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SE 4458 MIDTERM 1
API PROJECT FOR MOBILE
PROVIDER BILL PAYMENT
SYSTEM
PRESENTATION**

Technologies i used in my API project

Python-Flask



SQLAlchemy(ORM)



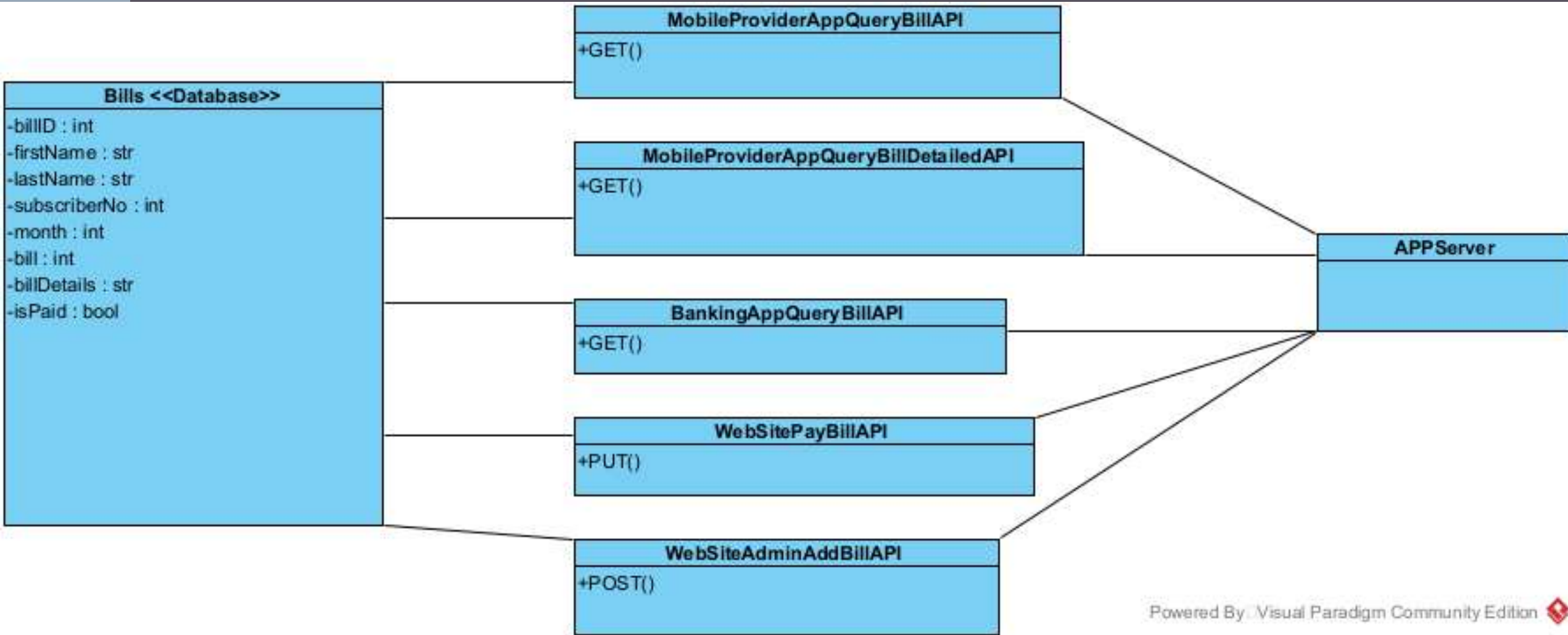
Postman (Test and Documentation)



IDE PyCharm



ER Diagram



SAMPLE DATABASE

9 rows									
WHERE ORDER BY									
	billId	firstName	lastName				billDea...	isPaid	
1	1	Jonh	Doe	1	8	200	fasfasdasda	1	
2	2	John	Doe	1	9	200	asdsadasdas	1	
3	3	Jonh	Doe	1	10	200	aqweqdad	0	
4	4	Merlin	Richmond	2	10	300	asdasdasd	1	
5	5	Marie	Vega	3	10	250	asdasdas	0	
6	6	Cary	Davson	4	9	150	asdas	1	
7	7	aaaa	aaaa	1	11	500	asdasda	0	
8	8	Marie	Vega	5	11	400	asdasdas	0	

All Possible Scenarios for My APIs

MobileProviderAppQueryBillAPI GET

SUCCESSFUL (200)

Parameters: (SubscriberNo, Month) API Response: (Bill Total, Paid Status)

The screenshot displays a REST client interface with the following details:

