Betterflye Database Documentation

**Purpose –** The Betterflye database tracks and stores information for the Betterflye application. This documentation provides an easy way to understand the database and each of it’s features.

#Note – all table and column names are subject to change, any changes will be reflected in this documentation

**Related Files**:

database.sql – a file to wipe and rebuild the database structure and all tables, useful to create a clean slate during production and testing.

test\_data.sql – a file to populate the tables of the Betterflye database with test data, contains insertion statements useful for the creation and modification of data within the application.

queries.sql – a file containing example queries that are useful for data retrieval within the application

test\_users.sql – a file containing approximately ten thousand users, used for scalability testing.

**Sections**:

Tables and their columns

Explicit indexing

**Tables, their columns, and their purposes**:

***users –*** Table for storing user information

*username*

**Type**: varchar(255)

**Attributes**: unique, not null

**Description**: The unique username that users use to login and identify themselves on the site.

*passwordMD5*

**Type**: varchar(255)

**Attributes**: not null

**Description**: The hashed password of a user, used for login. Matched with PHP’s MD5() function on input passwords.

*email*

**Type**: varchar(255)

**Attributes**: unique, not null

***Description****:* The unique email address associated with a user, used for communications between the site and the user.

*firstname*

**Type**: varchar(255)

**Attributes**: not null

**Description**: The first name of the user, used for personalization and verification.

*lastname*

**Type**: varchar(255)

**Attributes**: not null

**Description**: The last name of the user, used for personalization and verification.

*userID*

**Type**: int

**Attributes**: not null, AUTO\_INCREMENT

**Description**: Auto-generated id number of user, used for associations and identification.

*volHours*

**Type**: int

**Attributes**: default 0

**Description**: Total number of volunteer hours that a user has accumulated.

*donMoney*

**Type**: int

**Attributes**: default 0

**Description**: Total dollars donated by the user over the account’s lifetime.

*donItem*

**Type**: int

**Attributes**: default 0

**Description**: Total item amount donated by the user over the account’s lifetime.

*impactNum*

**Type**: int

**Attributes**: default 0

**Description**: An aggregate number/score of the user’s impact.

*influence*

**Type**: int

**Attributes**: default 0

**Description**: Total number of influenced users.

*profPic*

**Type**: varchar(255)

**Attributes**: N/A

**Description**: Link/URL to profile pic on server to display on site.

*dateJoined*

**Type**: datetime

**Attributes**: default NOW()

**Description**: a record of when the user joined the site. Automatically set at registration.

*superuser*

**Type**: int

**Attributes**: not null, default 0

**Description**: Indication of user’s abilities on the site. 0 = normal user, 1 = moderator/admin – not a Boolean due to potential future discrepancies.

*Other Attributes*:

Primary Key (userID)

***initiatives –*** Table for storing initiative information

*initName*

**Type**: varchar(255)

**Attributes**: unique, not null

**Description**: Detailed name of the initiative

*initDesc*

**Type**: text

**Attributes**: N/A

**Description**: Description of the initiative

*donationType*

**Type**: varchar(255)

**Attributes**: default money

**Description***:* This describes the type of initiative, only options are volunteer, money or items.

*amountNeeded*

**Type**: int

**Attributes**: not null

**Description**: The amount of donationType that is needed for the initiative

*amountDonated*

**Type**: int

**Attributes**: default 0

**Description**: The current count of how much has been donated.

*creatorType*

**Type**: varchar(255)

**Attributes**: not null

**Description**: Describes whether an initiative is put out by an individual user or an organization. Valid arguments = “org”,”user”

*creatorID*

**Type**: int

**Attributes**: null if orgID is not null, not null if orgID is null

**Description**: ID of user who created the initiative.

org*ID*

**Type**: int

**Attributes**: null if userID is not null, not null if userID is null

**Description**: ID of organization that created the initiative.

*initID*

**Type**: int

**Attributes**: not null, AUTO\_INCREMENT

**Description**: Auto-generated ID number of initiative, used for associations and identification.

*about*

**Type**: varchar(255)

**Attributes**: N/A

**Description**: Auxiliary information pertaining to the initiative. Directives and special information – ex. “Wear protective eye gear”.

