Assigment

TechShop

Main Menu

```
WELCOME TO TECH SHOP!
1. Customer Operations
2. Product Operations
3. Order Operations
4. Inventory Operations
5. Report Operations
6. Payment Operations
7. Exit
Enter your choice:
```

Customers

Adding Customer

<u>Validation: Name</u>

```
Customer Operations:
1. Register Customer
2. Update Customer Info
3. Back to Main Menu
Enter your choice: 1
Enter your first name: sam23123
Enter your last name: pal
Enter customer email: sameer234@gami.com
Enter customer phone: 8765432345
Enter address: 123, gzb
Error: First name should contain only letters.
```

<u>Validation</u> : For Mail

```
Customer Operations:
1. Register Customer
2. Update Customer Info
3. Back to Main Menu
Enter your choice: 1
Enter your first name: sameer
Enter your last name: yadav
Enter customer email: yadavgmailcom
Enter customer phone: 2345678
Enter address: 123, gaz
Error: Invalid email format.
```

Validation : Duplicate Mail

```
Customer Operations:
1. Register Customer
2. Update Customer Info
3. Back to Main Menu
Enter your choice: 1
Enter your first name: yash
Enter your last name: pandey
Enter customer email: sameer.yadav@gmail.com
Enter customer phone: 234567856432
Enter address: Moradabad
Email already exists.
```

Registration (All Checks)

```
Customer Operations:
1. Register Customer
2. Update Customer Info
3. Back to Main Menu
Enter your choice: 1
Enter your first name: sameer
Enter your last name: yadav
Enter customer email: sameer.yadav@gmail.com
Enter customer phone: 3456787
Enter address: 123, SA
Customer  registered successfully.
```

	CustomerID	FirstName	LastName	Email	Phone	Address
9	9	Grace	Moore	grace.moore@example.com	555-7788	555 Spruce St
10	10	Harry	Anderson	harry.anderson@example.com	555-9911	666 Aspen St
11	11	Ivy	Clark	ivy.clark@example.com	555-2233	777 Willow St
12	12	Jack	Martin	jack.martin@example.com	555-4455	888 Redwood St
13	13	Kelly	Lee	kelly.lee@example.com	21312312	qwe
14	14	Liam	Harris	liam.harris@example.com	555-8899	123 Maplewood St
15	15	Mia	Walker	mia.walker@example.com	555-1212	456 Oakwood St
16	16	Noah	Young	noah.young@example.com	555-3434	789 Pinewood St
17	17	Olivia	King	olivia.king@example.com	555-5656	101 Birchwood St
18	18	Paul	Scott	paul.scott@example.com	555-7878	202 Elmwood St
19	19	Quinn	Adams	quinn.adams@example.com	555-9090	303 Cedarwood St
20	20	Rachel	Baker	rachel.baker@example.com	555-0101	404 Maple St
21	21	JOHN	SMITH	ACVZ@GMAIL.COM	123-456...	1DQW, WALL ST...
22	22	sameer	pal	sameer@gmail.co	876578	asdad
23	23	sam	eer	sameer@gmail.com	123123...	123 b block, delhi
24	24	sameer	yadav	sameer.yadav@gmail.com	3456787	123, SA

Update

```
Customer Operations:
1. Register Customer
2. Update Customer Info
3. Back to Main Menu
Enter your choice: 2
Enter customer ID or email to update: 24
Current Customer Details:
ID: 24, Name: sameer yadav, Email: sameer.yadav@gmail.com, Phone: 3456787, Address: 123, SA
Enter new first name (current: sameer):
Enter new last name (current: yadav):
Enter new email (current: sameer.yadav@gmail.com):
Enter new phone number (current: 3456787): 98442352
Enter new address (current: 123, SA):
Customer updated successfully.
```

	CustomerID	FirstName	LastName	Email	Phone	Address
10	10	Harry	Anderson	harry.anderson@example.com	555-9911	666 Aspen St
11	11	Ivy	Clark	ivy.clark@example.com	555-2233	777 Willow St
12	12	Jack	Martin	jack.martin@example.com	555-4455	888 Redwood St
13	13	Kelly	Lee	kelly.lee@example.com	21312312	qwe
14	14	Liam	Harris	liam.harris@example.com	555-8899	123 Maplewood St
15	15	Mia	Walker	mia.walker@example.com	555-1212	456 Oakwood St
16	16	Noah	Young	noah.young@example.com	555-3434	789 Pinewood St
17	17	Olivia	King	olivia.king@example.com	555-5656	101 Birchwood St
18	18	Paul	Scott	paul.scott@example.com	555-7878	202 Elmwood St
19	19	Quinn	Adams	quinn.adams@example.com	555-9090	303 Cedarwood St
20	20	Rachel	Baker	rachel.baker@example.com	555-0101	404 Maple St
21	21	JOHN	SMITH	ACVZ@GMAIL.COM	123-456...	1DQW, WALL ST...
22	22	sameer	pal	sameer@gmail.co	876578	asdad
23	23	sam	eer	sameer@gmail.com	123123...	123 b block, delhi
24	24	sameer	yadav	sameer.yadav@gmail.com	98442352	123, SA
25	25	sarthak	sharma	sarthak@gmail.com	21321123	123, la

Product

Add product

```
Product Operations:
1. Add Product
2. Update Product
3. View All Products
4. Delete Products
5. Back to Main Menu
Enter your choice: 1
Enter product name: smartphone tablet
Enter product description: tablet
Enter product price: 23424
Product added successfully.
```

	ProductID	ProductName	Description	Price
8	8	Mechanical Keyboard	RGB backlit, Cherry MX switches	99
9	9	Monitor	27-inch 4K display	399
10	10	External SSD	1TB, USB-C, Portable	149
11	11	Portable Charger	10,000mAh, fast charging	49
12	12	Smart Speaker	Voice-controlled, built-in assistant	129
13	13	Bluetooth Earbuds	Wireless, noise-canceling	89
14	14	VR Headset	Virtual reality, high resolution	599
15	15	Smart Home Hub	Control smart devices, voice assistant	99
16	16	Drone	4K camera, GPS navigation	799
17	17	Fitness Band	Activity tracker, heart-rate monitor	59
18	18	Camera	DSLR, 24MP, 18-55mm lens	899
19	19	Smart Thermostat	WiFi-enabled, energy saving	199
20	20	E-reader	6-inch display, 8GB storage	141
21	21	SAMSUNG	OLED TV	79...
22	22	tv	samsung tv	23...
23	24	smartphone tablet	tablet	23...

Update product

```
Product Operations:
1. Add Product
2. Update Product
3. View All Products
4. