Project Documentation

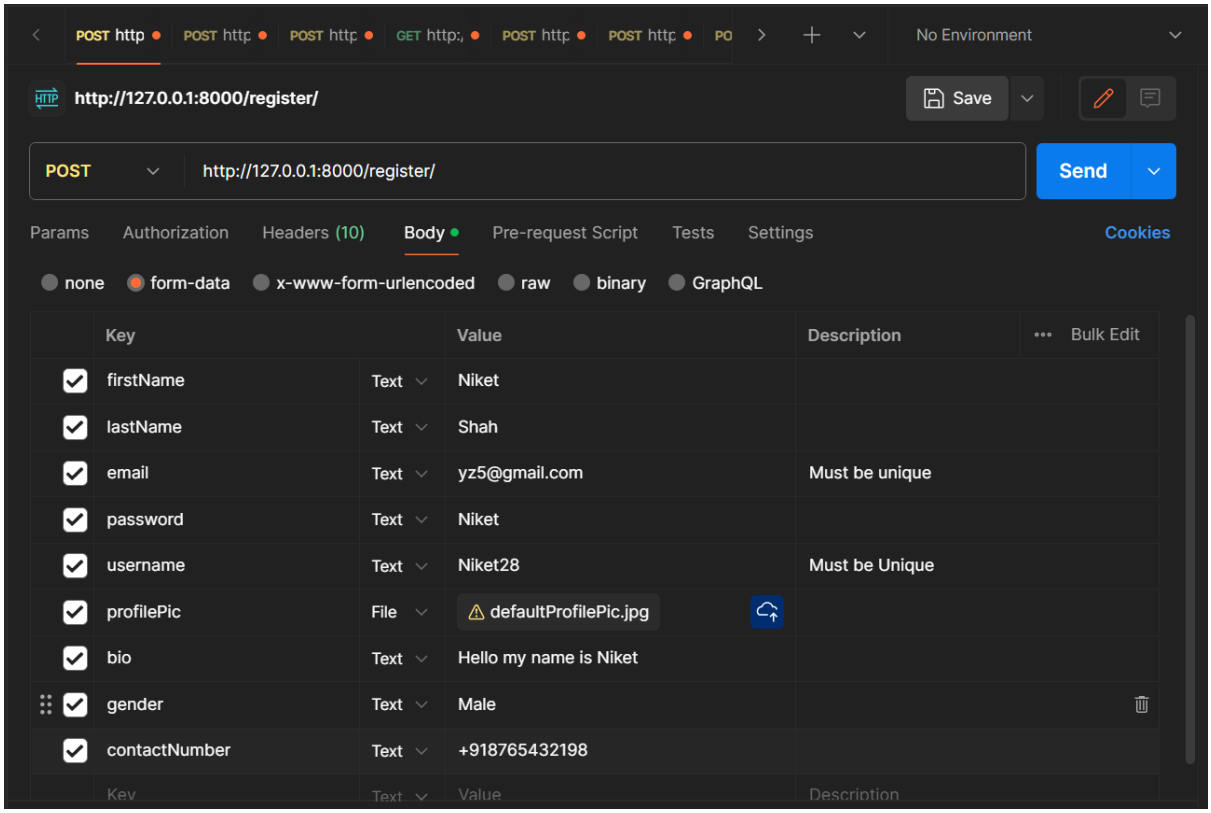
Contents

Registration API:-

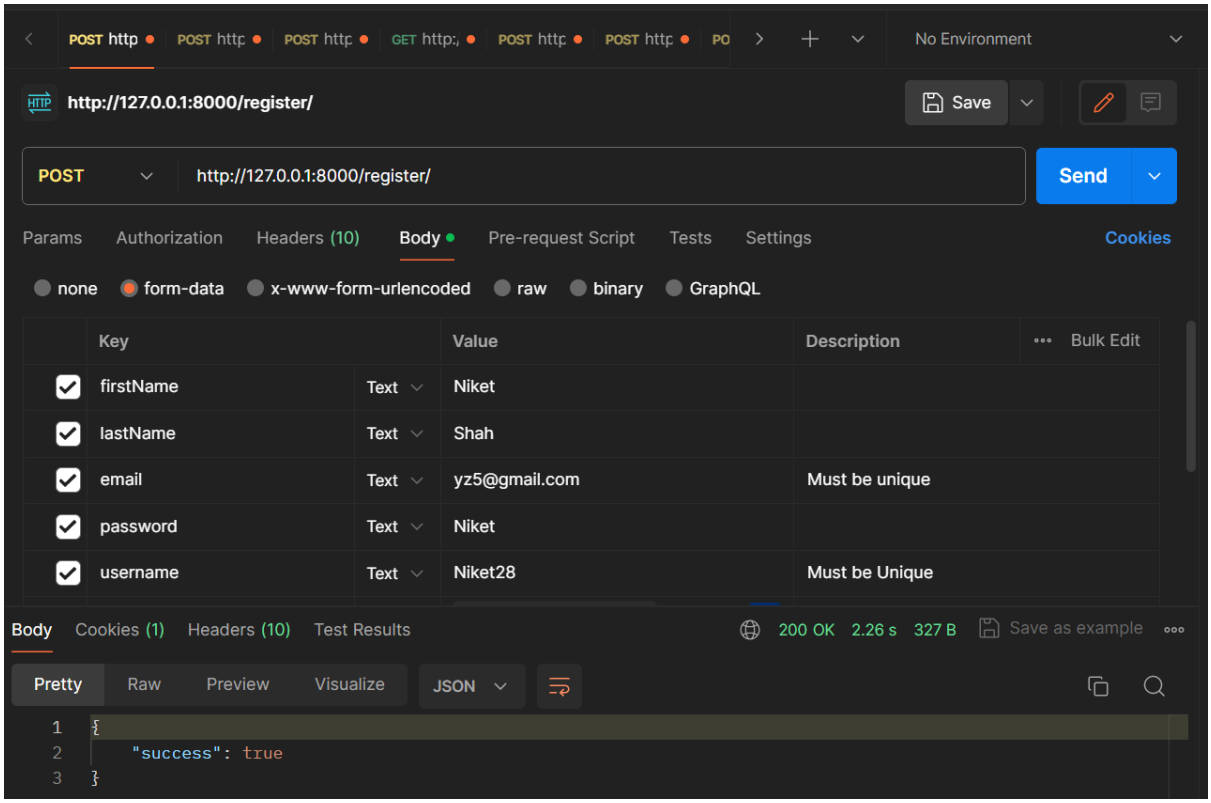
For registration the fields considered are:-

- User Id
- First Name
- Last Name
- Email
- Password
- Username
- Profile Pic
- Gender
- Contact Number

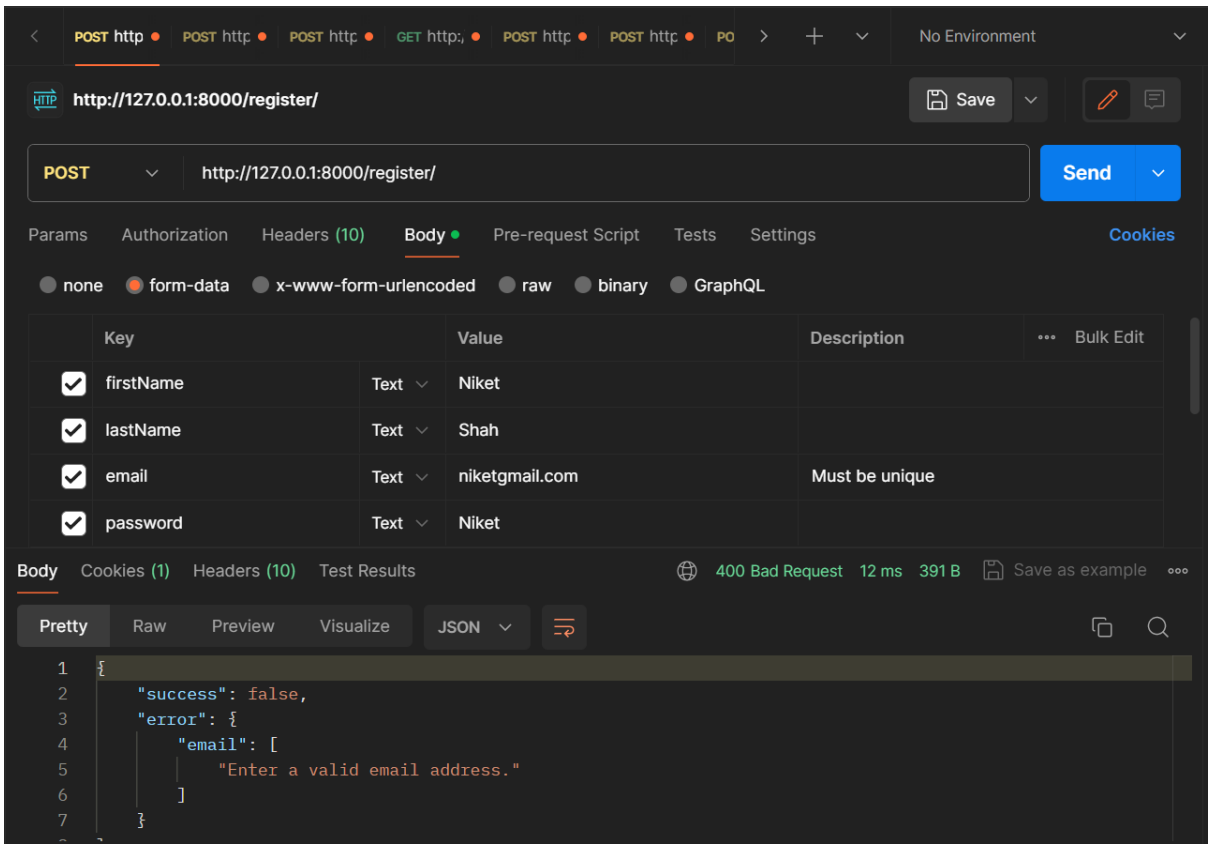
User Id is an auto created field and others are needed to be provided



