1. Test Check if docker endpoint is working, you should see

Request				
HTTP Method	GET		Explanation	Note
Resource	http://localhost:4000/testhealth		Test endpoint health state	Happy Test
Body Payload	None			
Response				
Status	Body	Encoding	Explanation	
200	{ "message": "test route" }	JSON	Success.	

2. Create Account -Happy Test

Request				
HTTP Method	POST		Explanation	Note
Resource	http://localhost:4000/createuser			
Body Payload	{ "username":"Jenny@gmail.com", "password":"Aa12345678" }		Create an account	Happy Test
Response				
Status	Body	Encoding	Explanation	Note
201	[{ "message": "user created" }, { "success": true }, { "account_created": "Mon, 05 Aug 2024 17:47:58 GMT", "password": "\$2b\$12\$6C2dkMj3iZ92Aw9ivGgplOqmlm9UB HV7m1AHINccB9ICzluoaKUrC", "username": "jenny@gmail.com" }	JSON	Successfully create an account	Response contains password is for verification purpose, DO NOT use in production.

3. Login an Account -Happy Test

Request				
HTTP Method	POST		Explanation	Note
Resource	http://localhost:4000/v1/login			
Body Payload	{ "username":"Jenny@gmail.com", "password":"Aa12345678" }		Login an account	Happy Test
Response				
Status	Body	Encoding	Explanation	Note
200	[{ "reason": "Login successful" }, { "success": true }]	JSON	Successfully login an account	

4. Create Account -Negative Test

Request				
HTTP Method	POST		Explanation	Note
Resource	http://localhost:4000/createuser			
Body Payload	{ "username":"Jenny@gmail.com", "password":"Aa12345678" }		Create an account	NegativeTest
Response				
Status	Body	Encoding	Explanation	Note

400	[{ "reason": "The username already exist. please choose a different one." }, { "success": false }]	JSON	Bad Request. Success: False. Reason: duplicated username.	
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Request				
HTTP Method	POST		Explanation	Note
Resource	http://localhost:4000/createuser			
Body Payload	{ "username":"jo", "password":"1234" }		Create an account	NegativeTest
Response				
Status	Body	Encoding	Explanation	Note
400	[{ "reason": "username must have a minimum length of 3 characters and a maximum length of 32 characters" }, { "success": false }]	JSON	Bad Request. Success: False. Reason: minimum length required in username.	

Request			
HTTP Method	POST	Explanation	Note
Resource	http://localhost:4000/createuser		
Body Payload	{ "username2":"jo", "password":"1234" }	Create an account	NegativeTest
Response			

Status	Body	Encoding	Explanation	Note
400	[{ "reason": "Missing 'username' key or Missing 'password' key in JSON data" }, { "success": false }]	JSON	Bad Request. Success: False. Reason: No key in payload request.	

5. Login an Account - Negative Test

Request				
HTTP Method	POST		Explanation	Note
Resource	http://localhost:4000/v1/login			
Body Payload	{ "username":"jenny@gmail.com", "password":"Aa" }		Login an account	NegativeTest
Response				
Status	Body	Encoding	Explanation	Note
401	[{ "reason": "Invalid password" }, { "success": false }]	JSON	Unauthorized. Success: False. Reason: Not valid password.	

Request			
HTTP Method	POST	Explanation	Note
Resource	http://localhost:4000/v1/login		
Body Payload	{ "username":"jenn", "password":"Aa" }	Login an account	NegativeTest

Response				
Status	Body	Encoding	Explanation	Note
401	[{ "reason": "no such username" }, { "success": false }]	JSON	Unauthorized. Success: False. Reason: No such username.	

Request				
HTTP Method	POST		Explanation	Note
Resource	http://localhost:4000/v1/login			
Body Payload	{ "username":"jenny@gmail.com", "password":"Aa" }		Login an account. Click this endpoint 6 times.	NegativeTest
Response				
Status	Body	Encoding	Explanation	Note
429	[{ "reason": "Too many failed login attempts. Please wait a minute before trying again." }, { "success": false }]	JSON	Too Many Requests. Success: False. Reason: Not valid password.	

6. Optional, NOT required. If you want to check all the records in userTable.

Request			
HTTP Method	GET	Explanation	Note
Resource	http://localhost:4000/get/table/users	Get all records in User Table	Happy Test
Body Payload	None		

Response				
Status	Body	Encoding	Explanation	Note
200	[{ "all users": [{ "account_created": "Mon, 05 Aug 2024 21:32:36 GMT", "password": "\$2b\$12\$zDrr4.DaxiZBjqX9O6FgEuTH0le.Xp0 X/AooSCJQ3i/9cZWOlbbiW", "username": "jenny@gmail.com" }] }, { "success": true }	JSON	Success.	Response contains all the records in user table, NOT the best practice. DO NOT use in production.

 $\label{thm:check-all-the-check} \mbox{check all the records in loginAttemptTable}.$

Request				
HTTP Method	GET		Explanation	Note
Resource	http://localhost:4000/get/table/loginAttempt Table		Get all records in LoginAttempt Table	Happy Test
Body Payload	None			
Response				
Status	Body	Encoding	Explanation	Note

```
"all attempts": [
           "success_login": true,
           "timestamp": "Mon, 05 Aug 2024 21:40:37
           GMT",
                                                                                           Response
           "username": "jenny@gmail.com"
                                                                                           contains all the
                                                                                           records in
                                                                                           loginAttempt
200
           "success_login": false,
                                                       JSON
                                                                    Success.
                                                                                           table, NOT the
           "timestamp": "Mon, 05 Aug 2024 21:40:40
                                                                                           best practice.
                                                                                           DO NOT use in
           "username": "jenny@gmail.com"
                                                                                           production.
           "success": true
          ]
```

7. Optional, NOT required. If ever needed to reset the database table

Request				
HTTP Method	DELETE		Explanation	Note
Resource	http://localhost:4000/delete/table/userTable		Drop UserTable	Optional, not required.
Body Payload	None			
Response				
Status	Body	Encoding	Explanation	Note

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HTTP Method	DELETE		Explanation	Note
Resource	http://localhost:4000/delete/table/loginAttemptTable		Drop LoginAttemptTable	Optional, not required.
Body Payload	None			
Response				
Status	Body	Encoding	Explanation	Note
200	{ "message": "LoginAttempt table dropped!" }	JSON	Success.	This will drop the loginAttempt table, DO NOT expose to frontend user. DO NOT use in production.