



Classic Model Business

Objective

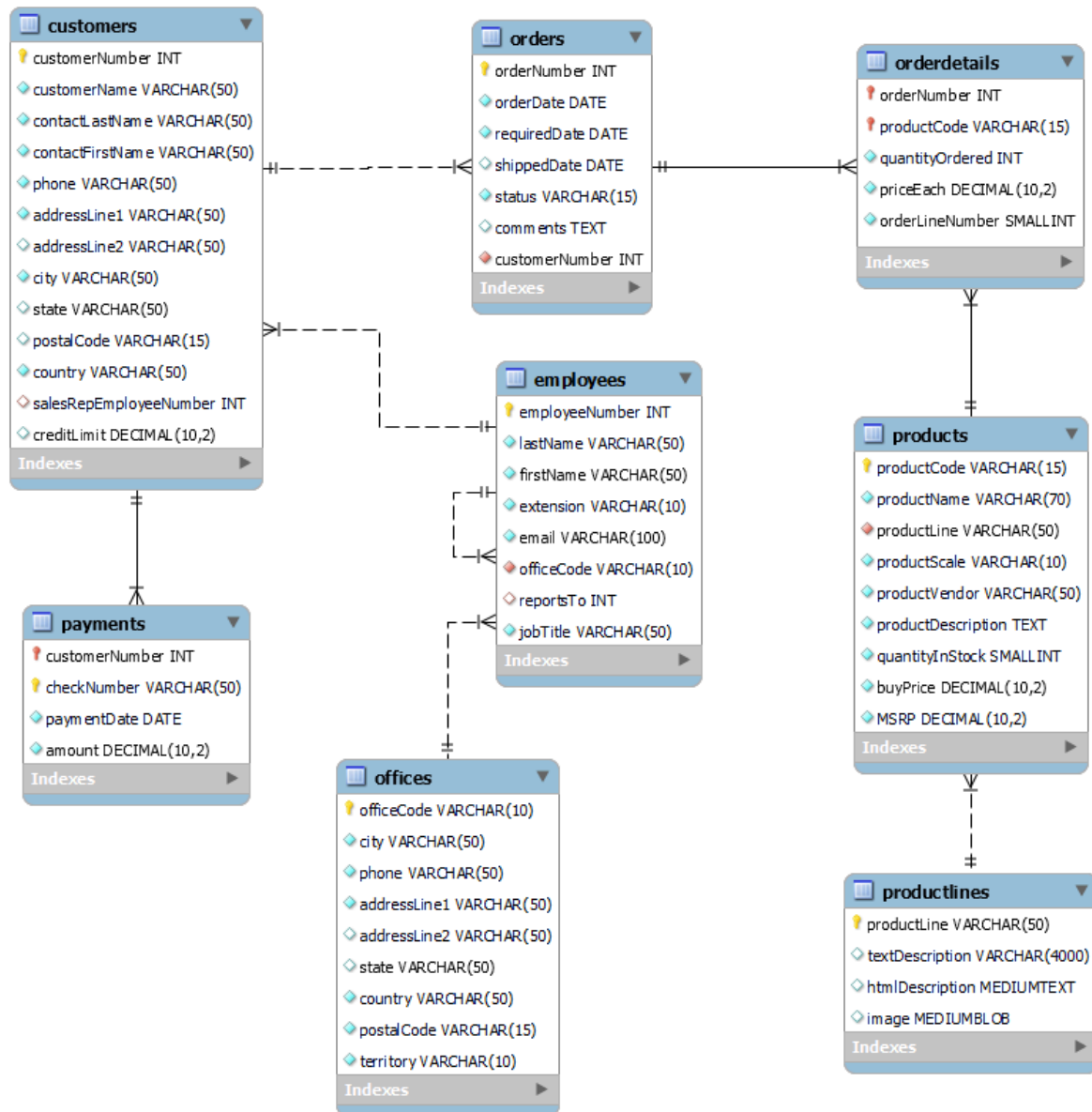


The "Classic Model Business" project's integrated system, featuring relational database management through APIs and a user-friendly UI, is poised to revolutionize the efficiency of day-to-day business operations. This initiative not only streamlines data management but also provides a clear and accessible 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.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/employee/{employee_no}	GET	Get Employees by employee number	Employee Object	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/employee/office/{office_code}	GET	Get Employees by office code	Collection of Employees.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/employee/city/{city}	GET	Get Employees by city	Collection of Employees.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/employee/add	POST	Add new Employee	<pre>{ "timeStamp": "2023-06-08", "message": "Employee details added successfully" }</pre>	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/employee/update/{employee_number}	PUT	Update Employee by employee number	<pre>{ "timeStamp": "2023-06-08", "message": </pre>	<pre>{ "timeStamp": "2023-06-08", "message": </pre>

