

APPOINTY TASK - Instagram Backend API

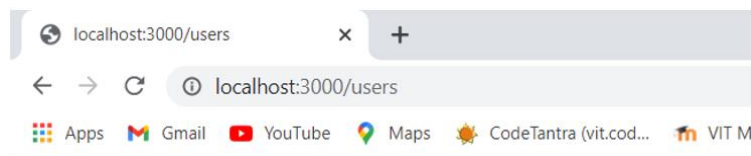
DOCUMENTATION

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I. Endpoints :

1. Creating Users:

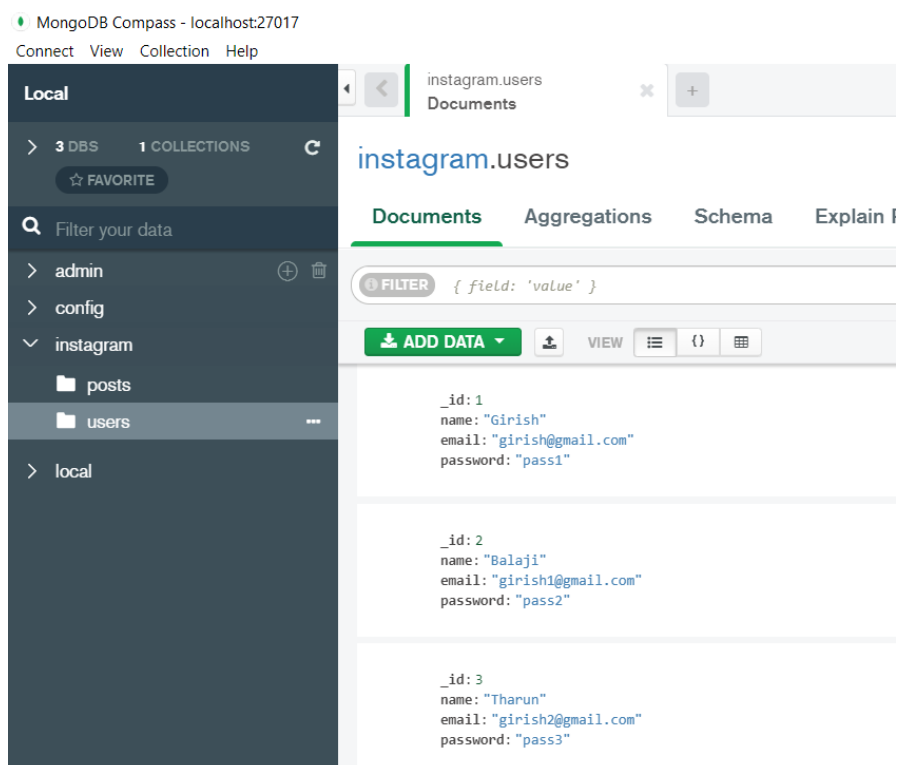
Below we can see that the url has “/users”.



Here I have printed the name of the 2nd user to check if my code is working and in the 2nd line we can see the number of users that have been inserted into the mongodb users database

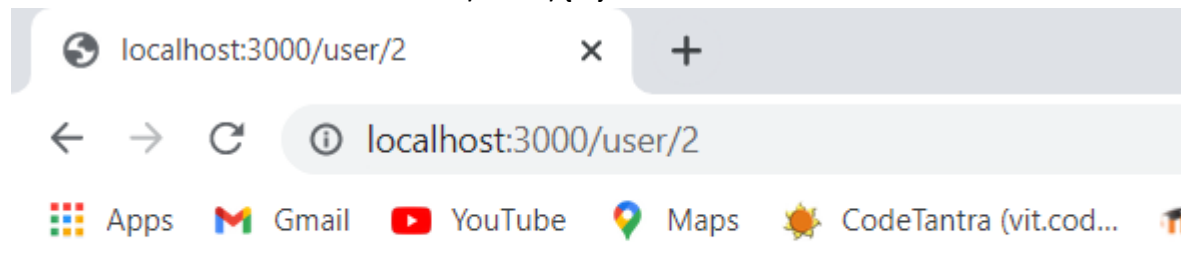
```
C:\Users\Girish\Desktop\my-rest-api>
C:\Users\Girish\Desktop\my-rest-api>go run main.go
Balaji
Inserted multiple users: [1 2 3]
```

Below we can see the MongoDB where the inserted data has been displayed in the JSON format. Thus my user entries have been successful.



