



Classic Model Business

Objective

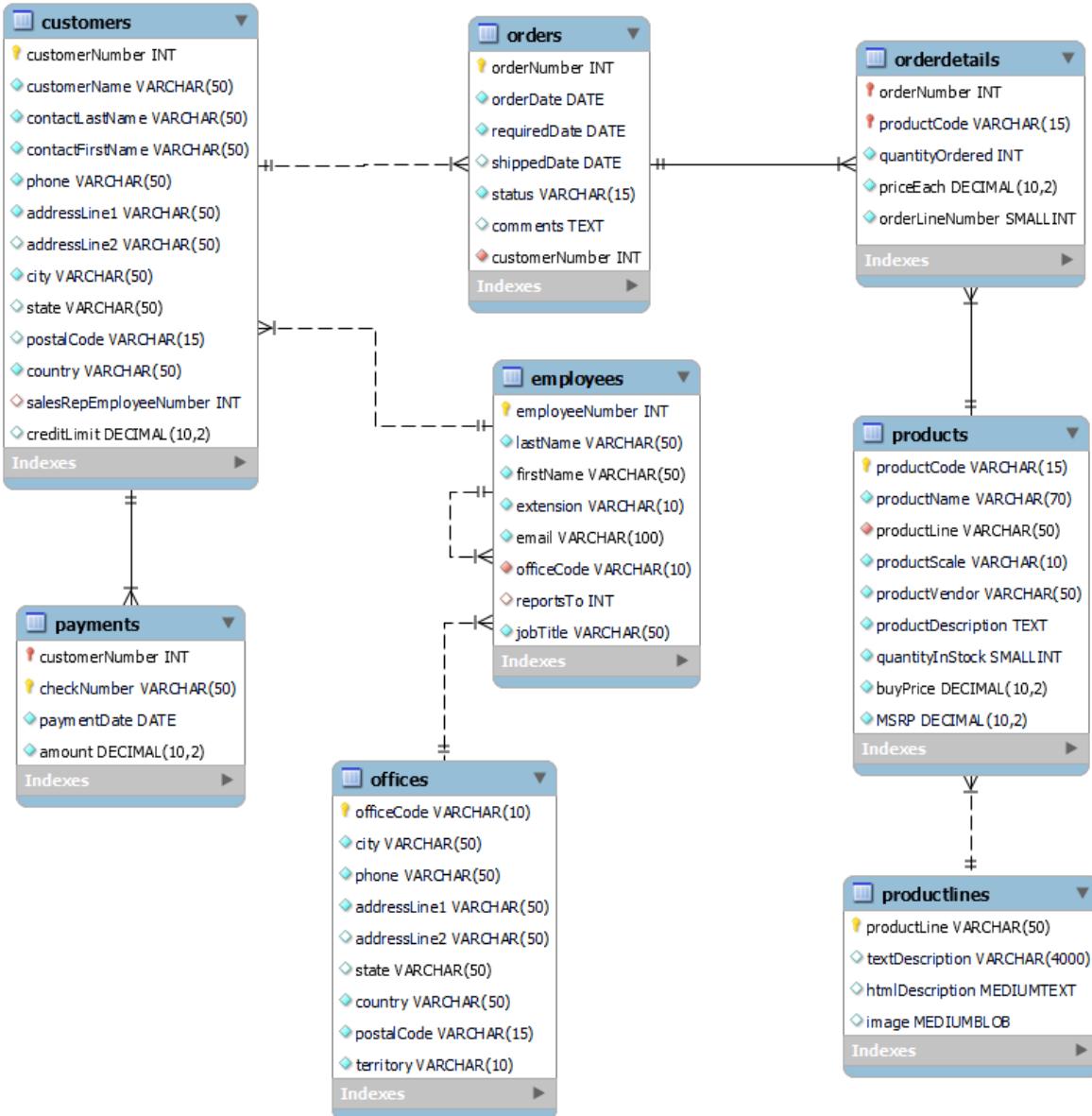


The "Classic Model Business" project's integrated system, featuring relational database management through APIs and a user-friendly UI, is poised to revolutionize the efficiency of day-to-day business operations. This initiative not only streamlines data management but also provides a clear and accessible interface for users to navigate and leverage the functionalities offered by the comprehensive system.