🔗 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", }

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

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

 Path URL	 HTTP Methods	 Description	 Success Response	 Error Response
/api/v1/customer/customer_name/{customer_name}	GET	Get Customer by customer_name	Customer Object.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/customer/sales_rep_employee_number/{sales_rep_employee_number}	GET	Get Customer by sales_rep_employee_number	Customer Object.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/customer/city/{city}	GET	Get Customers by city	Collection of Customers.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/customer/country/{country}	GET	Get Customers by country	Collection of Customers.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/customer/phone/{phone}	GET	Get Customers by phone number	Customer Object	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/customer/contact_firstname/{contact_firstname}	GET	Get Customers by contact_firstname	Collection of Customers	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/customer/contact_lastname/{contact_lastname}	GET	Get Customers by contact_lastname	Collection of Customers	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
/api/v1/customer/credit_limit/{credit_limit}	GET	Get Customers by credit_limit	Collection of Customers	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>

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

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

🔗 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
<u>/api/v1/payment/check_number/{check_number}/{customer_number}</u>	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>
<u>/api/v1/payment/amount/{amount}/{check_number}</u>	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>
<u>/api/v1/orders/all</u>	GET	<u>Get All Orders</u>	Collection of Orders.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
<u>/api/v1/orders/{order_number}</u>	GET	<u>Get Orders by order_number</u>	Orders Object	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
<u>/api/v1/orders/{customer_number}</u>	GET	<u>Get Customer's by customer_number</u>	Collection of Orders.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
<u>/api/v1/orders/order_date/{order_date}</u>	GET	<u>Get Orders by order_date</u>	Collection of Orders.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
<u>/api/v1/orders/required_date/{required_date}</u>	GET	<u>Get Orders by required_date</u>	Collection of Orders.	<pre>{ "timeStamp": "2023-06-08", "message": "Validation failed" }</pre>
<u>/api/v1/orders/shipped_date/{shipped_date}</u>	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
<u>ped_date}</u>				"Validation failed"
<u>/api/v1/orders/status/{status}</u>	GET	<u>Get Orders by status</u>	Collection of Orders.	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
<u>/api/v1/orders/{customer_number}/{status}</u>	GET	<u>Get Orders by customer_number and status</u>	Collection of Orders.	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
<u>/api/v1/orders/products_details/{order_number}</u>	GET	<u>Get Products by order_number</u>	Collection of Product.	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
<u>/api/v1/orders/products_shipped_details</u>	GET	<u>Get Products where order status is "shipped"</u>	Collection of Product.	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
<u>/api/v1/orders/add</u>	POST	<u>Add new Orders</u>	{ "timeStamp": "2023-06-08", "message": "Orders details added successfully" }	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
<u>/api/v1/orders/{order_number}/{shipped_date}</u>	PUT	<u>Update Orders shipped_date by order_number</u>	{ "timeStamp": "2023-06-08", "message": "Shipped Date updated successfully" }	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
<u>/api/v1/orders/{order_number}/{status}</u>	PUT	<u>Update Orders status by order_number</u>	{ "timeStamp": "2023-06-08", "message": "Order status updated" }	{ "timeStamp": "2023-06-08", "message": "Validation failed" }

🔗 Path URL	🔧 HTTP Methods	📝 Description	✅ Success Response	❌ Error Response
			successfully"	
/api/v1/product/all	GET	Get All Products	Collection of Product.	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
/api/v1/product/{product_code}	GET	Get Product by product_code	Product Object	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
/api/v1/product/name/{product_name}	GET	Get Product by product_name	Product Object	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
/api/v1/product/scale/{product_scale}	GET	Get Product by product_scale	Collection of Product.	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
/api/v1/product/vendor/{product_vendor}	GET	Get Product by product_vendor	Collection of Product.	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
/api/v1/product/total_ordered_qty/{product_code}	GET	Get Total Ordered Quantity	Total Ordered Quantity	{ "timeStamp": "2023-06-08", "message": "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/total_sale/{product_code}	GET	Get total sales by product_code	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	<u>Get total sales by product code</u>	Total sale amount for given product	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
/api/v1/product/add	POST	<u>Add new Product</u>	{ "timeStamp": "2023-06-08", "message": "Product details added successfully" }	{ "timeStamp": "2023-06-08", "message": "Validation failed" }
/api/v1/product/{product_code}/{buy_price}	PUT	<u>Update Product's Buy Price</u>	{ "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	<u>Update Product's quantity in stock</u>	{ "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	<u>Update Product's MSRP</u>	{ "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	<u>Update Product's vendor</u>	{ "timeStamp": "2023-06-08", "message": "Vendor details updated" }	{ "timeStamp": "2023-06-08", "message": "Validation failed" }

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