*location*

**Type**: varchar(255)

**Attributes**: default “online”

**Description**: Location of the initiative

*creationDate*

**Type**: datetime

**Attributes**: default NOW()

**Description**: Time the initiative was created and added to the site.

*initDatetime*

**Type**: datetime

**Attributes**: N/A

**Description**: The start time for the initiative.

*duration*

**Type**: int

**Attributes**: not null

**Description**: The duration in days that the initiative will last for.

*endDate*

**Type**: date

**Attributes**: default (DATE\_ADD(IFNULL(initDatetime,creationDate),INTERVAL duration DAY))

**Description**: The end date for the initiative. If the initDatetime is null the end date is creation date plus duration in days, otherwise it’s initDatetime plus duration.

*endTime*

**Type**: time

**Attributes**: N/A

**Description**: Time of day the initiative ends if relevant

*Other Attributes*:

Primary Key (initID)

Foreign Key (userID) references users (userID)

Foreign Key (orgID) references organizations (orgID)

***organizations –*** Table for storing organization information

*adminID*

**Type**: int

**Attributes**: not null

**Description**: ID of the admin user for the organization, the initial user that adds the organization.

*orgID*

**Type**: int

**Attributes**: not null, AUTO\_INCREMENT

**Description**: Auto-generated ID number of organization, used for associations and identification.

*orgName*

**Type**: varchar(255)

**Attributes**: not null, unique

**Description***:* The unique name of the organization.

*logo*

**Type**: varchar(255)

**Attributes**: N/A

**Description**: A link/URL to the logo image on the server.

*socialLinks*

**Type**: varchar(255)

**Attributes**: N/A

**Description**: Comma delimited list of social media links – attached to images

probably

*volHours*

**Type**: int

**Attributes**: default 0

**Description**: Total volunteer hours within all initiatives in the organization.

*donItem*

**Type**: int

**Attributes**: default 0

**Description**: Total items donated within all initiatives in the organization.

*donMoney*

**Type**: int

**Attributes**: default 0

**Description**: Total dollar value of all donations made within all initiatives in the organization.

*aggRating*

**Type**: int

**Attributes**: default 0

**Description**: Average aggregate rating of the organization made by users.

*Other Attributes*:

Primary Key (orgID)

Foreign Key (adminID) references users (userID)

***itemInit –*** Table for storing item information for in-kind donation-typed initiatives

*initID*

**Type**: int

**Attributes**: not null

**Description**: Initiative that needs the item associated with it

*itemName*

**Type**: varchar(255)

**Attributes**: not null

**Description**: Name of the item that needs donated

*itemID*

**Type**: int

**Attributes**: not null, AUTO\_INCREMENT

**Description***:* Auto-generated identification for item information

*amountNeeded*

**Type**: int

**Attributes**: not null

**Description**: Amount of the item that needs donated

*amountDonated*

**Type**: int

**Attributes**: not null, default 0

**Description**: Amount of the item that has been donated.

*Other Attributes:*

Primary Key (itemID)

Foreign Key (initID) references initiatives (initID)

***orgMember –*** Table for creating associations between users and organizations: memberships.

*orgID*

**Type**: int

**Attributes**: not null

**Description**: ID number of the organization.

*userID*

**Type**: int

**Attributes**: not null

**Description**: ID number of the user in the organization.

*Other Attributes:*

Foreign Key (orgID) references organizations (orgID)

Foreign Key (userID) references users (userID)

***tags –*** Table for creating tags that identify information about initiatives, these are user created and can be applied to more than one initiative.