Database schema:

▼ ER Diagram

[classicbusinessmodel.mwb](#)



▼ MySQL Script file

```
classicbusinessmodel_schema.sql
```

Design Guidelines

1. All Rest API request and response format must be in JSON.

- 200, 201, 400, 404, 401, 500, 505 – use appropriate http status code in your response object.
- Handle the Rest exceptions globally using Rest exception handler for all endpoints.
- Sample Error Responses are shown in below table, participants to identify error paths for all the Endpoints.
- Test your Rest API using Junit and Mockito.
- Participants should not alter database schema under any circumstances except wherever changes are mentioned explicitly.
- All GET and POST requests for Employee are secured.
- Alter image column of Product Lines to URL.
- Remove username & password columns of Employee table instead use separate table for security.
- Add role column (with only 2 values "Admin || Non Admin") in Employee table.

Rest API Design

All REST API requests and responses follow the JSON format. The project employs standard HTTP status codes (200, 201, 400, 404, 401, 500, 505) appropriately in response objects to convey the outcome of API requests.

Status Codes

HTTP response codes are used to indicate general classes of success and error.

HTTP Status Quote	Description
200	Successfully processed request.
201	Created
202	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden

HTTP Status Quote	Description
404	Not Found
500	Internal Server Error

Endpoints

Endpoints (1)

Path URL	HTTP Methods	Description	Success Response	Error Response
/api/v1/employee/all	GET	Get All Employees	Collection of Employees.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/employee/{employee_no}	GET	Get Employees by employee number	Employee Object	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/employee/office/{office_code}	GET	Get Employees by office_code	Collection of Employees.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/employee/city/{city}	GET	Get Employees by city	Collection of Employees.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/employee/add	POST	Add new Employee	{ "timeStamp": "2023-06-08", "message": "Employee details added successfully" }	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
/api/v1/employee/update/{employee_number}	PUT	Update Employee by employee_number	{ "timeStamp": "2023-06-08", "message": "Validation failed" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
			"Employee details updated successfully"	"Validation failed"
<u>/api/v1/employee/{old_employee_number}/reports_to/{new_employee_number}</u>	PUT	<u>Update employee's reporting hierarchy</u>	{ "timeStamp": "2023-06-08", "message": "Employee details updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/employee/role/{role}</u>	PUT	<u>Update the role of employee</u>	{ "timeStamp": "2023-06-08", "message": "Employee role updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/employee/{employee_number}/map_to_office/{office_code}</u>	PUT	<u>Update Employee office details by office_code and employee_number</u>	{ "timeStamp": "2023-06-08", "message": "Employee office details updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/employee/delete/{employee_number}</u>	DELETE	<u>Delete Employee by employee_number</u>	{ "timeStamp": "2023-06-08", "message": "Employee details deleted successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/office/all</u>	GET	<u>Get All Offices</u>	Collection of Offices.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/office/{office_code}</u>	GET	<u>Get Office by office_code</u>	Office Object	{"timeStamp": "2023-06-08", "message": "Validation failed"}

Path URL	HTTP Methods	Description	Success Response	Error Response
				{"message": "Validation failed"}
/api/v1/office/{city1}/{city2}/{cityN}	GET	<u>Get office details from provided list of different cities</u>	Collection of Employees.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/office/add	POST	<u>Add new Office</u>	{ "timeStamp": "2023-06-08", "message": "Office details added successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/office/{office_code}/{phone_number}	PUT	<u>Update Office with new phone number</u>	{ "timeStamp": "2023-06-08", "message": "Office phone number updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/office/update/{office_code}	PUT	<u>Update Office Object</u>	{ "timeStamp": "2023-06-08", "message": "Office details updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/orderdetails/all	GET	<u>Get All OrderDetails</u>	Collection of OrderDetails.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/orderdetails/{order_number}	GET	<u>Get OrderDetails by order_number</u>	Collection of OrderDetails	{"timeStamp": "2023-06-08", "message": "Validation failed"}

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
<code>/api/v1/orderdetails/{order_number}/{product_code}</code>	GET	<u>Get OrderDetails</u>	OrderDetails Object	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<code>/api/v1/orderdetails/total_orders/{order_number}</code>	GET	<u>Get Sum of all order by order_number</u>	Sum of OrderDetails	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<code>/api/v1/orderdetails/total_sales</code>	GET	<u>Get Total Sales of OrderDetails</u>	Total Sales of OrderDetails	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<code>/api/v1/orderdetails/add</code>	POST	<u>Add new OrderDetails</u>	{ "timeStamp": "2023-06-08", "message": "Order details added successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<code>/api/v1/customer/all</code>	GET	<u>Get All Customers</u>	Collection of Customers.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<code>/api/v1/customer/{customer_number}</code>	GET	<u>Get Customer by customer_number</u>	Customer Object	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<code>/api/v1/customer/office/{office_code}</code>	GET	<u>Get Customers by office_code</u>	Collection of Customers.	{"timeStamp": "2023-06-08", "message": "Validation failed"}