2. Get a user using id:

Below we can see that the url has “/users/{id}”.

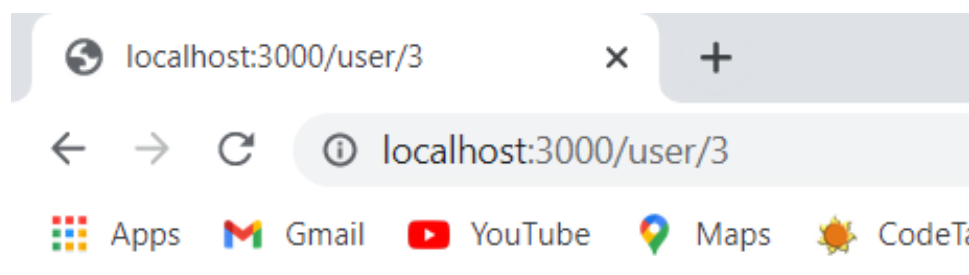


Here we can see that the id given in the url is 2, therefore we can see the output as the the user details of the 2nd user

```
C:\Users\Girish\Desktop\my-rest-api>go run main.go
Balaji
Inserted multiple users: [1 2 3]
Found a single user: {ID:2 Name:Balaji Email:girish1@gmail.com Password:pass2}
```

```
Found a single user: {ID:2 Name:Balaji Email:girish1@gmail.com Password:pass2}
```

Here we can see that the id given in the url is 3, therefore we can see the output as the the user details of the 3rd user

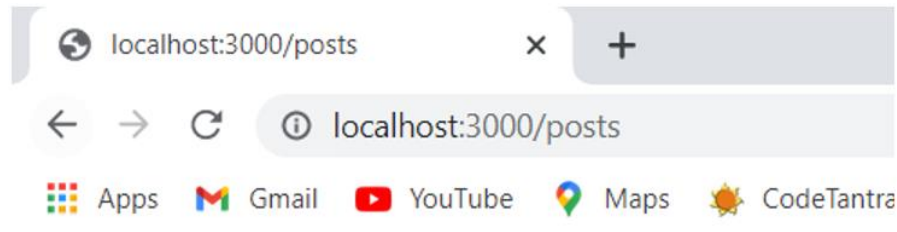


```
C:\Users\Girish\Desktop\my-rest-api>go run main.go
Balaji
Inserted multiple users: [1 2 3]
Found a single user: {ID:2 Name:Balaji Email:girish1@gmail.com Password:pass2}
Found a single user: {ID:3 Name:Tharun Email:girish2@gmail.com Password:pass3}
```

```
Found a single user: {ID:3 Name:Tharun Email:girish2@gmail.com Password:pass3}
```

3. Create Posts:

Below we can see that the url has “/posts”.



Here I have printed the caption of the 1st post to check if my code is working and in the 2nd line we can see the number of posts that have been inserted into the mongodb users database . we have created 6 posts here, 1 for user 1, 1 for user 2, 3 for user 3 and 1 for user 4.

Below I have printed the insertion of the multiple posts

```
this is post 1
Inserted multiple posts: [ObjectID("6161b1714161888506892b88") ObjectID("6161b1714161888506892b89") ObjectID("6161b1714161888506892b8a") ObjectID("6161b1714161888506892b8b") ObjectID("6161b1714161888506892b8c") ObjectID("6161b1714161888506892b8d")]
```

```
C:\Users\Girish\Desktop\my-rest-api>go run main.go
Balaji
Inserted multiple users: [1 2 3]
Found a single user: {ID:2 Name:Balaji Email:girish1@gmail.com Password:pass2}
Found a single user: {ID:3 Name:Tharun Email:girish2@gmail.com Password:pass3}
this is post 1
Inserted multiple posts: [ObjectID("6161b1714161888506892b88") ObjectID("6161b1714161888506892b89") ObjectID("6161b1714161888506892b8a") ObjectID("6161b1714161888506892b8b") ObjectID("6161b1714161888506892b8c") ObjectID("6161b1714161888506892b8d")]
```

Below we can see that the posts have been added to the MongoDB database. Thus our post creation was successful.