Output:-

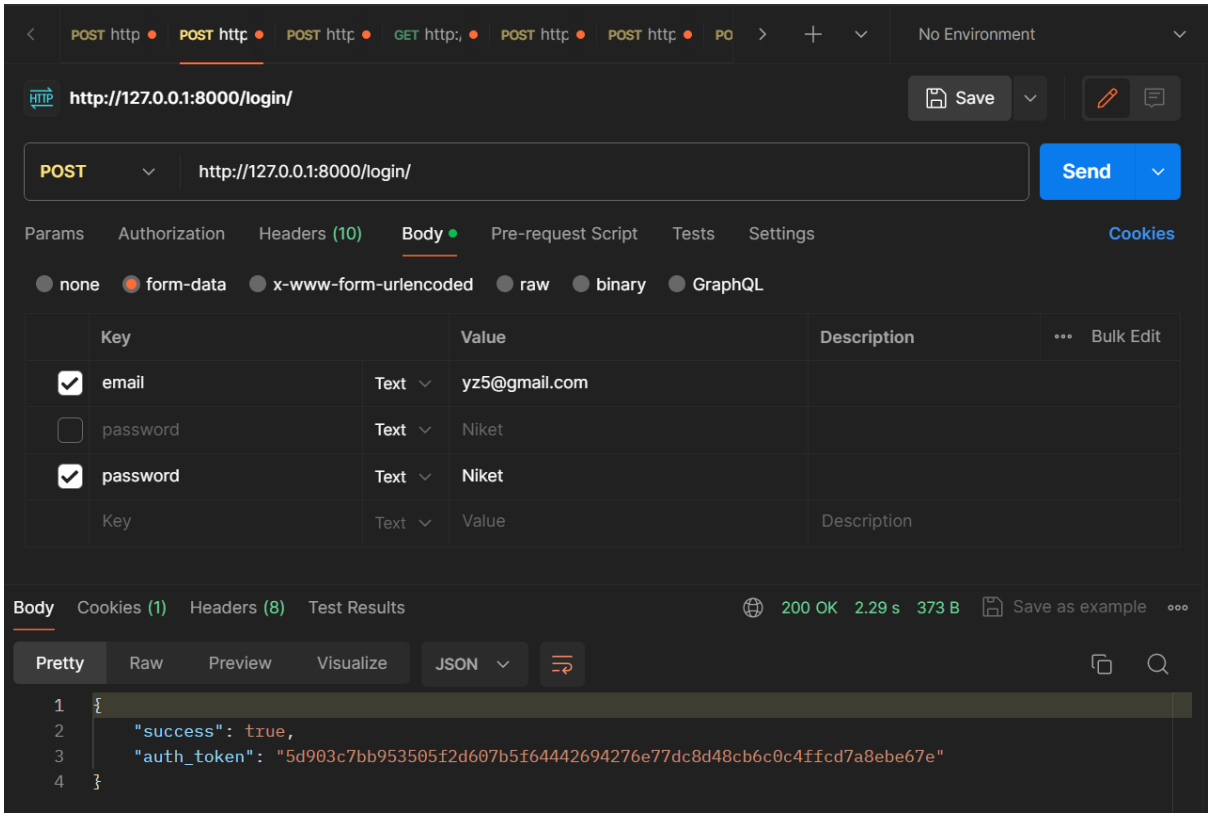


If any field is not according to Format eg:- If Email is taken as niketgmail.com

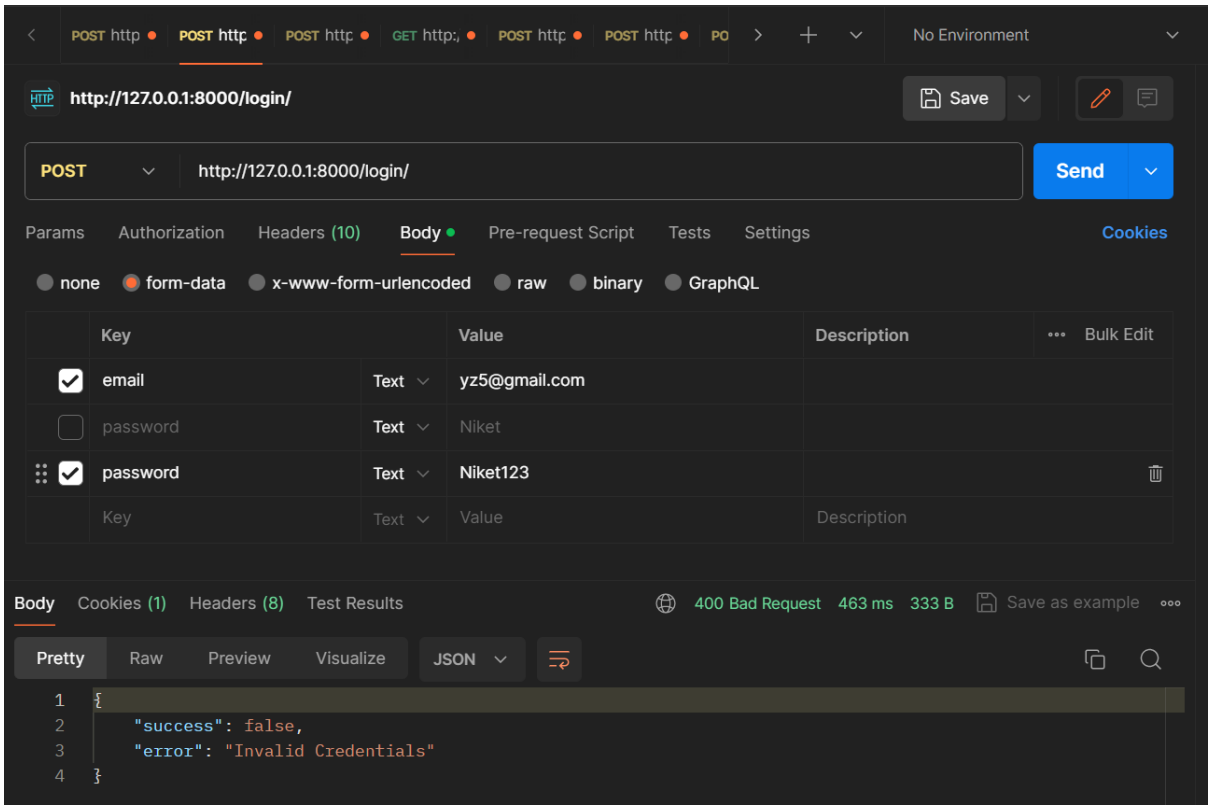


Login Api:-

Login is done via email and password:-



If Authentication Fails



Update Profile API:-

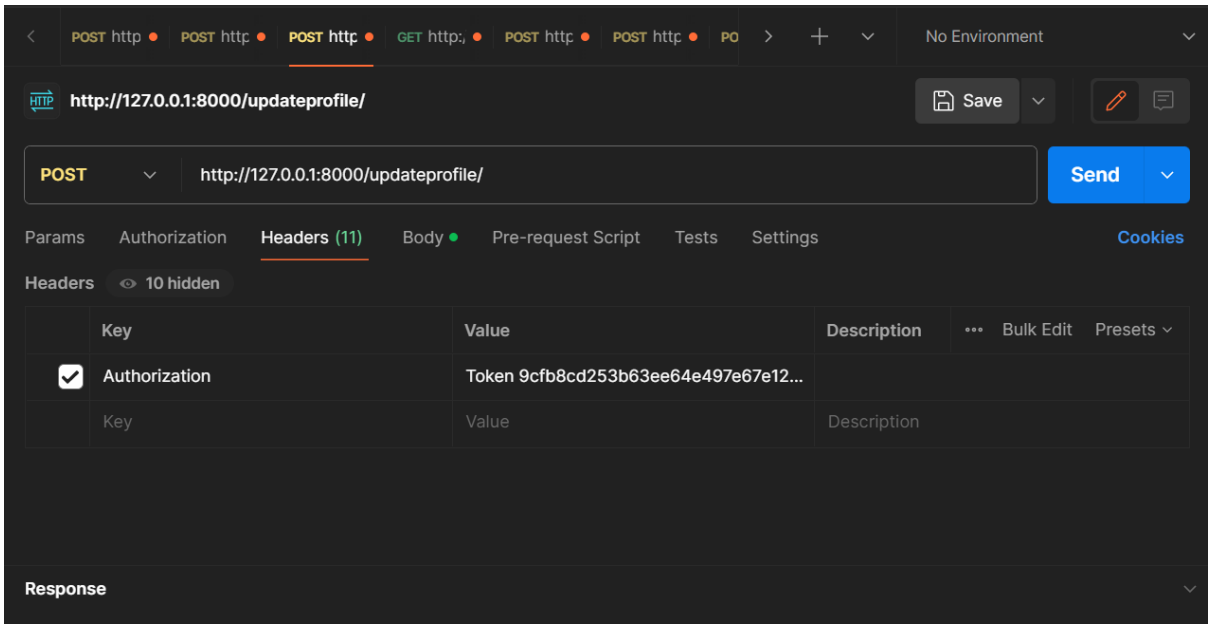
Here whole object of User profile is sent with altered field values and then it is updated. The update function is in serializer which is used to update the instance:-

