}

{

Username: “Johny”,

Password: “Johny123”,

Email: [987654321@iu.edu](mailto:987654321@iu.edu),

Profile: [www.pictures.com/userpicture?username=Johny](http://www.pictures.com/userpicture?username=Johny),

LastName: “Johny”,

FirstName: “Dog”,

Phone: null,

SignUpTime: 02/14/2020,

States: false,

IsDeleted: {

Deleted: True,

Time: 02/15/2021

}

}

**Table Name:** Admin

**Description**: The admins may have different signing up page, but most of columns are the same as Users.

|  |  |
| --- | --- |
| **Column/Key** | **Description** |
| Account | The unique id of an admin, just for login and other functions, not show to others. |
| Password | 8 digits at least, for security, the passwd will be encrypted |
| Email | Use for validating account/admin, reset passwd etc. Cannot be null. |
| Profile | Picture of a user |
| LastName | Shown in profile page |
| FirstName | Shown in profile page |
| Phone | Can be null at first (Not null) |

* There is no need to record states or isDeleted column because once an admin quits, delete it directly.
* Admins do not use username, their profiles show their LastName and FirstName.
* Admins’ phone number shouldn’t be null.

**Example:**

{

Account: “123456”,

Password: “admin123”,

Email: [admin@iu.edu](mailto:admin@iu.edu)

Profile: [www.pictures.com/userpicture?username=admin](http://www.pictures.com/userpicture?username=admin),

LastName: “Admin”,

FirstName: “Administrator”,

Phone: +1 (010) 789684122

}

**Table Name**: FitCoach

**Description**: This table mainly records the information of fitness coach, there is a little difference between users and fitness coaches.

|  |  |
| --- | --- |
| **Column/Key** | **Description** |
| Username | The unique id of a user, will show in profile page |
| Password | 8 digits at least, for security, the passwd will be encrypted |
| Email | Use for validating account/username, reset passwd etc. Cannot be null. |
| Profile | Picture of a user |
| LastName | -- |
| FirstName | -- |
| Level | Shows the level of the coach, i.e. what kind of honor he/she owns |
| Phone | Can be null at first (Default null) |
| SignUpTime | The 1st time a user signed up the account |
| States | Is online or offline  Online: true  Offline: false (Default) |

**Example:**

{

Account: “CoachLee”,

Password: “CoachLee123”,

Email: [CoachLee@iu.edu](mailto:CoachLee@iu.edu)

Profile: www.pictures.com/userpicture?username=CoacheLee,

LastName: “Lunar”,

FirstName: “Carl”,

Level: {

WorkingTime: 3 Year,

Honor: World Fitness Man gold medal

},

Phone: +1 (010) 4455667788,

SignUpTime: 02/15/2021,

States: false

}

**Note:**

1. Users and Fitness Coaches’ usernames are unique to each other. Say, if a user’s username is “fit2021”, then the coach cannot adopt that username. Similarly, if a user’s username is “fit2020”, then this means the username has not been used by anyone include users and fitness coach.
2. The same email cannot sign up for 2 accounts except that the former account has been deleted by the users. One email will represent either user or fitness coach.
3. If a user cancel an account, then we delete it logically not physically. For instance, Tony deletes his account, we note the Isdeleted column True in the table Users and all queries will ignore it.
4. If an admin or a coach cancels an account, the we delete it physically.
5. Above tables just record basic information of different users. The unique id of a user is username; admin is account; coach is username. They are the primary key in all tables.

**Table Name:** LoginInfo

**Description**: This table mainly considers about the risk of ID stealing.

|  |  |
| --- | --- |
| **Column** | **Description** |
| Account | The unique id of users, including users and coach |
| LastLogin | Record the last login info:  Time, Locate, LogoutTime, IPAddr. |

**Example:**

{

Account: “Jack123”,

LastLogin:{

Time: 02/15/2021 08:36:25 EST,

Locate: {

Country: the U.S.,

State: Indiana,

City: Bloomington

},

LogoutTime: 02/15/2021 09:36:25 EST,

IPAddr: 132.456.78.9

}

}