- URL:** `http://127.0.0.1:5000//mobileQueryAPI?subscriberNo=1&month=8`
- Method:** GET
- Params:** subscriberNo=1, month=8
- Status:** 200 OK
- Time:** 9 ms
- Size:** 203 B
- Response Body (JSON):**

```
{  "Bill Total": 200,  "Paid Status": true}
```

Key	Value	Description
subscriberNo	1	
month	8	

MobileProviderAppQueryBillAPI GET

NOT FOUND (404)

Parameters: (SubscriberNo, Month) API Response: (Bill Total, Paid Status)

The screenshot shows a REST client interface with the following details:

- URL:** `http://127.0.0.1:5000//mobileQueryAPI?subscriberNo=1&month=12`
- Method:** GET
- Params:** subscriberNo=1, month=12
- Status:** 404 NOT FOUND
- Time:** 6 ms
- Size:** 230 B
- Response Body:**

```
{  "message": "No bill found for the specified parameters"}
```

Key	Value	Description
subscriberNo	1	
month	12	

MobileProviderAppQueryBillDetailedAPI GET

SUCCESSFUL (200)

Parameters: (SubscriberNo, Month) API Response: (Bill Details, Bill Total)

The screenshot displays a REST client interface with the following details:

- URL:** `http://127.0.0.1:5000//mobileQueryDetailedAPI?subscriberNo=1&month=8`
- Method:** GET
- Query Params:**

Key	Value	Description
subscriberNo	1	
month	8	
- Status:** 200 OK, Time: 16 ms, Size: 241 B
- Response Body (JSON):**

```
1 {
2   "bills": [
3     {
4       "Bill Details": "fasfasdasda",
5       "Bill Total": 200
6     }
7   ],
8   "total_bills": 1
9 }
```


MobileProviderAppQueryBillDetailedAPI GET

NOT FOUND (404)

Parameters: (SubscriberNo, Month) API Response: (Bill Details, Bill Total)

The screenshot shows a REST client interface with the following details:

- URL:** `http://127.0.0.1:5000//mobileQueryDetailedAPI?subscriberNo=5&month=3`
- Method:** GET
- Send Button:** A blue button labeled "Send".
- Params Tab:** Active tab showing query parameters.
- Query Params Table:**

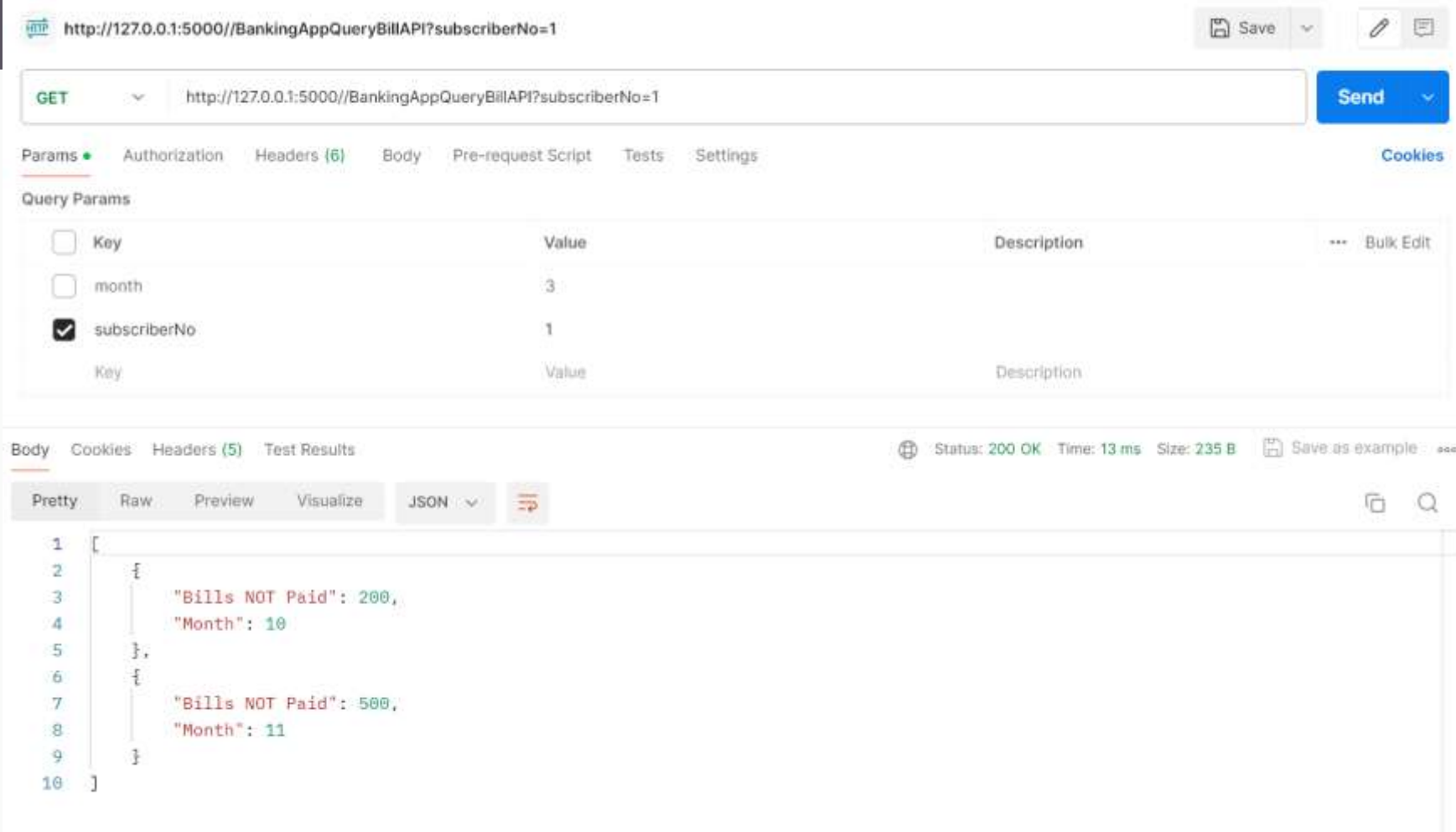
<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	subscriberNo	5			
<input checked="" type="checkbox"/>	month	3			
	Key	Value	Description		
- Body Tab:** Active tab showing the response body.
- Status:** 404 NOT FOUND
- Time:** 8 ms
- Size:** 231 B
- Save as example:** A button to save the response as an example.
- Response Body (JSON):**

```
1 {  
2   "message": "No bills found for the specified parameters"  
3 }
```