Local

> 3 DBS 1 COLLECTIONS

☆ FAVORITE

Filter your data

> admin

> config

> instagram

> posts

> users

> local

instagram.posts Documents

instagram.posts

Documents Aggregations Schema Explain Plan Indexes Validation

FILTER { field: 'value' }

ADD DATA VIEW

```
_id: ObjectId("6161b1714161888506892b88")
id: 1
caption: "this is post 1"
image: "https://images.unsplash.com/photo-1515091943-9d5c0ad475af?ixid=MnwMhJA..."
time: 2021-10-09T15:12:49.188+00:00
```

```
_id: ObjectId("6161b1714161888506892b89")
id: 2
caption: "this is post 1"
image: "https://images.unsplash.com/photo-1547707188-cdbffa0bc270?ixid=MnwMhJA..."
time: 2021-10-09T15:12:49.188+00:00
```

```
_id: ObjectId("6161b1714161888506892b8a")
id: 3
caption: "this is post 1"
image: "https://images.unsplash.com/photo-1532375810709-75b1da00537c?ixid=MnwMhJA..."
time: 2021-10-09T15:12:49.188+00:00
```

```
_id: ObjectId("6161b1714161888506892b8b")
id: 3
caption: "this is post 2"
image: "https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwMhJA..."
time: 2021-10-09T15:12:49.188+00:00
```

```
_id: ObjectId("6161b1714161888506892b8c")
```

Local

> 3 DBS 1 COLLECTIONS

☆ FAVORITE

Filter your data

> admin

> config

> instagram

> posts

> users

> local

instagram.posts Documents

instagram.posts

Documents Aggregations Schema Explain Plan Indexes Validation

FILTER { field: 'value' }

ADD DATA VIEW

```
time: 2021-10-09T15:12:49.188+00:00
```

```
_id: ObjectId("6161b1714161888506892b8a")
id: 3
caption: "this is post 1"
image: "https://images.unsplash.com/photo-1532375810709-75b1da00537c?ixid=MnwMhJA..."
time: 2021-10-09T15:12:49.188+00:00
```

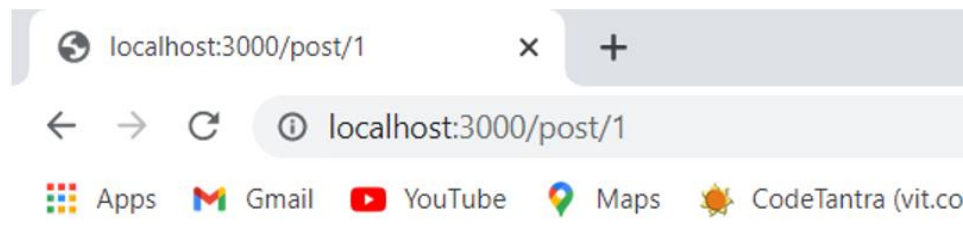
```
_id: ObjectId("6161b1714161888506892b8b")
id: 3
caption: "this is post 2"
image: "https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwMhJA..."
time: 2021-10-09T15:12:49.188+00:00
```

```
_id: ObjectId("6161b1714161888506892b8c")
id: 3
caption: "this is post 3"
image: "https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwMhJA..."
time: 2021-10-09T15:12:49.188+00:00
```

```
_id: ObjectId("6161b1714161888506892b8d")
id: 4
caption: "this is post 4"
image: "https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwMhJA..."
time: 2021-10-09T15:12:49.188+00:00
```

4. Get a post using id:

Below we can see that the url has “/posts/{id}”

