Budget Tracker

Server Specification  
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# Type Definitions

enum ResultStatus {

Success,

InvalidCredentials,

AccessTokenExpired,

EntryDoesNotExist,

Error(error: String),

}

AccessTokenForm {

“access\_token”: String

}

StatusResult {

“status”: ResultStatus

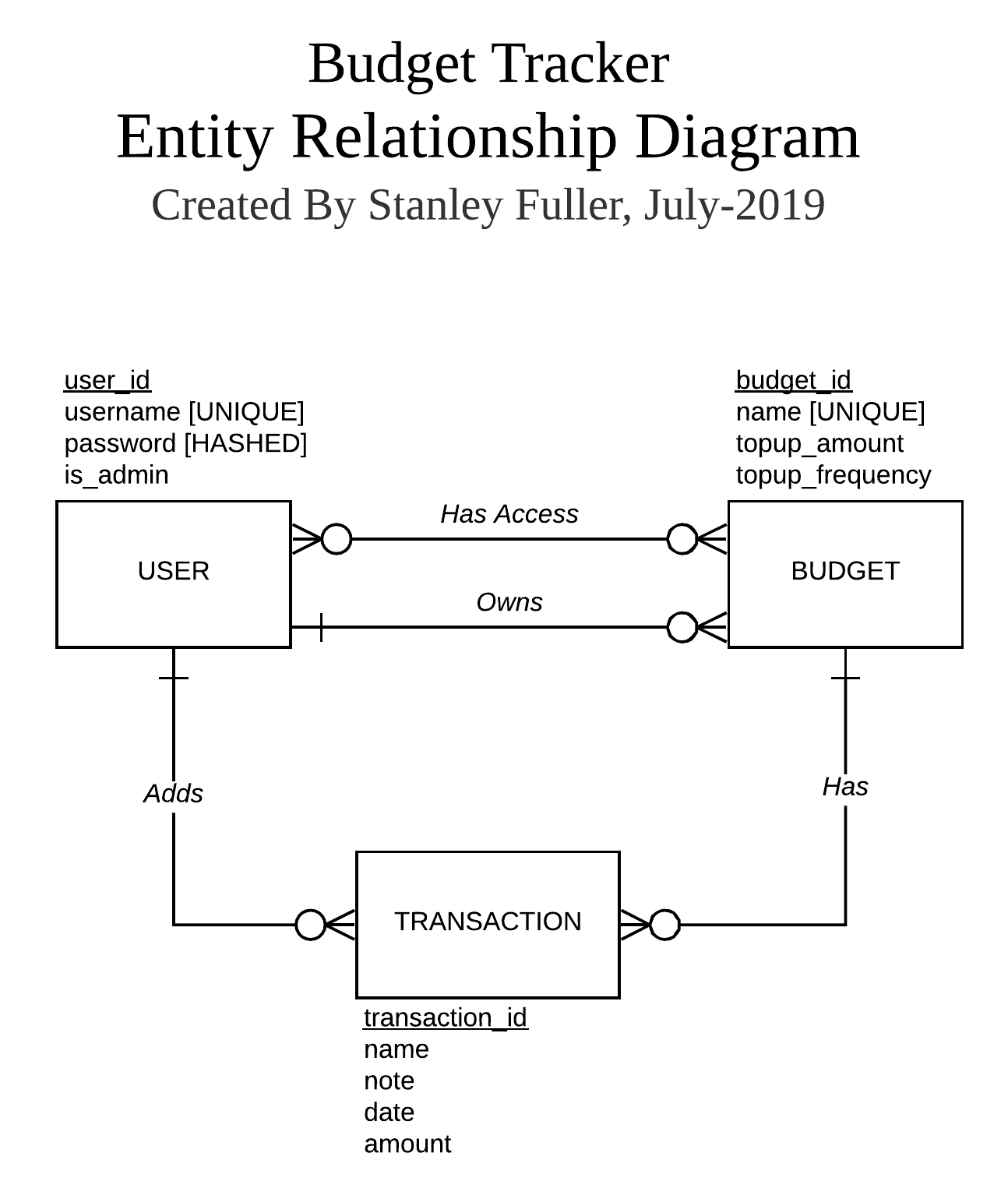
}

SelectForm {  
 “access\_token”: String,

“id”: i64

}

# Database Design



# API Paths

## Overview

|  |  |  |
| --- | --- | --- |
| Path | Description | More Detail |
| /get\_access\_token | Returns a valid access code if the provided login details are correct. | [[…]](#_/get_access_token) |
| /change\_password | Changes the password of the current user and returns an updated access token. | [[...]](#_/change_password) |
| /register\_user | Registers an account with the given details. | [[...]](#_/register_account) |
| /list/budgets | Returns a list of all budgets available to the user. | [[...]](#_/list/budgets) |
| /add/budget | Create a new budget and return its ID. | [[...]](#_/add/budget) |
| /delete/budget/{budget\_id} | Deletes the budget with the given ID. | [[…]](#_/delete/budget/{budget_id}) |
| /get/budget/{budget\_id} | Get the budget with the given ID and return its properties. | [[…]](#_/get/budget/{budget_id}) |
| /access/budget/list/{budget\_id} | Displays a list of all users who have access to the budget. | [[…]](#_/access/budget/list/{budget_id}) |
| /access/budget/add/{budget\_id} | Gives access to the given budget ID from the given user. | [[…]](#_/access/budget/add/{budget_id}) |
| /access/budget/remove/{budget\_id} | Removes access to the given budget ID from the given user. | [[…]](#_/access/budget/remove/{budget_id}) |
| /list/transactions/{budget\_id} | Returns a list of all transactions in the budget. | [[…]](#_/list/transactions/{budget_id}) |
| /list/current/transactions/{budget\_id} | Returns a list of all transactions in the current time period. | [[…]](#_/list/current/transactions/{budget_) |
| /list/between/transactions/{budget\_id} | Returns a list of transactions within a supplied date range. | [[…]](#_/list/between/transactions/{budget_) |
| /add/transaction | Add a transaction with the given properties and return its ID. | [[…]](#_/add/transaction) |
| /delete/transaction/{transaction\_id} | Deletes the transaction with the given ID. | [[…]](#_/delete/transaction/{transaction_id) |
| /get/transaction/{transaction\_id} | Get the transaction with the given ID and return its properties. | [[…]](#_/get/transaction/{transaction_id}) |