BankingAppQueryBillAPI GET

SUCCESSFUL (200)

Parameters: (SubscriberNo) API Response: (Bills NOT Paid, by month)



The screenshot displays a REST client interface for the endpoint `http://127.0.0.1:5000//BankingAppQueryBillAPI?subscriberNo=1`. The request method is GET, and the status is 200 OK. The response body is a JSON array with two objects, each containing 'Bills NOT Paid' and 'Month' values.

Key	Value	Description
<input type="checkbox"/> Key		
<input type="checkbox"/> month	3	
<input checked="" type="checkbox"/> subscriberNo	1	

Key	Value	Description
<input type="checkbox"/> Key		
<input type="checkbox"/> month	3	
<input checked="" type="checkbox"/> subscriberNo	1	

Body: Cookies Headers (5) Test Results

Status: 200 OK Time: 13 ms Size: 235 B Save as example


Pretty Raw Preview Visualize JSON



```
1 [
2   {
3     "Bills NOT Paid": 200,
4     "Month": 10
5   },
6   {
7     "Bills NOT Paid": 500,
8     "Month": 11
9   }
10 ]
```



BankingAppQueryBillAPI GET


NOT FOUND (404)


Parameters: (SubscriberNo) API Response: (Bills NOT Paid, by month)


 http://127.0.0.1:5000//BankingAppQueryBillAPI?subscriberNo=8

 Save 

GET  http://127.0.0.1:5000//BankingAppQueryBillAPI?subscriberNo=8


Send 



Params  Authorization Headers (6) Body Pre-request Script Tests Settings



Cookies



Query Params

<input type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input type="checkbox"/>	month	3			
<input checked="" type="checkbox"/>	subscriberNo	8			
	Key	Value	Description		

Body  Cookies Headers (5) Test Results

 Status: 404 NOT FOUND Time: 10 ms Size: 238 B  Save as example ...

Pretty Raw Preview Visualize JSON  

```
1 {  
2   "message": "No unpaid bills found for the specified subscriber"  
3 }
```

WebSitePayBillAPI PUT

SUCCESSFUL (200)

Parameters: (SubscriberNo, Month)

API Response: (Payment Status: Successful, Error)

The screenshot shows a REST client interface with the following details:

- URL:** `http://127.0.0.1:5000/WebSitePayBillAPI/4/9?subscriberNo=4&month=9`
- Method:** PUT
- Params:** subscriberNo=4, month=9
- Status:** 200 OK
- Time:** 23 ms
- Size:** 209 B
- Response Body:**

```
{  "message": "Bill with ID 6 marked as paid"}
```

The interface includes tabs for Params, Authorization, Headers (7), Body, Pre-request Script, Tests, and Settings. The Params tab is active, showing a table of query parameters:

Key	Value	Description
subscriberNo	4	
month	9	






The Body tab is also active, showing the JSON response in a code editor.