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
/api/v1/customer/ customer_name/ {customer_name} }	GET	Get Customer by customer_name	Customer Object.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/customer/ sales_rep_emplo yee_number/{sal es_rep_employee _number}	GET	Get Customer by sales_rep_employee number	Customer Object.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/customer/ city/{city}	GET	Get Customers by city	Collection of Customers.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/customer/ country/{country} }	GET	Get Customers by country	Collection of Customers.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/customer/ phone/{phone}	GET	Get Customers by phone number	Customer Object	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/customer/ contact_firstname e/{contact_firstname ame}	GET	Get Customers by contact_firstname	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/customer/ contact_lastname e/{contact_lastname ame}	GET	Get Customers by contact_lastname	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/customer/ credit_limit/{cre dit_limit}	GET	Get Customers by credit_limit	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
<u>/api/v1/customer/postal_code/{postal_code}</u>	GET	<u>Get Customers by postal_code</u>	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/customer/credit_range/{min_credit}/{max_credit}</u>	GET	<u>Get Customers between minimum and maximum credit range</u>	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/customer/customer_firstname/{firstname}</u>	GET	<u>Get Customers by firstname</u>	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/customer/greater_than/{credit_limit}</u>	GET	<u>Get Customers with credit limit greater than {credit_limit}</u>	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/customer/less_than/{credit_limit}</u>	GET	<u>Get Customers with credit limit less than {credit_limit}</u>	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/customer/add</u>	POST	<u>Add new Office</u>	{ "timeStamp": "2023-06-08", "message": "Customer details added successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/customer/update/{customer_number}</u>	PUT	<u>Update Customer by customer_number</u>	{ "timeStamp": "2023-06-08", "message": "Customer details updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
<code>/api/v1/customer/{customer_number}/{contact_lastname}</code>	PUT	<u>Update Customer's contact lastname</u>	<pre>{ "timeStamp": "2023-06-08", "message": "Customer contact lastname details updated successfully" }</pre>	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/customer/{customer_number}/{contact_firstname}</code>	PUT	<u>Update Customer's contact firstname</u>	<pre>{ "timeStamp": "2023-06-08", "message": "Customer contact firstname details updated successfully" }</pre>	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/customer/address/{customer_number}</code>	PUT	<u>Update Customer's address</u>	<pre>{ "timeStamp": "2023-06-08", "message": "Customer address updated successfully" }</pre>	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/payment/all</code>	GET	<u>Get All Payments</u>	Collection of Payments.	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/payment/{customer_number}</code>	GET	<u>Get Payment by customer_number</u>	Payment Object	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/payment/payment_date/{payment_date}</code>	GET	<u>Get Payment's by payments date</u>	Collection of payments.	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
<u>/api/v1/payment/customer_payment_date/{payment_date}</u>	GET	<u>Get Customer's by payments date</u>	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/payment/check_number/{check_number}</u>	GET	<u>Get Payment's by check_number</u>	Collection of payments.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/payment/total_amount/{customer_number}</u>	GET	<u>Get total amount of Payments by customer_number</u>	Total amount of payments	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/payment/customers/{check_number}</u>	GET	<u>Get Customer's by check_number</u>	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/payment/max_amount/{amount}</u>	GET	<u>Get Customer by max payment amount</u>	Customer Object	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/payment/customers/{start Paydate}/{endpaydate}</u>	GET	<u>Get Customer between start payment_date and end payment_date</u>	Collection of Customers	{"timeStamp": "2023-06-08", "message": "Validation failed"}
<u>/api/v1/payment/add</u>	POST	<u>Add new Payment</u>	{ "timeStamp": "2023-06-08", "message": "Payment details added successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
<code>/api/v1/payment/check_number/{check_number}/{customer_number}</code>	PUT	<u>Update Payment's check_number by customer_number</u>	<pre>{ "timeStamp": "2023-06-08", "message": "Check number updated successfully" }</pre>	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/payment/amount/{amount}/{check_number}</code>	PUT	<u>Update Payment's amount by check_number</u>	<pre>{ "timeStamp": "2023-06-08", "message": "Amount updated successfully" }</pre>	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/orders/all</code>	GET	<u>Get All Orders</u>	Collection of Orders.	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/orders/{order_number}</code>	GET	<u>Get Orders by order_number</u>	Orders Object	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/orders/{customer_number}</code>	GET	<u>Get Customer's by customer_number</u>	Collection of Orders.	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/orders/order_date/{order_date}</code>	GET	<u>Get Orders by order_date</u>	Collection of Orders.	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/orders/required_date/{required_date}</code>	GET	<u>Get Orders by required_date</u>	Collection of Orders.	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>
<code>/api/v1/orders/shipped_date/{shipped_date}</code>	GET	<u>Get Orders by shipped_date</u>	Collection of Orders.	<pre>{"timeStamp": "2023-06-08", "message": "Validation failed"}</pre>