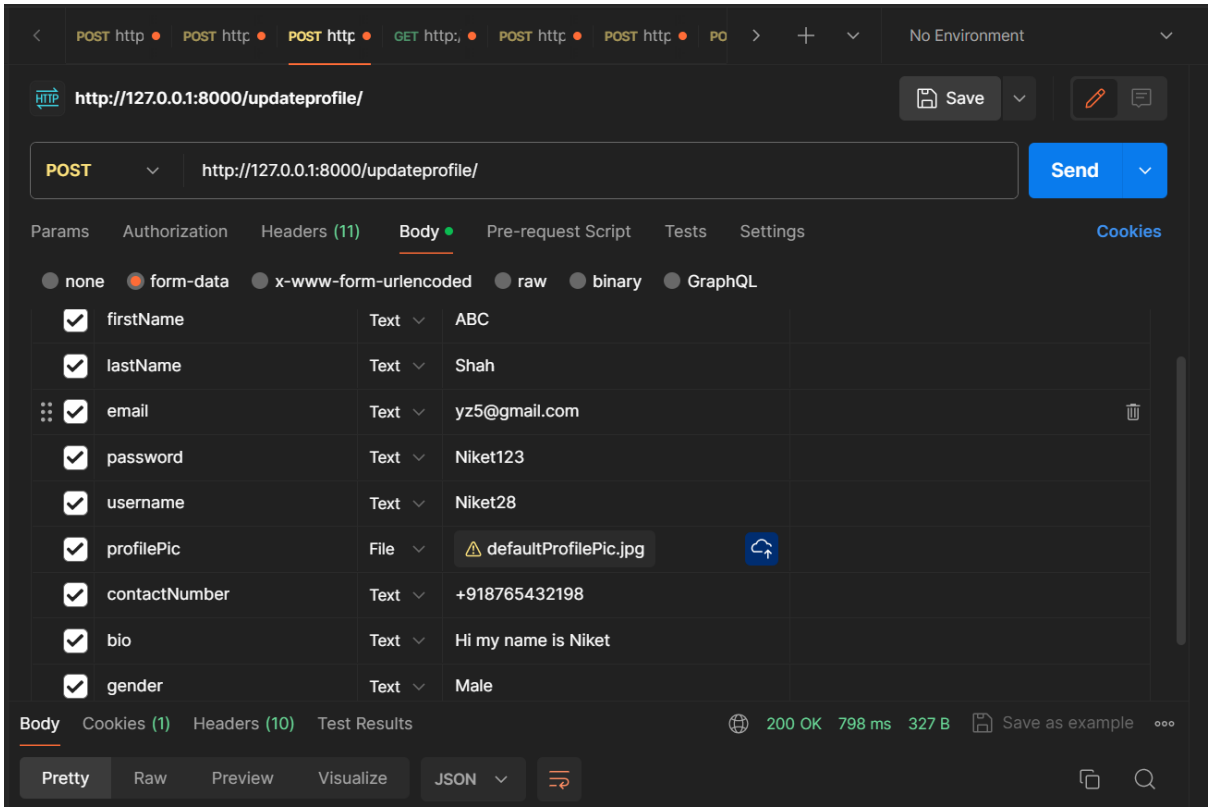
```
def update(self, instance, validated_data):
    print(instance.email)
    instance.firstName = validated_data['firstName']
    instance.lastName = validated_data['lastName']
    instance.username = validated_data['username']
    instance.profilePic = validated_data['profilePic']
    instance.bio = validated_data['bio']
    instance.gender = validated_data['gender']
    instance.contactNumber = validated_data['contactNumber']
    instance.email=validated_data["email"]

    password = validated_data['password']
    if password:
        instance.password=make_password(password)
    instance.save()
    return instance
```

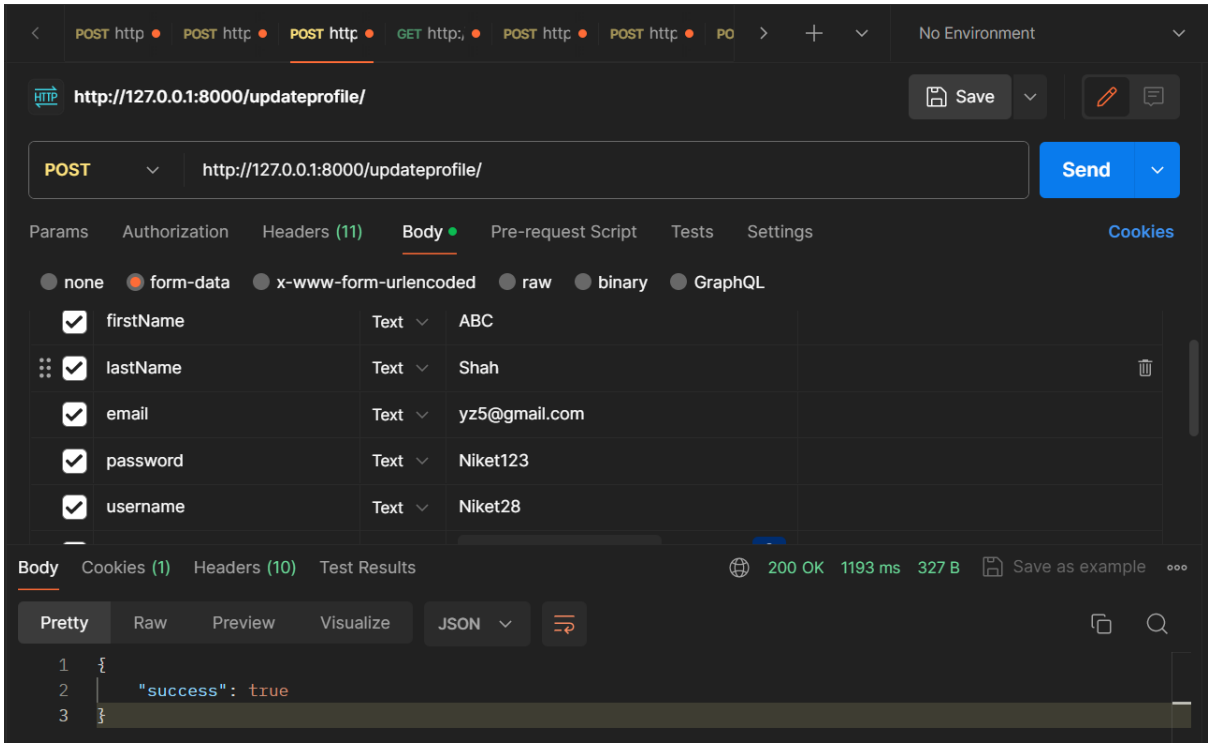
Eg:- If Password and First Name are to be changed for the newly registered user above

First the Token must be added in Header:-




POST http
POST http
POST http
GET http:,
POST http
POST http
PO
No Environment
http://127.0.0.1:8000/updateprofile/
Save
POST
http://127.0.0.1:8000/updateprofile/
Send
Params
Authorization
Headers (11)
Body
Pre-request Script
Tests
Settings
Cookies
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
firstName
Text
ABC
lastName
Text
Shah
email
Text
yz5@gmail.com
password
Text
Niket123
username
Text
Niket28
profilePic
File
defaultProfilePic.jpg
contactNumber
Text
+918765432198
bio
Text
Hi my name is Niket
gender
Text
Male
Body
Cookies (1)
Headers (10)
Test Results
200 OK
798 ms
327 B
Save as example
Pretty
Raw
Preview
Visualize
JSON

Output:-


POST http
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Save
POST
http://127.0.0.1:8000/updateprofile/
Send
Params
Authorization
Headers (11)
Body
Pre-request Script
Tests
Settings
Cookies
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
firstName
Text
ABC
lastName
Text
Shah
email
Text
yz5@gmail.com
password
Text
Niket123
username
Text
Niket28
Body
Cookies (1)
Headers (10)
Test Results
200 OK
1193 ms
327 B
Save as example
Pretty
Raw
Preview
Visualize
JSON
1 {
2 "success": true
3 }

As we test now the password has been changed :-

POST http ● POST http ● POST http ● GET http:, ● POST http ● POST http ● PO

No Environment

http://127.0.0.1:8000/login/

Save

POST http://127.0.0.1:8000/login/ Send

Params Authorization Headers (10) Body ● Pre-request Script Tests Settings Cookies

none form-data x-www-form-urlencoded raw binary GraphQL

Key		Value	Description	Bulk Edit
email	Text	yz5@gmail.com		
password	Text	Niket		
password	Text	Niket123		

Body Cookies (1) Headers (8) Test Results 400 Bad Request 435 ms 333 B Save as example

Pretty Raw Preview Visualize JSON

```
1 {
2     "success": false,
3     "error": "Invalid Credentials"
4 }
```