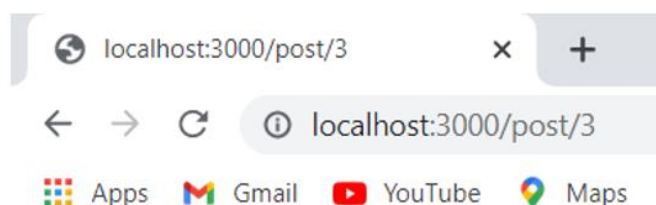


Here we can see that the id given in the url is 1, therefore we can see the output as the the post details of the 1st user

```
Found post: {ID:1 Caption:this is post 1 Image:https://images.unsplash.com/photo-1515091943-9d5c0ad475af?ixid=MnwxdmJhZ3F0B8MhXzZWFyY2h8Omx8aW5kaWwF8ZW58MhX8MhX8ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC}
```

```
C:\Users\Girish\Desktop\my-rest-api>go run main.go
Balaji
Inserted multiple users: [1 2 3]
Found a single user: {ID:2 Name:Balaji Email:girish1@gmail.com Password:pass2}
Found a single user: {ID:3 Name:Tharun Email:girish2@gmail.com Password:pass3}
this is post 1
Inserted multiple posts: [ObjectID("6161b1714161888506892b88") ObjectID("6161b1714161888506892b89") ObjectID("6161b1714161888506892b8a") ObjectID("6161b1714161888506892b8b") ObjectID("6161b1714161888506892b8c") ObjectID("6161b1714161888506892b8d")]
Found post: {ID:1 Caption:this is post 1 Image:https://images.unsplash.com/photo-1515091943-9d5c0ad475af?ixid=MnwxdmJhZ3F0B8MhXzZWFyY2h8Omx8aW5kaWwF8ZW58MhX8MhX8ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC}
```

Here we can see that the id given in the url is 3, therefore we can see the output as the the post details of the 3rd user

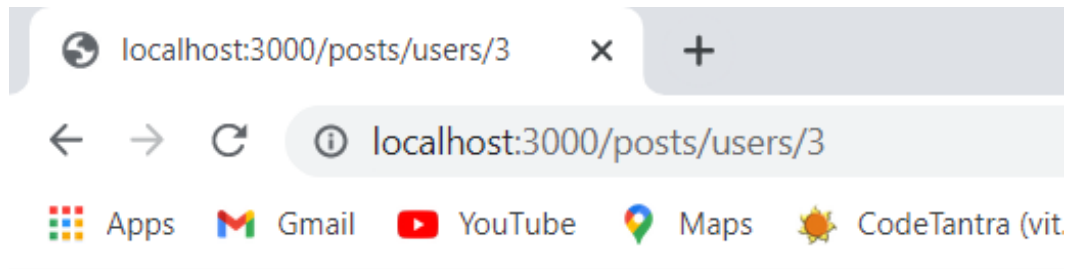


```
Found post: {ID:3 Caption:this is post 1 Image:https://images.unsplash.com/photo-1532375810709-75b1da00537c?ixid=MnwxdmJhZ3F0B8MhXzZWFyY2h8Mnx8aW5kaWwF8ZW58MhX8MhX8ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC}
```

```
C:\Users\Girish\Desktop\my-rest-api>go run main.go
Balaji
Inserted multiple users: [1 2 3]
Found a single user: {ID:2 Name:Balaji Email:girish1@gmail.com Password:pass2}
Found a single user: {ID:3 Name:Tharun Email:girish2@gmail.com Password:pass3}
this is post 1
Inserted multiple posts: [ObjectID("6161b1714161888506892b88") ObjectID("6161b1714161888506892b89") ObjectID("6161b1714161888506892b8a") ObjectID("6161b1714161888506892b8b") ObjectID("6161b1714161888506892b8c") ObjectID("6161b1714161888506892b8d")]
Found post: {ID:1 Caption:this is post 1 Image:https://images.unsplash.com/photo-1515091943-9d5c0ad475af?ixid=MnwxdmJhZ3F0B8MhXzZWFyY2h8Omx8aW5kaWwF8ZW58MhX8MhX8ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC}
Found post: {ID:3 Caption:this is post 1 Image:https://images.unsplash.com/photo-1532375810709-75b1da00537c?ixid=MnwxdmJhZ3F0B8MhXzZWFyY2h8Mnx8aW5kaWwF8ZW58MhX8MhX8ixlib=rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC}
```

