

NYC Danger Map - DB Proposal

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Users

Description: The User collection will contain the data for all website users. The user will be required to provide a username, password, phone number, email address and age when creating an account. The collection will also contain info about the user's profile photo, preferred address and location details (if provided) as well as their user rating and info about all posts, comments, and blocked users corresponding to the user.

```
{
  "_id": "507f1f77bcf86cd799439011",
  "username": "user123",
  "password":
"$2b$16$KhpU9wvlhC5pShqOPWkLO/0HiBICkZDKtWemuPxgHy5eNM7s9G
PK",
  "phone_number": "1234567890",
  "email": "firstnamelastname@gmail.com",
  "age": "20",
  "home_address": "10 PA St, Hoboken, NJ",
  "location":
  {
    "longitude": 40.7411,
    "latitude": 73.9897
  },
  "profile_picture": "/static/users/pfp.jpg",
  "user_credit": 0,
  "posts": ["690ba1d9a6fd31f3a68dd55d, 690ba1e7b0779667c4e480df"],
```

```

"comments": ["690ba1fad8d421f3da2908f1"],
"blocked_users": ["690ba1f1f7b107599ff88aa1"],
"reports": ["690be8a5657e5a7c37b0ceca","690be8b12ebddaddec39ab76"]
}

```

Field		Type		Description
_id		ObjectId		Unique identifier generated by MongoDB
username		String		Publicly visible name associated with the user
password		String		Password hash generated from password provided at sign-up
phone_number		Number		User's US number. Provided at sign-up
email		String		Email address provided by the user at sign-up
home_address		String		User's home address; can be used to show recent news around the user's home
location	longitude	object	Number	Contains two keys that store that longitude and latitude of the user as Numbers.
	latitude		Number	
profile_picture		String		Contains the file location of the user's profile photo
user_credit		Number		Stores the user's rating as determined by the combined rating of their posts
posts		Array		Contains IDs of all posts created by the user
comments		Array		Contains IDs of all comments made by the user
blocked_users		Array		Contains IDs of all users blocked by the user

reports	Array	Contains IDs of all reports made by the user
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Posts

Description: The Posts collection will contain the data for all posts made to the website to notify other users of potentially dangerous incidents. Posts will have a unique id, a title and body text, an optional photo, a date and time, the location of the incident, the sensitivity of the post, the post's rating, and will also contain a field to identify the user who created the post as well as the ids of all comments and reports attached to the post.

```
{
  "_id": "507f1f77bcf86cd799439011",
  "title": "Dangerous Incident at 175 Fifth Avenue",
  "body": "I was at this location and I saw a man doing abc and then xyz",
  "photo": "/static/posts/photo.jpg",
  "date": "2025-11-06T00:21:14.431Z",
  "location":
    {
      "longitude": 40.7411,
      "latitude": -73.9897
    },
  "sensitive": false,
  "post_score": 0,
  "user": "690ba1fad8d421f3da2908f1",
  "comments": ["690ba1d9a6fd31f3a68dd55d, 690ba1e7b0779667c4e480df"],
  "reports": ["690be8a5657e5a7c37b0ceca", "690be8b12ebddaddec39ab76"]
}
```

Field	Type	Description
_id	ObjectId	Unique identifier generated by MongoDB

title		String		Title of post provided by user
body		String		Text body of the post provided by user
photo		String		Contains the file location of the post's photo; would be optional
date/time		String		Date and time of the time the post is created generated by creating a Date object and applying JSON.stringify()
location	longitude	object	Number	Contains two keys that respectively store that longitude and latitude of the post as Numbers.
	latitude		Number	
sensitivity		boolean		Notes whether the post contains sensitive content
post_score		Number		Stores the post's rating
user		String		ID of the user who created the post
comments		Array		Contains IDs of all comments attached to the post
reports		Array		Contains IDs of all reports related to the post

Comments

Description: The comments collection will contain the data for all comments made to the website that elaborate on already established posts. Comments will have a unique id, the text of the comment, the score the commentor giving to the post and will also contain a field to identify the user who posted the comment and the id of the post it is attached to.

```
{
  "_id": "507f1f77bcf86cd799439011",
```

```

"text": "I also saw this happen.",
"score": "5",
"user": "690ba1fad8d421f3da2908f1",
"post": "690ba1f1f7b107599ff88aa1"
}

```

Field	Type	Description
_id	ObjectId	Unique identifier generated by MongoDB
text	String	Text body of the comment provided by user
score	Number	The score the commentor giving to the post; should be between 0 to 5
user	String	ID of the user who created the comment
post	String	ID of the post the comment is associated with

Reports

Description: The reports collection will contain the data for all reports. Reports will have a unique id, the category of the issue of the post, the text of the reason for the report, and will also contain a field to identify the user or post being reported as well as the user making the report.

```

{
  "_id": "507f1f77bcf86cd799439011",
  "type": ["false", "irrelevant"],
  "text": "The post contains false information.",
  "reported_entity": "690ba1fad8d421f3da2908f1",
  "reporter": "690ba1f1f7b107599ff88aa1"
}

```

Field	Type	Description
_id	ObjectId	Unique identifier generated by MongoDB
type	Array[String]	The type of the report
text	String	Reason given for the report
reported_entity	String	ID of the user or post being reported
reporter	String	ID of the user making the report