POST http ● POST http ● POST http ● GET http:, ● POST http ● POST http ● PO

No Environment

http://127.0.0.1:8000/login/

Save

POST http://127.0.0.1:8000/login/ Send

Params Authorization Headers (10) Body ● Pre-request Script Tests Settings Cookies

none form-data x-www-form-urlencoded raw binary GraphQL

Key		Value	Description	Bulk Edit
email	Text	yz5@gmail.com		
password	Text	Niket123		
password	Text	Niket123		

Body Cookies (1) Headers (8) Test Results 200 OK 957 ms 373 B Save as example

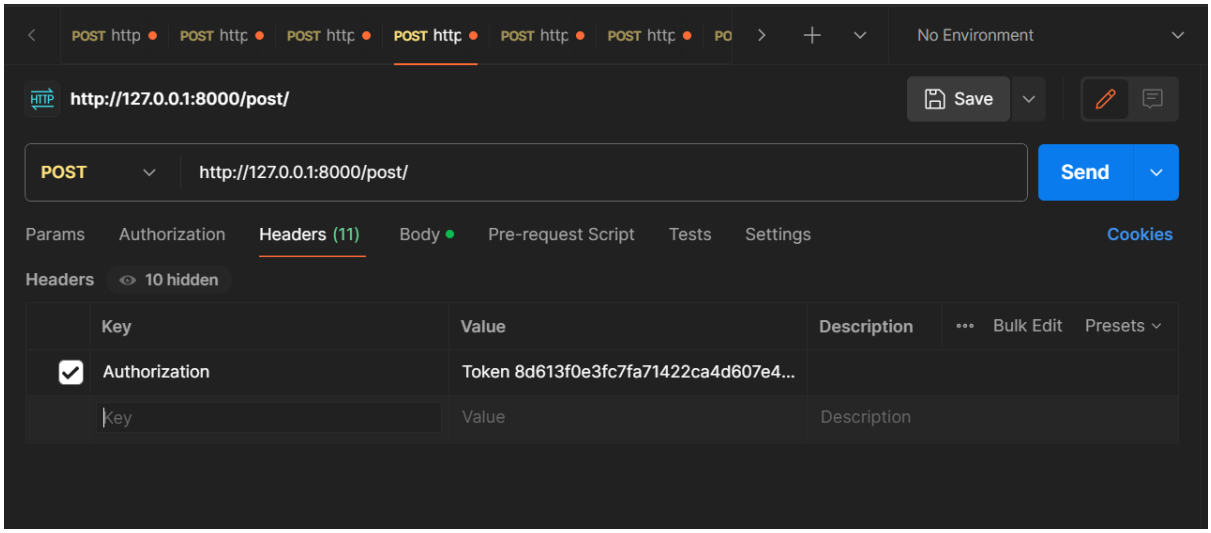
Pretty Raw Preview Visualize JSON

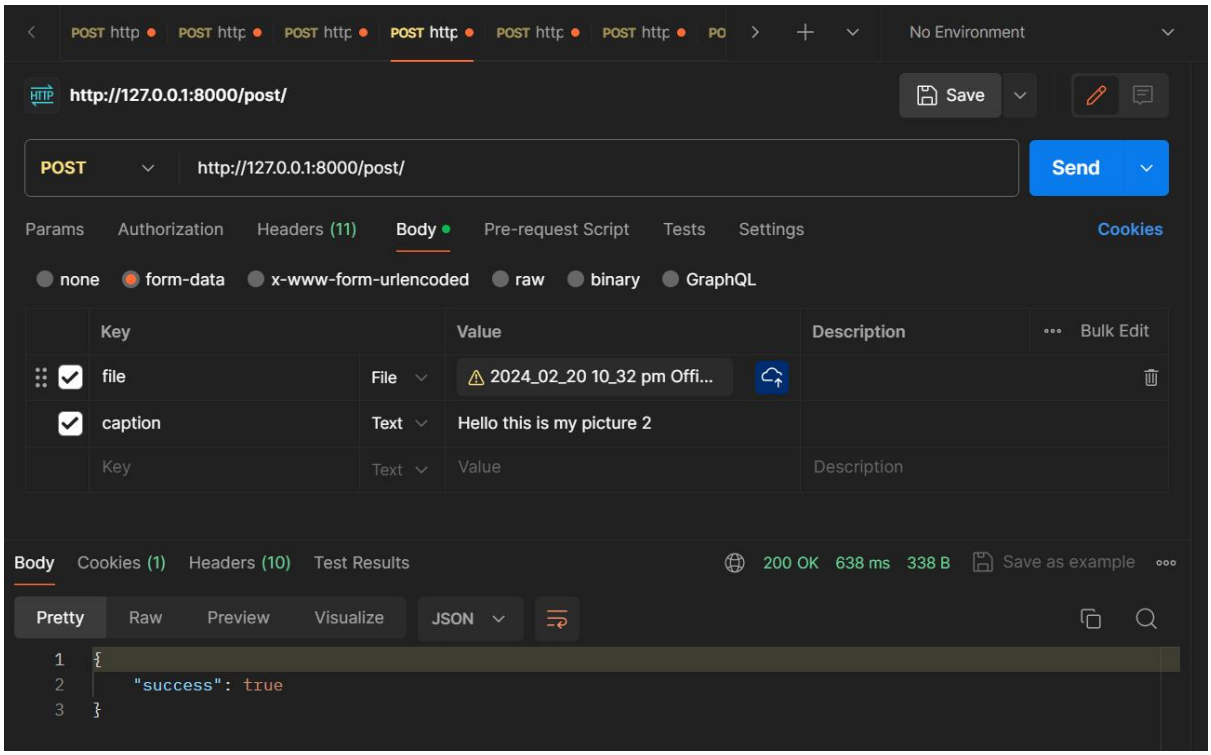
```
1 {
2     "success": true,
3     "auth_token": "3a59bb3c096299064cd5bd9b246272b725dedc462a317a584a986d9a10e68c33"
4 }
```

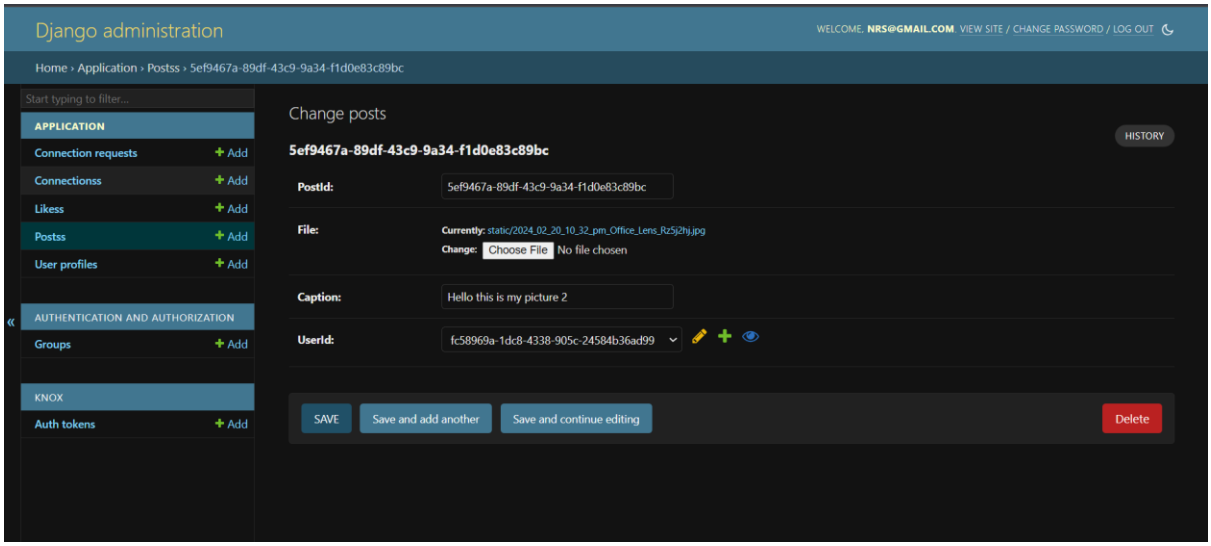
Posts Api:-

- Post Creation and to get list of posts both are included in same api. i.e Through POST request you can create a post by sending Token and relevant data(considered only image/video file and caption for now) and by sending GET request just with Token of user you can get list of posts of that user.