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
<code>ped_date}</code>				<code>{"Validation failed"}</code>
<code>/api/v1/orders/status/{status}</code>	GET	<u>Get Orders by status</u>	Collection of Orders.	<code>{"timeStamp": "2023-06-08", "message": "Validation failed"}</code>
<code>/api/v1/orders/{customer_number}/{status}</code>	GET	<u>Get Orders by customer_number and status</u>	Collection of Orders.	<code>{"timeStamp": "2023-06-08", "message": "Validation failed"}</code>
<code>/api/v1/orders/products_details/{order_number}</code>	GET	<u>Get Products by order_number</u>	Collection of Product.	<code>{"timeStamp": "2023-06-08", "message": "Validation failed"}</code>
<code>/api/v1/orders/products_shipped_details</code>	GET	<u>Get Products where order status is "shipped"</u>	Collection of Product.	<code>{"timeStamp": "2023-06-08", "message": "Validation failed"}</code>
<code>/api/v1/orders/add</code>	POST	<u>Add new Orders</u>	<code>{ "timeStamp": "2023-06-08", "message": "Orders details added successfully" }</code>	<code>{"timeStamp": "2023-06-08", "message": "Validation failed"}</code>
<code>/api/v1/orders/{order_number}/{shipped_date}</code>	PUT	<u>Update Orders shipped_date by order_number</u>	<code>{ "timeStamp": "2023-06-08", "message": "Shipped Date updated successfully" }</code>	<code>{"timeStamp": "2023-06-08", "message": "Validation failed"}</code>
<code>/api/v1/orders/{order_number}/{status}</code>	PUT	<u>Update Orders status by order_number</u>	<code>{ "timeStamp": "2023-06-08", "message": "Order status updated" }</code>	<code>{"timeStamp": "2023-06-08", "message": "Validation failed"}</code>

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
			successfully" }	
/api/v1/product/all	GET	<u>Get All Products</u>	Collection of Product.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/{product_code}	GET	<u>Get Product by product_code</u>	Product Object	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/name/{product_name}	GET	<u>Get Product by product_name</u>	Product Object	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/scale/{product_scale}	GET	<u>Get Product by product_scale</u>	Collection of Product.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/vendor/{product_vendor}	GET	<u>Get Product by product_vendor</u>	Collection of Product.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/total_ordered_qty/{product_code}	GET	<u>Get Total Ordered Quantity</u>	Total Ordered Quantity	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/total_sale/{product_code}	GET	<u>Get total sales by product_code</u>	Total sale amount for given product	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/total_sale/{product_code}	GET	<u>Get total sales by product_code</u>	Total sale amount for given product	{"timeStamp": "2023-06-08", "message": "Validation failed"}

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
				"Validation failed"
/api/v1/product/total_sale/{product_code}	GET	Get total sales by product_code	Total sale amount for given product	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/add	POST	Add new Product	{ "timeStamp": "2023-06-08", "message": "Product details added successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/{product_code}/{buy_price}	PUT	Update Product's Buy Price	{ "timeStamp": "2023-06-08", "message": "Product Buy Price updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/update_quantity/{product_code}/{quantity_in_stock}	PUT	Update Product's quantity_in_stock	{ "timeStamp": "2023-06-08", "message": "Quantity in Stock details updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/msrp/{product_code}/{msrp}	PUT	Update Product's MSRP	{ "timeStamp": "2023-06-08", "message": "MSRP details updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/product/vendor/{product_code}/{product_vendor}	PUT	Update Product's vendor	{ "timeStamp": "2023-06-08", "message": "Vendor details updated" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}

🔗 Path URL	HTTP Methods	Description	✓ Success Response	✗ Error Response
			"successfully" }	
/api/v1/product/name/{product_code}/{product_name}	PUT	<u>Update Product's Product name</u>	{ "timeStamp": "2023-06-08", "message": "Product name details updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
api/v1/product/scale/{product_code}/{product_scale}	PUT	<u>Update Product's Product Scale</u>	{ "timeStamp": "2023-06-08", "message": "Product Scale details updated successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/productlines/all	GET	<u>Get All ProductLines</u>	Collection of ProductLines.	{"timeStamp": "2023-06-08", "message": "Validation failed"}
/api/v1/productlines/add	POST	<u>Add new ProductLines</u>	{ "timeStamp": "2023-06-08", "message": "ProductLines details added successfully" }	{"timeStamp": "2023-06-08", "message": "Validation failed"}