## Detailed

### /get\_access\_token

Returns a valid access code if the provided login details are correct.

#### Input Body

CredentialForm {

“username”: String,

“password”: String

}

#### Output Body

AccessTokenResult {

“status”: ResultStatus,  
 “access\_token”: Option<String>

}

### /change\_password

Changes the password of the current user and returns an updated access token.

#### Input Body

ChangePasswordForm {

“access\_token”: String,

“current\_password”: String

“new\_password”: String

}

#### Output Body

AccessTokenResult {

“status”: ResultStatus,  
“access\_token”: Option<String>

}

### /register\_user

Registers an account with the given details.

#### Input Body

RegisterAccountForm {

“username”: String

“password”: String

}

#### Output Body

AccessTokenResult {

“status”: ResultStatus,  
“access\_token”: Option<String>

}

### /list/budgets

Returns a list of all budgets available to the user. If the current user is an administrator, then they can view all budgets.

#### Input Body

AccessTokenForm {

“access\_token”: String

}

#### Output Body

BudgetListResult {

“status”: ResultStatus,  
“budgets”: Option<Vec<Budget>>

}

### /add/budget

Create a new budget with the current user as its owner and return its ID.

#### Input Body

AddBudgetForm {  
 “access\_token”: String,

“budget\_name”: String,

“budget\_period\_length”: i64

}

#### Output Body

BudgetResult {

“status”: ResultStatus,  
“budget”: Option<Budget>

}

### /delete/budget

Delete the budget with the given ID.

#### Input Body

SelectForm {  
 “access\_token”: String,

“id”: i64

}

#### Output Body

StatusResult {

“status”: ResultStatus

}

### /get/budget

Get the budget with the given ID and return it.

#### Input Body

SelectForm {  
 “access\_token”: String,

“id”: i64

}

#### Output Body

BudgetResult {

“status”: ResultStatus,

“budget”: Option<Budget>

}

### /list/can\_access\_budget

Displays a list of all users who have access to the budget, including the budget owner.

#### Input Body

SelectForm {  
 “access\_token”: String,

“id”: i64

}

#### Output Body

UserListResult {

“status”: ResultStatus,

“users”: Option<Vec<String>>

}

### /add/can\_access\_budget

Gives access to the given budget ID from the given user.

Note #1: this user cannot be the budget owner.

Note #2: only the owner can give access to other users.

#### Input Body

CanAccessBudgetForm {  
 “access\_token”: String,

“username”: String

“budget\_id”: i64

}

#### Output Body

StatusResult {

“status”: ResultStatus

}

### /delete/can\_access\_budget

Removes access to the given budget ID from the given user.

Note #1: this user cannot be the budget owner.

Note #2: only the owner can remove access from other users (except if the username is the current user).

#### Input Body

CanAccessBudgetForm {  
 “access\_token”: String,

“username”: String

“budget\_id”: i64

}

#### Output Body

StatusResult {

“status”: ResultStatus

}

### /list/transactions/{budget\_id}

Returns a list of all transactions in the budget.

#### Input Body

AccessTokenForm {  
 “access\_token”: String

}

#### Output Body

ListTransactionsResult {

“status”: ResultStatus,

“transactions”: Option<Vec<Transaction>>

}

### /list/current/transactions/{budget\_id}

Returns a list of all transactions in the current time period.

#### Input Body

AccessTokenForm {  
 “access\_token”: String

}

#### Output Body

ListTransactionsResult {

“status”: ResultStatus,

“transactions”: Option<Vec<Transaction>>

}

### /list/between/transactions/{budget\_id}

Returns a list of transactions within a supplied date range.

#### Input Body

ListTransactionsBetweenForm {  
 “access\_token”: String,

“date\_a”: String,

“date\_b”: String

}

#### Output Body

ListTransactionsResult {

“status”: ResultStatus,

“transactions”: Option<Vec<Transaction>>

}

### /add/transaction

Add a transaction with the given properties and return it.

#### Input Body

AddTransactionForm {  
 “access\_token”: String,

“name”: String,

“note”: String,

“date”: Option<String>, **Note: If field is ‘None’ then current day is assumed**

“amount”: f32

}

#### Output Body

AddTransactionResult {

“status”: ResultStatus,

“transaction”: Option<Transaction>

}

### /delete/transaction/{transaction\_id}

Deletes the transaction with the given ID.

#### Input Body

AccessTokenForm {  
 “access\_token”: String

}

#### Output Body

StatusResult {

“status”: ResultStatus

}

### /get/transaction/{transaction\_id}

Get the transaction with the given ID and return its properties.

#### Input Body

AccessTokenForm {  
 “access\_token”: String

}

#### Output Body

GetTransactionResult {

“status”: ResultStatus,

“transaction”: Option<Transaction>

}