Post Creation:-



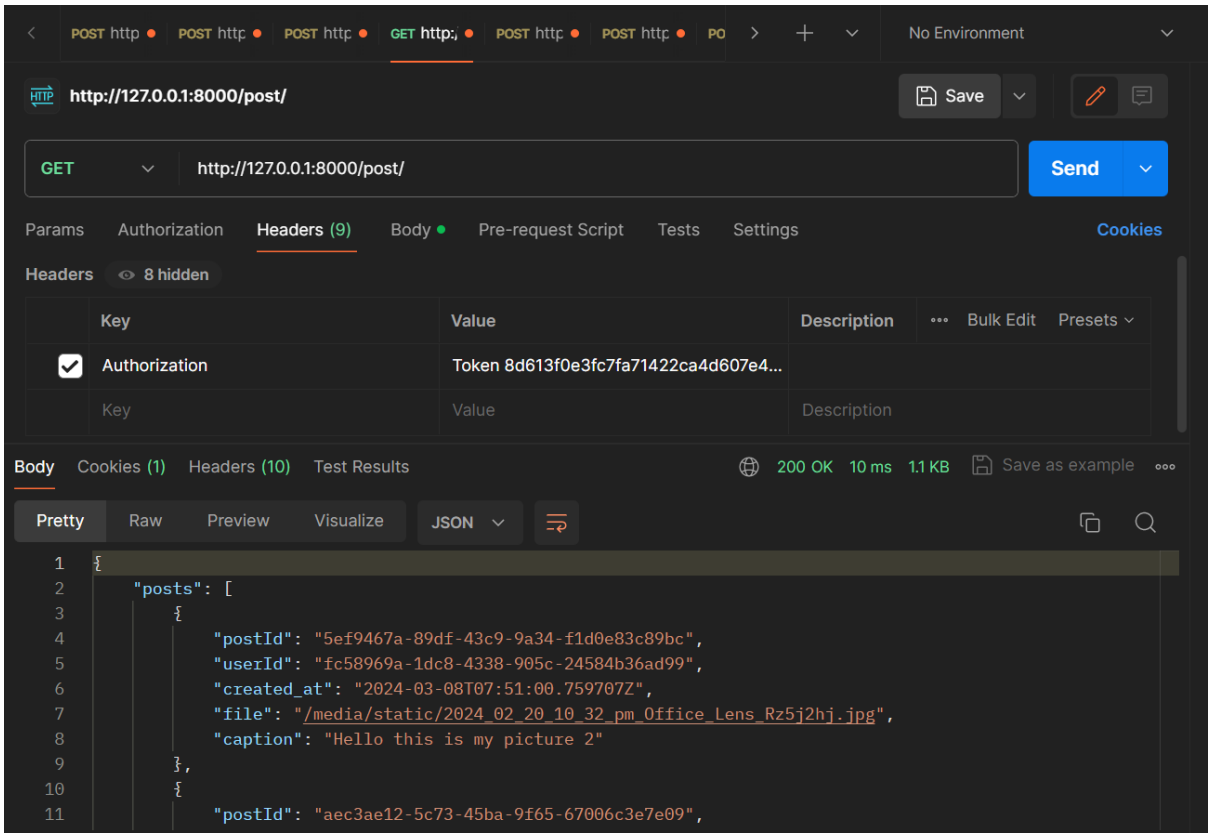




Get List of All Posts:-

Added 2 more posts and then will retrieve data

Just by sending Token we are able to retrieve all posts of the user

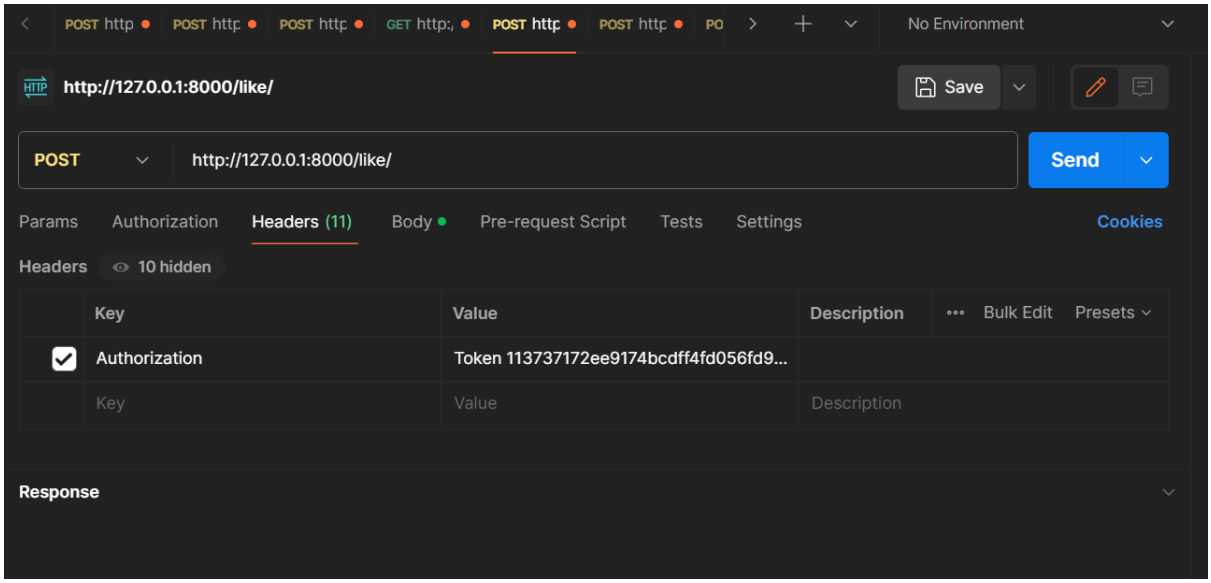


Like Post:-

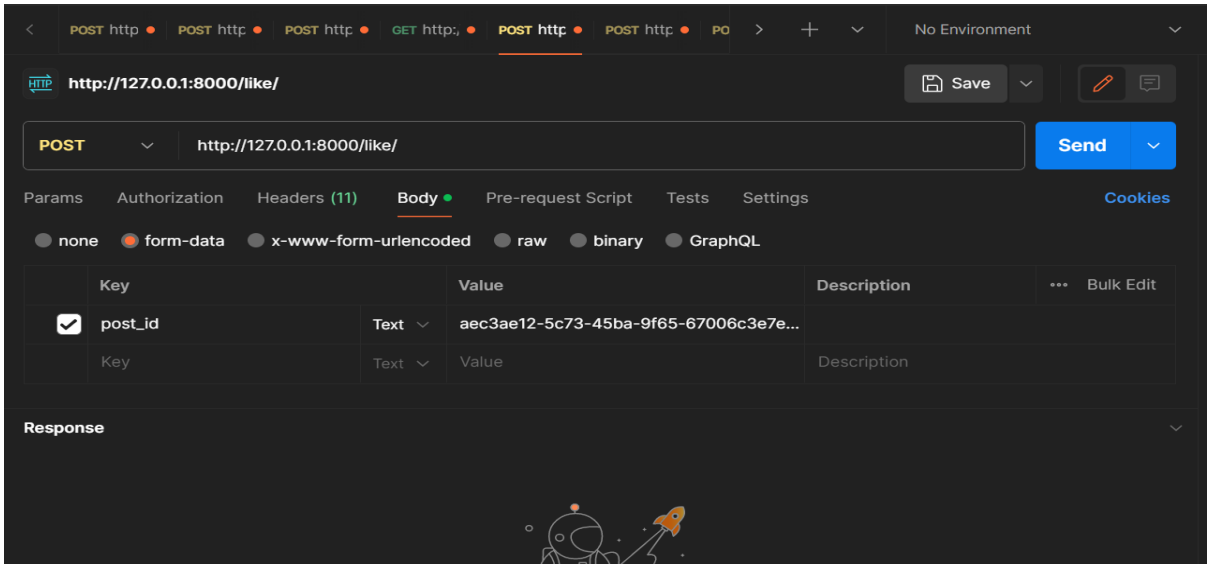
- Here If the user has liked once then if he/she like again it wont give any error but will not save in database again

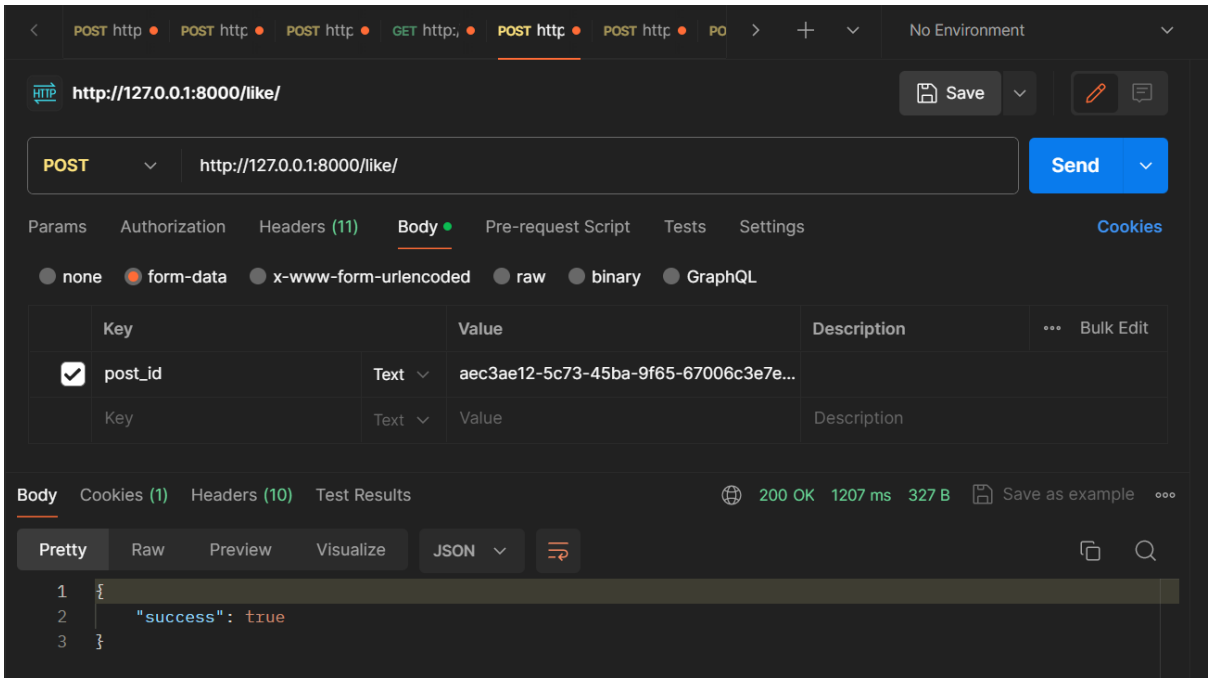
```
@api_view(["POST"])
@authentication_classes([TokenAuthentication])
@permission_classes([IsAuthenticated])
def likepost(request):
    try:
        liked_obj=Likes.objects.get(userId=str(request.user))
    except Likes.DoesNotExist:
        post_id=request.POST["post_id"]
        like_post_serializer=LikeSerializer(data={'postId':post_id,'userId':str(request.user)})
        if like_post_serializer.is_valid():
            like_post_serializer.save()
            return JsonResponse({'success':True},status=200)
        else:
            return JsonResponse({'success':False,'error':like_post_serializer.errors},status=400)
    return JsonResponse({'success':True},status=200)
```