5. List all posts of a user

here we can see that the url is given in the format `"/posts/users/{id}"`



The value of the id given in the url is 3 here, therefor all the posts of the 3rd user is

```
C:\Users\Girish\Desktop>my-rest-api>go run main.go
Found models corresponding to the particular user! : [{ID:3 Caption:this is post 1 Image:https://images.unsplash.com/photo-1532375810709-75b1da00537c?ixid=MnwmxjA3fDBBMHxzZWYy2h8Mnx8aw5kawlF8ZW58MHx8MHx8ixlib-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC} {ID:3 Caption:this is post 2 Image:https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwmxjA3fDBBMHxzZWYy2h8Mnx8aw5kawlF8ZW58MHx8MHx8ixlib-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC} {ID:3 Caption:this is post 3 Image:https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwmxjA3fDBBMHxzZWYy2h8Mnx8aw5kawlF8ZW58MHx8MHx8ixlib-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC}]]
```

In the above output we can see that the 3 posts of the 3rd user has been printed, we can check from the database that there are 3 posts under the 3rd user

II. Secure Storage of Passwords

Passwords has been hashed here using the sha256 library from go, thus we can safely store the passwords like this.

```
C:\Users\Girish\Desktop\my-rest-api>go run main.go
pass1$$$B$1J$$$o$%$A$1$1$$$R$1
Inserted multiple users: [1 2 3]
```

III. Pagination

this part of the code can be used to implement pagination to limit the number of posts :

```

264         collection := client.Database("instagram").Collection("posts")
265         filter := bson.D{{"id", id}}
266
267
268         findOptions := options.Find()
269         findOptions.SetLimit(3)
270
271         var results []Post
272         cur, err := collection.Find(context.TODO(), filter, findOptions)
273         if err != nil {
274             log.Fatal(err)
275         }
276         if err = cur.All(context.TODO(), &results); err != nil {
277             log.Fatal(err)
278         }

```

```
C:\Users\Girish\Desktop>my-rest-api>go run main.go  
Found multiple posts corresponding to the particular user! : [{ID:3 Caption:this is post 1 Image:https://images.unsplash.com/photo-1532375810709-75b1da00537c?ixid=MnwMxMjA3fDDB8MHxzZWYyZHMwXkAw5kaWw8ZWV5bH8mXzB8bX8x&ixlilb-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC} {ID:3 Caption:this is post 2 Image:https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwMxMjA3fDDB8MHxzZWYyZHMwXkAw5kaWw8ZWV5bH8mXzB8bX8x&ixlilb-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC} {ID:3 Caption:this is post 3 Image:https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwMxMjA3fDDB8MHxzZWYyZHMwXkAw5kaWw8ZWV5bH8mXzB8bX8x&ixlilb-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC} {ID:3 Caption:this is post 4 Image:https://images.unsplash.com/photo-1532375810709-75b1da00537c?ixid=MnwMxMjA3fDDB8MHxzZWYyZHMwXkAw5kaWw8ZWV5bH8mXzB8bX8x&ixlilb-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:23:43.01 +0000 UTC} {ID:3 Caption:this is post 5 Image:https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwMxMjA3fDDB8MHxzZWYyZHMwXkAw5kaWw8ZWV5bH8mXzB8bX8x&ixlilb-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:23:43.01 +0000 UTC}]]
```

```
C:\Users\Girish\Desktop\my-rest-api>go run main.go
Found multiple posts corresponding to the particular user! : [{ID:3 Caption: this is post 1 Image:https://images.unsplash.com/photo-1532375810709-75b1da00537c?ixid=MnwMjA3fD08BMHczZWYyZm8wXzAw5kalf8ZW5SMHhBMHh8ixlib-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC} {ID:3 Caption: this is post 2 Image:https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwMjA3fD08BMHczZWYyZm8wXzAw5kalf8ZW5SMHhBMHh8ixlib-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC} {ID:3 Caption: this is post 3 Image:https://images.unsplash.com/photo-1524492412937-b28074a5d7da?ixid=MnwMjA3fD08BMHczZWYyZm8wXzAw5kalf8ZW5SMHhBMHh8ixlib-rb-1.2.1&auto=format&fit=crop&w=500&q=60 Timestamp:2021-10-09 15:12:49.188 +0000 UTC}]
```