Final Project Project Database Proposal
Group: Arrays Start at 1
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Collection Name: USERS
Collection Description: Every user should have an account, so this user collection is for saving user's username and password with an auto increment id in database. It will also contain profile information about the user.

Sample Document:

```
{
   "_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
   "email": "joe@smith.com",
   "password": "$2a$08$XdvNkfdNIL8Fq7lSbNOFgK0M0iV5HOskfVn7.PWncShU.O",
   "Profile"{
      "_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
      "firstName": "Joe",
      "lastName": "Smith",
      "DOB": "02/26/1990",
      "gender": "male"
   }
}
```

Field Description:

Field Name	Type	Description
_id	string	A globally unique identifier to represent the user
email	string	The users email used by the user to login Must follow standard email formats For registering need to check if userName has already existed.
password	string	Should have at least a capital letter, a lowercase letter, a special letter and a number. Length limitation 20. For registering need to check if password and confirm password are the same. Extra usage: Encryption and Decryption
profile	User profile	The user's profile (See sub document description)

CryptoJS for Password Encryption and Decryption (Extra)
https://stackoverflow.com/questions/18279141/javascript-string-encryption-and-decryption
https://code.google.com/archive/p/crypto-js/

Collection Name: Profile: Subdocument not stored in a collection
Collection Description: Document used to describe the user
Sample Document:

```
{
   "_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
   "firstName": "Joe",
   "lastName": "Smith"
   "DOB": "02/26/1990",
   "gender": "male"
}
```

Field Description:

Field Name	Type	Description
_id	string	A globally unique identifier to represent the profile
firstName	string	The user's first name
lastName	string	The user's Last Name
DOB	date	The user's date of birth
gender	string	The gender of the user

Collection Name: ACTIVITY_TYPES
Collection Description: A collection used to store the different types of activities that a user can track

Sample Document:

```
{
   "_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
   "name ": "downhill skiing",
   "description": "The activity of skiing downhill on snow",
   "Active": true,
   "Fields": [{
      "_id": "90239028490283490209",
      "name": "location",
      "description": "location where the activity took place",
      "type": "string",
      "active": true,
      "required": true
   }]
}
```

Field Description:

Field Name	Type	Description
_id	string	A globally unique identifier to represent the activity type
name	string	The name of the activity ie Skiing
description	string	A brief description of the activity
active	boolean	Is this activity available to users to log against
fields	Fields Document	A list of field documents describing fields associated with the activity

Collection Name: FIELDS: Subdocument not stored in a collection
Collection Description: Document used to define the fields/data that can be collected for the activity
Sample Document:

```
{
    "_id": "90239028490283490209",
    "name": "location",
    "description": "location where the activity took place",
    "type": "string",
    "active": true,
    "required": true
}
```

Field Description:

Field Name	Type	Description
_id	string	A globally unique identifier to represent the field
name	string	The name of the field ie location
description	string	Description of the field
type	string	The type of the field, string, date etc
active	boolean	Is the field active to display on site
required	boolean	Does the field have to be filled out

Collection Name: USER_ACTIVITIES
Collection Description: A collection used to store the logged activities for the users

Sample Document:

```
{
    "_id": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
    "userId": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
    "activityId": "7b7997a2-c0d2-4f8c-b27a-6a1d4b5b6310",
    "location": "Mountain Creek",
    "date": "01/01/2018"
    ...
}
```

Field Description:

Field Name	Type	Description
_id	string	A globally unique identifier to represent the logged activity entry
userId	string	The unique identifier of the user who logged the activity in the user's collection
activityId	string	The unique identifier of the activity definition in the ACTIVITY_TYPES collection. Used to specify what type of activity the entry is
Fields for the activity	Depends on the data	The remaining fields will be dynamic depending on what is defined in the fields list of the activity in the activity_types collection