WebSitePayBillAPI PUT

CONFLICT (409)


Parameters: (SubscriberNo, Month)


API Response: (Payment Status: Successful, Error)

 http://127.0.0.1:5000/WebSitePayBillAPI/1/8?subscriberNo=1&moth=8  Save   

PUT 

http://127.0.0.1:5000/WebSitePayBillAPI/1/8?subscriberNo=1&moth=8


Send 



Params  Authorization Headers (7) Body Pre-request Script Tests Settings



Cookies



Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	subscriberNo	1			
<input checked="" type="checkbox"/>	moth	8			
	Key	Value	Description		

Body  Cookies Headers (5) Test Results

 Status: 409 CONFLICT Time: 35 ms Size: 207 B  Save as example ...

Pretty Raw Preview Visualize JSON  


```
1 {  
2   "message": "Bill is already paid"  
3 }
```

WebSitePayBillAPI PUT

NOT FOUND (404)

Parameters: (SubscriberNo, Month)

API Response: (Payment Status: Successful, Error)

 http://127.0.0.1:5000/WebSitePayBillAPI/4/9?subscriberNo=15&month=10

PUT

http://127.0.0.1:5000/WebSitePayBillAPI/4/9?subscriberNo=15&month=10

Send

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	subscriberNo	15			
<input checked="" type="checkbox"/>	month	10			
	Key	Value	Description		

Body

Cookies

Headers (5)

Test Results

Status: 404 NOT FOUND

Time: 32 ms

Size: 240 B

Save as example

...

Pretty

Raw

Preview

Visualize

JSON

```
1 {
2   "message": "No bills found for the specified subscriber or month"
3 }
```

WebSiteAdminAddBillAPI POST

SUCCESSFUL (200)

Parameters: (SubscriberNo, Month, Transaction Status, First Name, Second Name, Bill Total, Bill Details) API Response: (Transaction status)

HTTP http://127.0.0.1:5000/admin_add_bill?firstName=Marie&lastName=Vega&subscriberNo=5&bill=400&month=11&billDeatils=asdasdas Save

POST http://127.0.0.1:5000/admin_add_bill?firstName=Marie&lastName=Vega&subscriberNo=5&bill=400&month=11&billDeatils=asdasdas&transaction_sta Send

Params Authorization Headers (7) Body Pre-request Script Tests Settings Cookies

Query Params

<input type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	firstName	Marie			
<input checked="" type="checkbox"/>	lastName	Vega			
<input checked="" type="checkbox"/>	subscriberNo	5			
<input checked="" type="checkbox"/>			

Body Cookies Headers (5) Test Results Status: 200 OK Time: 26 ms Size: 250 B Save as example

Pretty Raw Preview Visualize JSON

```
1 {
2   "message": "Bill added for subscriber 5 for month 11 with transaction status False"
3 }
```

WebSiteAdminAddBillAPI POST

CONFLICT (409)

Parameters: (SubscriberNo, Month, Transaction Status, First Name, Second Name, Bill Total, Bill Details) API Response: (Transaction status)

The screenshot shows a REST client interface with the following details:

- URL:** `http://127.0.0.1:5000/admin_add_bill?firstName=Marie&lastName=Vega&subscriberNo=3&bill=250&month=10&billDeatils=asdasdas`
- Method:** POST
- Params:**

Key	Value
lastName	Vega
subscriberNo	3
bill	250
month	10
bill	300
- Status:** 409 CONFLICT
- Time:** 21 ms
- Size:** 239 B
- Response (JSON):**

```
{  1  {  2    "message": "A bill already exists for subscriber for that month "  3  }
```


WebSiteAdminAddBillAPI POST

BAD REQUEST (400)

Parameters: (SubscriberNo, Month, Transaction Status, First Name, Second Name, Bill Total, Bill Details) API Response: (Transaction status)

The screenshot shows a REST client interface with the following details:

- URL:** `http://127.0.0.1:5000/admin_add_bill?firstName=Marie&lastName=Vega&subscriberNo=3&month=10&billDeatils=asdasdas&transact`
- Method:** POST
- Request URL:** `http://127.0.0.1:5000/admin_add_bill?firstName=Marie&lastName=Vega&subscriberNo=3&month=10&billDeatils=asdasdas&transaction_status=0`
- Params:**

Key	Value
lastName	Vega
subscriberNo	3
bill	250
month	10
bill	300
- Status:** 400 BAD REQUEST
- Time:** 9 ms
- Size:** 269 B
- Response Body (JSON):**

```
{  "message": "Missing parameters. Please provide subscriberNo, month, and transaction_status."}
```

**THANK YOU FOR
LISTENING**

REFERENCES