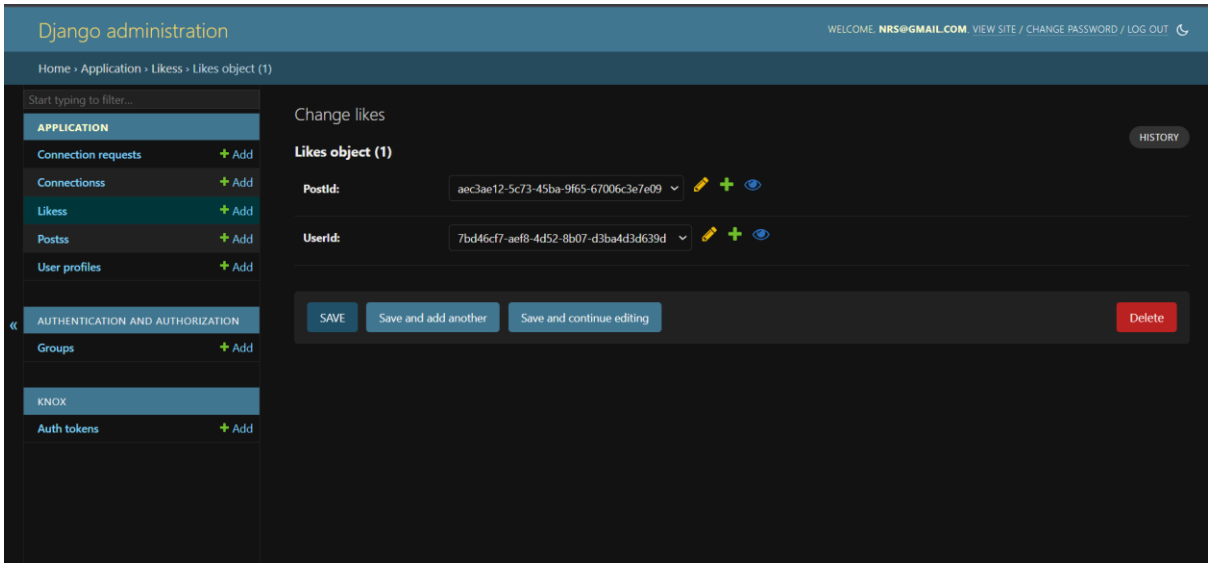
Here first the token of user who has liked is taken:



Now for data we need post id of posts user wants to like:-





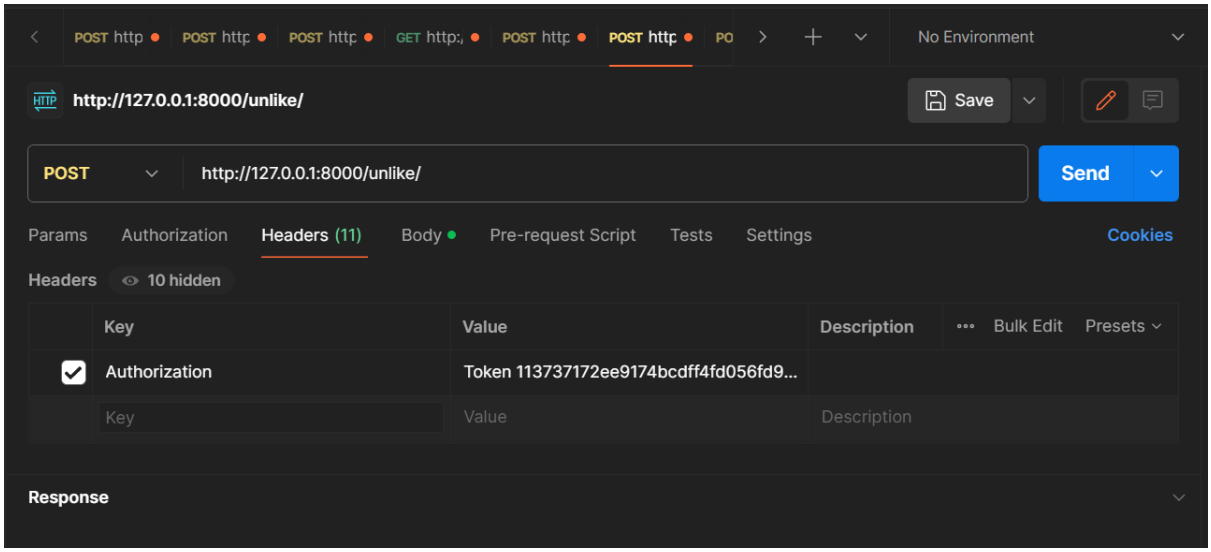


Unlike Post:-

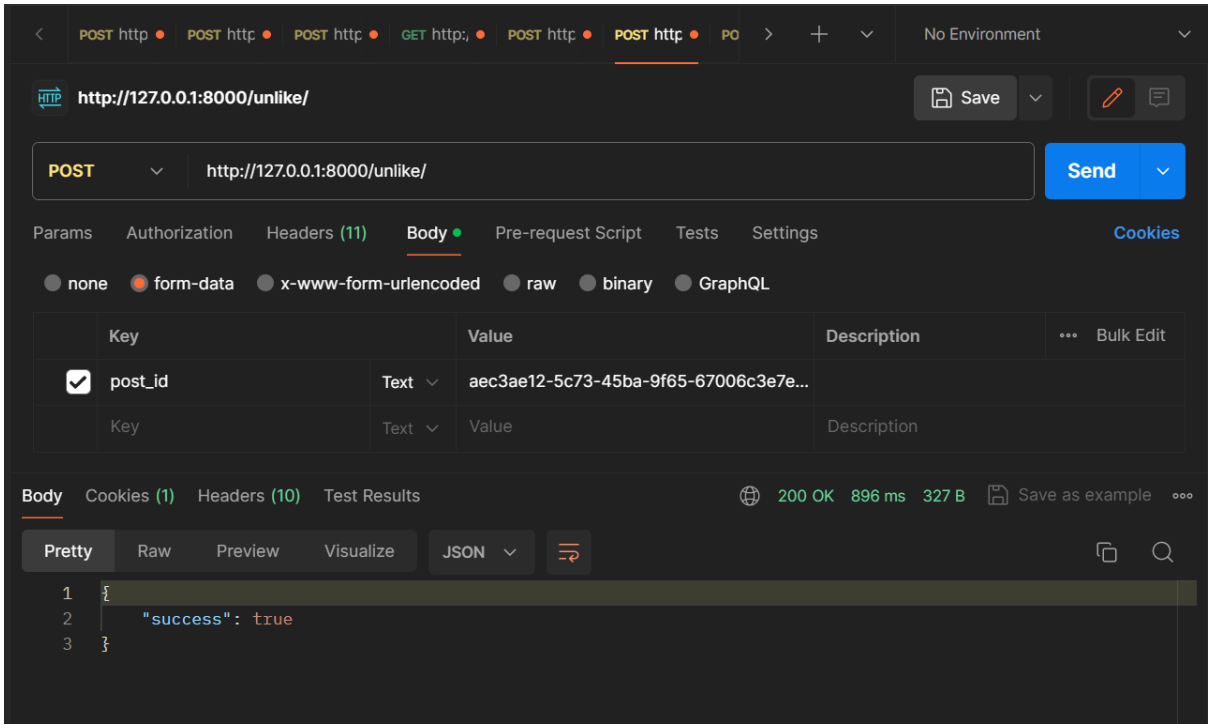
- When you unlike post here it removes the data from database and if he has not liked it will not give any error but will not perform any action as he/she hasn't liked the post

```
@api_view(["POST"])
@authentication_classes([TokenAuthentication])
@permission_classes([IsAuthenticated])
def unlike(request):
    try:
        liked_obj=Likes.objects.get(userId=str(request.user),postId=request.POST['post_id'])
        liked_obj.delete()
        return JsonResponse({'success':True},status=200)
    except Likes.DoesNotExist:
        return JsonResponse({'success':True},status=200)
```

Here First we need to taken token of user who ants to unlike:-



After that for data we need to post id which helps in mapping which post is to be unliked:-

