Database Proposal

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Web Programming
CS546WS—Summer I
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1   Introduction

The final project website will be a blog where users can post text, videos, and images as well as view and like the posts other users make. The database will require two collections, one for users and one for user posts.

2   User Collection

This collection stores the data for users who create an account and use the site. Each entry has information that the user provided at account creation and the interaction the user had on the site in form of posts and likes.

```
1    [{
2        "id": "user id",
3        "firstname": "first-name of user",
4        "lastname": "last-name of user",
5        "username": "username of user",
6        "password": "hashed password",
7        "email": "email of user",
8        "description": "user description",
9        "picture": "url to profile picture",
10       "posts": [
11           "postID1",
12           "postID2",
13           "..."
14       ],
15       "likes": [
16           "postID1",
17           "postID2",
18           "..."
19       ]
20   }]
```

Listing 1: JSON for User Collection

Field Name	Field Type	Description
id	ObjectID	MongoDB ID of User
firstname	String	User entered first name
lastname	String	User entered last name
username	String	User entered user name
password	String	Hash of User password
email	String	User entered email
description	String	User entered description
picture	String	User entered URL to profile picture
posts	Array	Array of PostIDs User Created
likes	Array	Array of PostIDs User Likes

Table 1: Table of User Collection

3   Post Collection

This collection stores information on the posts users make. Each entry has information about the post and its content. The collection can be used to store all different types of posts (text, image, and video) since the program will determine how to process the type using the type field and if the url is provided.

```
1    [{
2        "id": "post id"
3        "title": "title of post",
4        "author": "user._id",
5        "content": "content of post",
6        "type": "type of post",
7        "url": "url of content"
8    }]
```

Listing 2: JSON for Post Collection

Field Name	Field Type	Description
id	ObjectID	MongoDB ID of Post
title	String	Title of Post
author	ObjectID	ID of User posting
content	String	Content of post
type	String	Type of post (text, image, video)
url	String	URL of video or image to embed

Table 2: Table of Post Collection