

Building Inventory System DB Proposal

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Users

The "Users" collection will store all the users. Each user entry will be used to have their login details, what buildings they own, and what buildings they've been shared to have access to.

JSON

```
{
  "_id" : "6425bbc8d19ec0c42ce59110",
  "userName" : "xxmistacruzxx",
  "hashedPassword" : "$2a$08$XdvNkfdNIL8F8xsuIUeSbN0FgK0M0iV5H0skfVn7.PWncShU.0",
  "email" : "dcruz2@stevens.edu",
  "firstName" : "David",
  "lastName" : "Cruz",
  "profilePicture" : "/static/defaultProfilePic.jpg",
  "buildingOwnership" : [ "6425bbf6c9a99b68b9153464" ],
  "buildingManageAccess" : [ ],
  "buildingViewAccess" : [ ],
  "buildingFavorites" : [ ]
}
```

Table

Name	Type	Description
_id	string	A unique id to represent a user
userName	string	The unique username for a specific user
hashedPassword	string	The hashed password for the user's login
email	string	The email for a specific user

firstName	string	The first name for a specific user
lastName	string	The last name for a specific user
profilePicture	string	The picture to represent a specific user
buildingOwnership	array	An array of building_id's that the user currently owns the inventory for
buildingManageAccess	array	An array of building_id's that the user has management access to
buildingViewAccess	array	An array of building_id's that the user has viewing access to
buildingFavorites	array	An array of building_id's that the user has added to favorites

Buildings

The “Buildings” collection will store all the buildings. Each building entry will store the building’s unique id, name, description, creation date (date added to website), address info, whether the building can be publicly viewed, and the rooms nested for the building.

JSON

```
{
  "_id" : "6425bbf6c9a99b68b9153464",
  "name" : "Howe",
  "description" : "14-story high-rise that serves as the hub of administrative and student activities.",
  "creationDate" : "03/30/2023",
  "address" : "1 Castle Point Terrace",
  "city" : "Hoboken",
  "state" : "NJ",
  "zip" : "07030",
  "public" : True,
  "rooms" : [ "6425bc110953eed3dbb279eb" ]
}
```

Table

Name	Type	Description
_id	string	A unique id to represent buildings
name	string	Name assigned to a building
description	string	A description of the building
creationDate	date	Stores the date that the building was created
address	string	Address of the building
city	string	City of the building
state	string	State of the building
zip	string	Zip code of the building
public	boolean	Indication of whether the building is viewable to the public or not
rooms	array	An array of room_id’s that are a part of the building

Rooms

The “Rooms” collection will store all the rooms. Each room entry will store the room’s unique id, name, description, creation date (date added to website), all the container ids of containers in the room, and all the item ids of items in the room.

JSON

```
{
  "_id" : "6425bc110953eed3dbb279eb",
  "name" : "Lobby",
  "description" : "Main entrance room of the Howe Building."
  "creationDate" : "03/30/2023",
  "containers" : [ "6425bc391eec02618f389556" ]
  "items" : []
}
```

Table

Name	Type	Description
_id	string	A unique id to represent rooms
name	string	Name assigned to a room
description	string	A description of the room
creationDate	date	Stores the date that the room was created
containers	array	An array of container_id's that are a part of the room
items	array	An array of items_id's that are in the room

Containers

The “Containers” collection will store all the containers. Each container entry will store the container’s unique id, the container’s name, a description, its creation date (date added to website), and all item ids of items stored in the container.

JSON

```
{
  "_id" : "6425bc391eec02618f389556",
  "name" : "Box 2A",
  "Description" : "Box located under main desk"
  "creationDate" : "03/30/2023",
  "items" : [ "6425bc5306abab50f900d238" ]
}
```

Table

Name	Type	Description
_id	string	A unique id to represent the container
name	string	Name assigned to the container
description	string	Description of the container
creationDate	date	Stores the date that the container was created
items	array	An array of items_id’s that are within the container

Items

The “Items” collection will store all the items. Each item entry will store the item’s unique id, name, description, creation date (date added to website), and other data (such as its count/count history, and value/value history).

JSON

```
{
  "_id" : "6425bc5306abab50f900d238",
  "name" : "Pen",
  "description" : "Writes on paper.",
  "creationDate" : "03/30/2023",
  "count": 4,
  "countHistory" : [{ "time": "1680195600", "value": 4 }, { "time": "1680192000", "value": 3 } ]
  "value" : 2.0
  "valueHistory" : [{ "time": "1680195600", "value": 2.00 }, { "time": "1680192000", "value":
2.10 } ]
}
```

Table

Name	Type	Description
_id	string	A unique id to represent the item
name	string	Name assigned to the item
description	string	A description of the item
creationDate	date	Stores the date that the item was created
count	number	Item count
countHistory	array	History of the item’s count, storing a pair of the UNIX timestamp and its count at that time
value	number	Value of item in USD
valueHistory	array	History of the item’s value, storing a pair of the UNIX timestamp and its value at that time