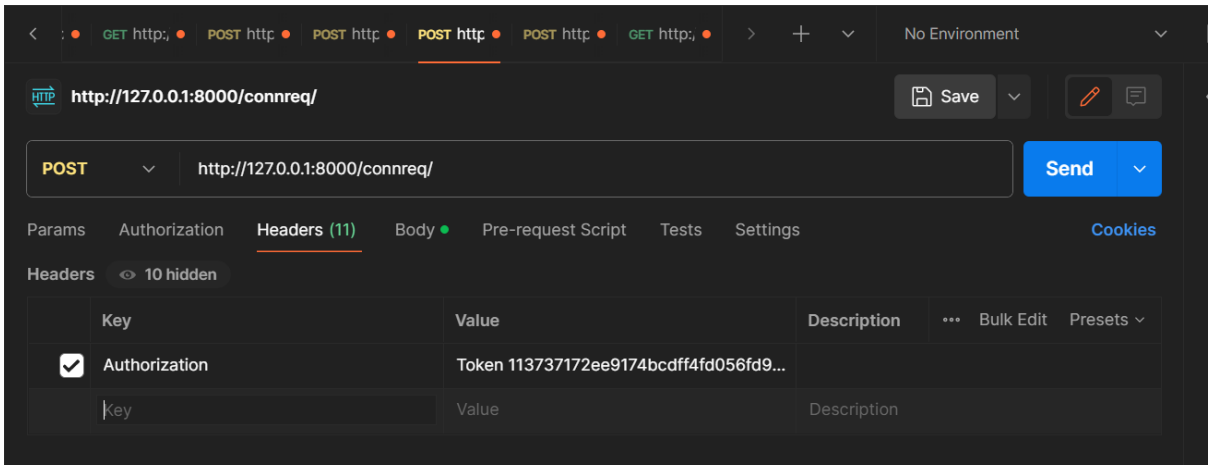


Connections Management:-

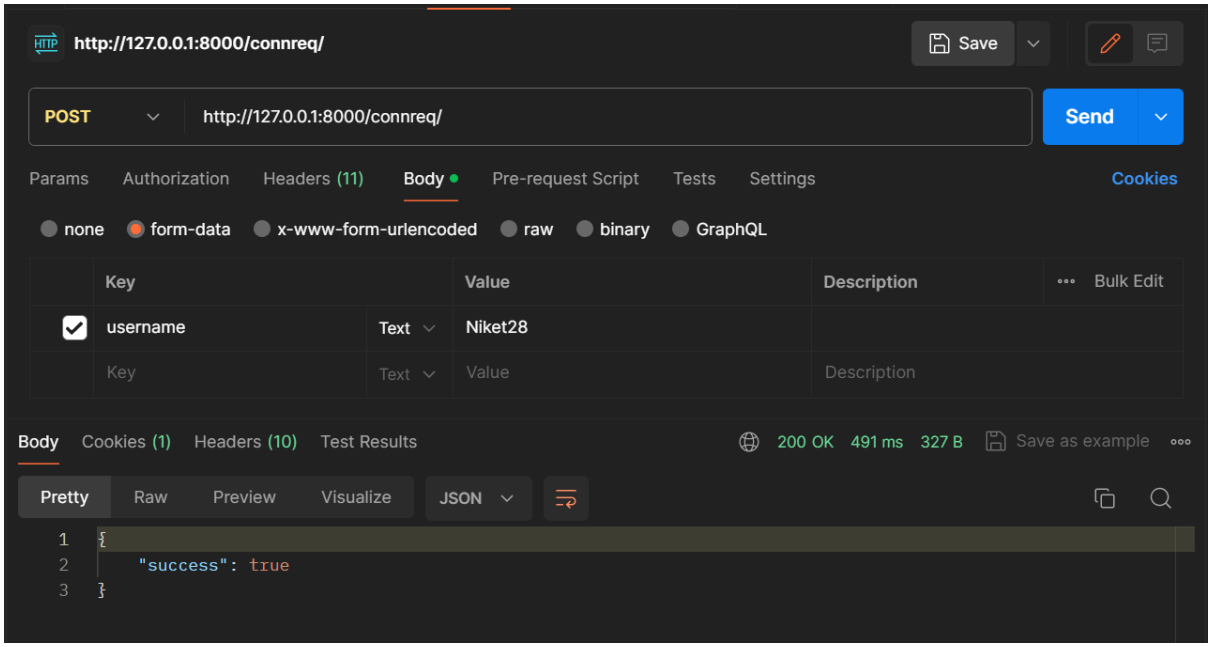
- Here there are 2 stages First is user adds a connection request and after that the other user can accept or reject the request. If he /she accepts requests then the user is added to connections.

Request Stage:-

Here first the token of the user sending request is taken:-



And for data , username of the user whom request is to be sent:



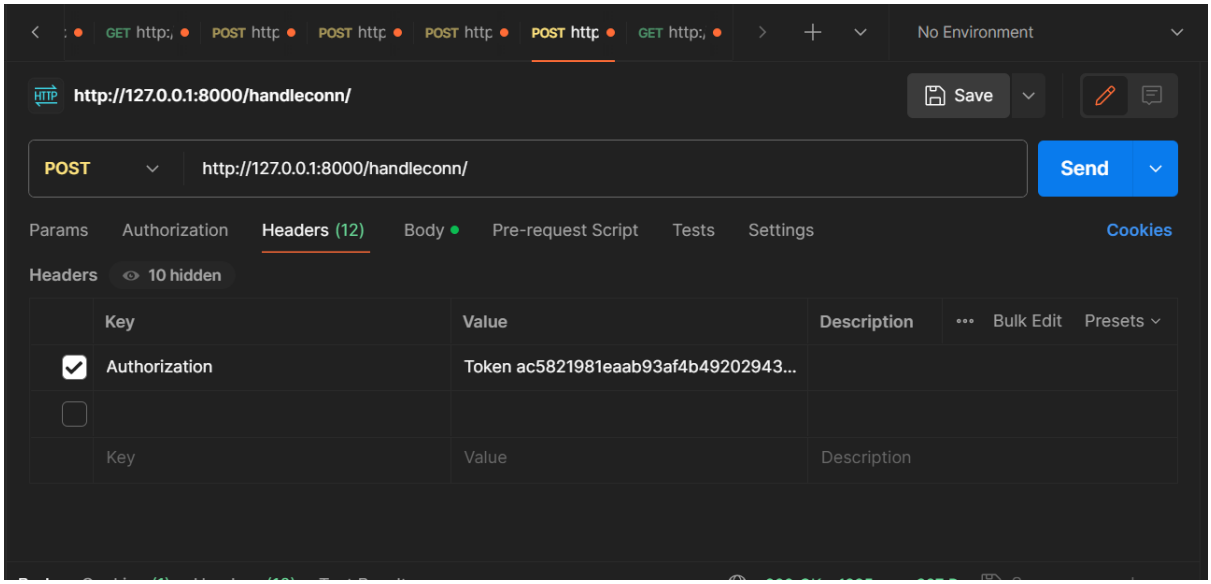
Code:-

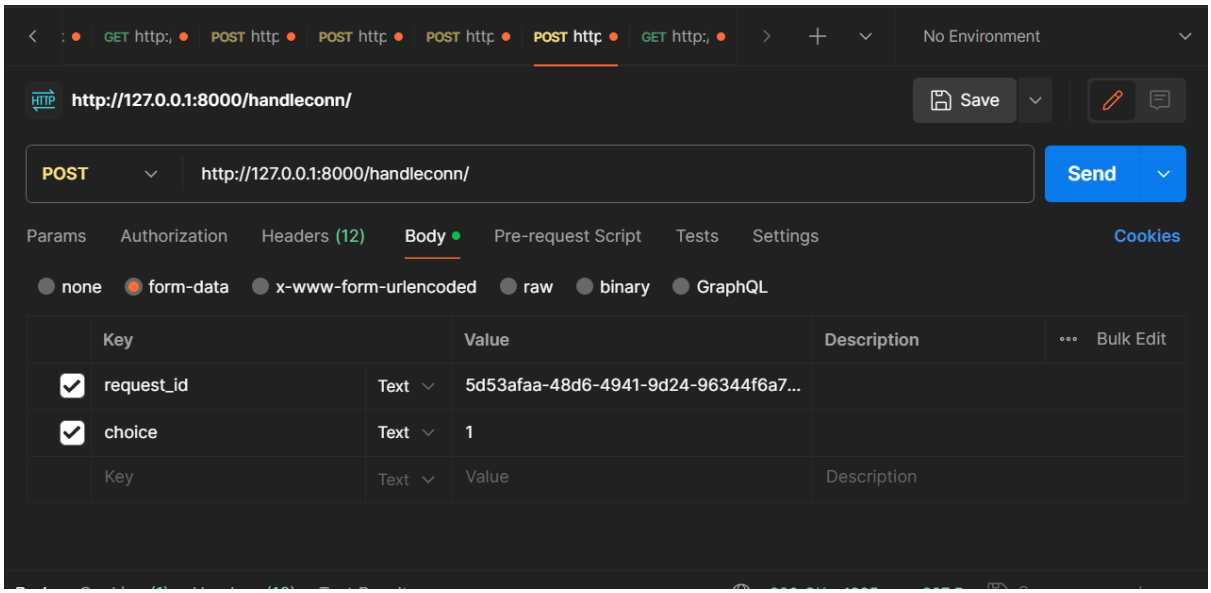
```
@api_view(["POST"])
@authentication_classes([TokenAuthentication])
@permission_classes([IsAuthenticated])
def connectionrequest(request):
    destination_username=request.POST['username']
    print(destination_username)
    try:
        destination_id=UserProfile.objects.get(username=destination_username).userId
    except UserProfile.DoesNotExist:
        return JsonResponse({'success':False,'error':'User with given username Does not exist!'},status=400)
    try:
        req_data=ConnectionRequest.objects.get(source=str(request.user),destination=destination_id)
    except ConnectionRequest.DoesNotExist:
        try:
            conn_exits=Connections.objects.get(user2=str(request.user),user1=str(destination_id))
        except Connections.DoesNotExist:
            try:
                rev_conn=Connections.objects.get(user1=str(request.user),user2=str(destination_id))
            except Connections.DoesNotExist:
                conn_req={'source':str(request.user),'destination':destination_id}
                conn_req_serializer=ConnectionRequestSerializer(data=conn_req)
                if conn_req_serializer.is_valid():
                    conn_req_serializer.save()
                    return JsonResponse({'success':True},status=200)
                else:
                    return JsonResponse({'success':False,'error':conn_req_serializer.errors},status=400)
            return JsonResponse({'success':True},status=200)
    return JsonResponse({'success':True},status=200)
```