*tagName*

**Type**: varchar(255)

**Attributes**: unique, not null

**Description**: Unique name given to tag to be applied to an initiative.

*tagID*

**Type**: int

**Attributes**: not null, AUTO\_INCREMENT

**Description**: Auto-generated ID number for identifying the tag.

Other Attributes:

Primary Key (tagID)

***initTags –*** Table that holds associations between tags and initiatives

*tagID*

**Type**: int

**Attributes**: not null

**Description**: ID of the tag being applied

*initID*

**Type**: int

**Attributes**: not null

**Description**: ID of the initiative being tagged

*Other Attributes:*

Foreign key (userID) references users (userID)  
 Foreign key (initID) references initiatives (initID)

***initiativeUser –*** Table that holds associations between users and initiatives – users who have signed up or donated to an initiative

*userID*

**Type**: int

**Attributes**: not null

**Description**: ID of the user within the initiative

*initID*

**Type**: int

**Attributes**: not null

**Description**: ID of the initiative the user is being added to

*Other Attributes:*  
 Foreign Key (userID) references users (userID)  
 Foreign Key (initID) references initiatives (initID)

***volunteer –*** Table for storing volunteering information on a per-volunteer basis

*orgID*

**Type**: int

**Attributes**: N/A

**Description**: Optional ID of the organization sponsoring the initiative.

*initID*

**Type**: int

**Attributes**: not null

**Description**: The ID of initiative the user has volunteered for.

*userID*

**Type**: int

**Attributes**: not null

**Description***:* The ID of the user volunteering.

*totalHours*

**Type**: int

**Attributes**: not null

**Description**: The total number of hours the user volunteered and has entered

*Other Attributes:*  
 Foreign Key (orgID) references organizations (orgID)  
 Foreign Key (initID) references initiatives (initID)  
 Foreign Key (userID) references users (userID)

***donations –*** Table for storing donation information on a per-donation basis – not reliant on donation type

*orgID*

**Type**: int

**Attributes**: N/A

**Description**: Optional ID of the organization sponsoring the initiative.

*initID*

**Type**: int

**Attributes**: not null

**Description**: The ID of initiative the user has donated towards.

*userID*

**Type**: int

**Attributes**: not null

**Description***:* The ID of the user who donated towards the initiative.

*totalAmount*

**Type**: int

**Attributes**: not null

**Description**: The total amount that the user donated towards the initiative.

*Other Attributes:* Foreign Key (orgID) references organizations (orgID)  
 Foreign Key (initID) references initiatives (initID)  
 Foreign Key (userID) references users (userID)

***userReviews –*** Table for storing user reviews/comments that have been sent by another user

*userID*

**Type**: int

**Attributes**: not null

**Description**: The ID of the user being commented on.

*reviewerID*

**Type**: int

**Attributes**: not null

**Description**: The ID of the user leaving the comment/review.

*reviewText*

**Type**: text

**Attributes**: not null

**Description**: The contents of the comment left by the reviewer

*Other Attributes:*  
 Foreign Key (userID) references users (userID)

Foreign Key (reviewerID) references users (userID)

***orgReviews –*** Table for storing organization reviews that have been created by a user.

*orgID*

**Type**: int

**Attributes**: not null

**Description**: The ID of the organization being reviewed.

*reviewerID*

**Type**: int

**Attributes**: not null

**Description**: The ID of the user who leaves the review.

*reviewText*

**Type**: text

**Attributes**: not null

**Description**:The contents of the review written by the user.

*Other Attributes:*  
 Foreign Key (reviewerID) references users (userID)  
 Foreign Key (orgID) references organizations (orgID)

***orgRatings –*** Table for storing an integer value that corresponds with a star value for the

review process of organizations

*userID*

**Type**: int

**Attributes**: not null

**Description**: The ID of the organization being rated.

*reviewerID*

**Type**: int

**Attributes**: not null

**Description**: The ID of the user who provides the rating.

*rating*

**Type**: int

**Attributes**: not null

**Description**: The integer value assigned to amount of stars the organization received.

*Other Attributes:*  
 Foreign Key (userID) references users (userID)  
 Foreign Key (orgID) references organizations (orgID)

***influence –*** Table that holds associations between users and those they have influenced to join the site or an initiative

*influencerID*

**Type**: int

**Attributes**: not null

**Description**: The ID of the user who influenced another user to join

*influencedID*

**Type**: int

**Attributes**: not null

**Description**: The ID of the user who joined under the influence of another user.

*Other Attributes:*  
 Foreign Key (influencerID) references users (userID)  
 Foreign Key (influencedID) references users (userID)

**Explicit Indexing:**

Index 1 ***–*** an index to allow faster querying on usernames and passwords for login efficiency.