Request Handling:-

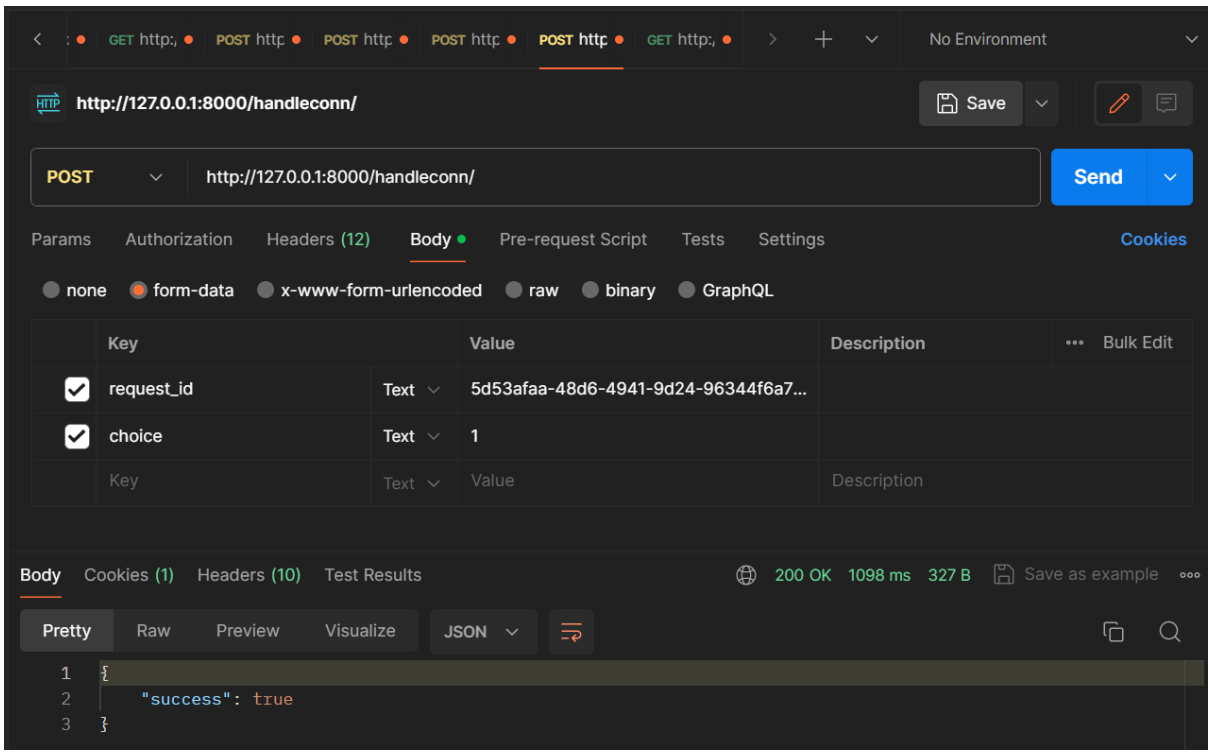
Here User can accept or decline .If user accepts the request then the record is added to Connection else it is just discarded.

Here we take the request Id and the Token of user whom request was sent:-





Here if choice is 1 it means user has accepted and if it is 0 it means user has rejected the request



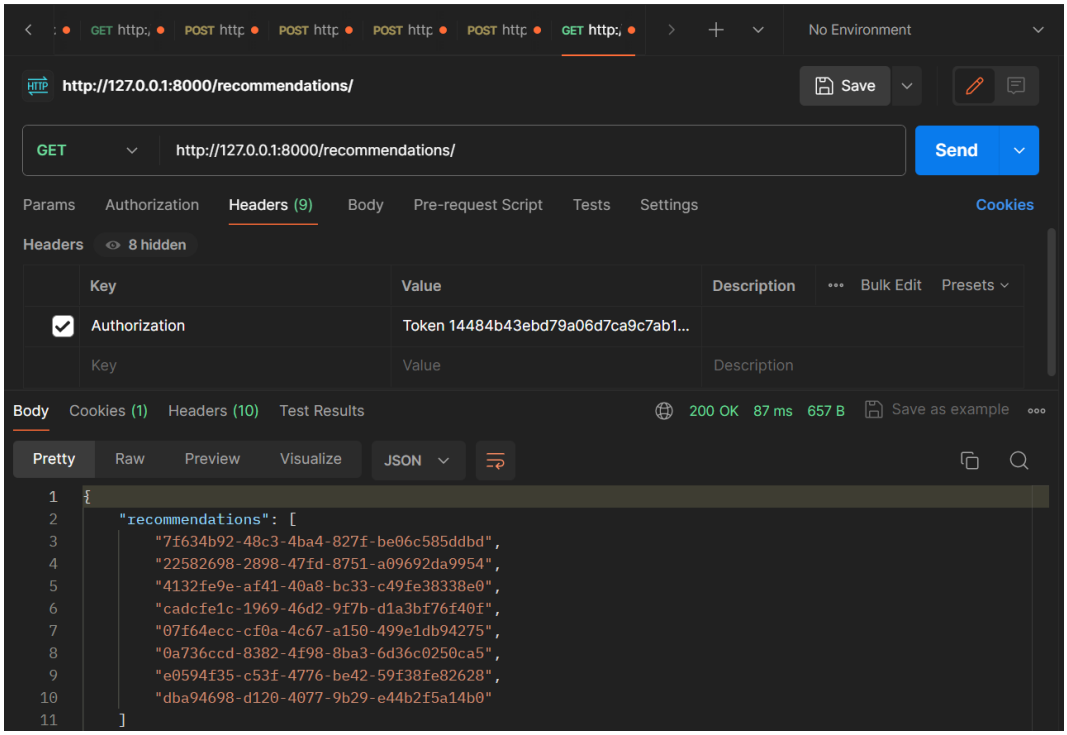
Code:-

```
@api_view(["POST"])
@authentication_classes([TokenAuthentication])
@permission_classes([IsAuthenticated])
def handle_connection_request(request):
    request_id = request.POST['request_id']
    choice = request.POST['choice']
    # Here choice represents whether user accepts or rejects the request so it would be either 0 or 1
    try:
        request_data=ConnectionRequest.objects.get(reqId=request_id)
        print(choice)
        if choice == "1":
            if str(request_data.destination)==str(request.user):
                conn_data={'user2':str(request_data.source),'user1':str(request.user)}
                conn_serializer=ConnectionSerializer(data=conn_data)
                if conn_serializer.is_valid():
                    conn_serializer.save()
                    request_data.delete()
                    return JsonResponse({'success':True},status=200)
                else:
                    return JsonResponse({'success':False,'error':conn_serializer.errors},status=400)
            else:
                return JsonResponse({'success':False,'error':'Authentication Failed'},status=400)
        else:
            request_data.delete()
            return JsonResponse({'success':True},status=200)
    except ConnectionRequest.DoesNotExist:
        return JsonResponse({'success':False,'error':'Request Does Not Exist'},status=400)
```

Recommendations:-

- Here we first take connections of the user and we check their connections who are not connected to user and recommend them to the user

Here we just take the token of user:-



We get the ids of the recommended users for connection.

Code:-

```
class Recommendations(APIView):
    permission_classes=[IsAuthenticated]
    authentication_classes=[TokenAuthentication]
    def get(self,request):
        connections = Connections.objects.filter(
            Q(user1=str(request.user)) | Q(user2=str(request.user))
        )

        user_connections = set()
        for connection in connections:
            user_connections.add(str(connection.user2)
            if str(connection.user1) == str(request.user)
            else str(connection.user1)
            )

        recommendation=set()
        for connection in user_connections:
            followers_connection = Connections.objects.filter(
                Q(user1=str(connection)) | Q(user2=str(connection))
            )

            followers_of_connection=set()
            for follower_of_connection in followers_connection:
                followers_of_connection.add(str(follower_of_connection.user2)
                if str(follower_of_connection.user1) == str(connection)
                else str(follower_of_connection.user1)
                )

            required_connections=followers_of_connection - user_connections
            required_connections.discard(str(request.user))

            recommendation=recommendation.union(required_connections)
        return JsonResponse({'recommendations':list(recommendation)},status=200)
```

<u>Code Explanation:-</u> Here we first take connections of user for whom recommendations are to be found. Then we find connections of the users who are not connected to user and add them to recommendation list and carry on . To avoid duplicates, set data structure is used and set union operator is used to merge the unique ids to recommendation.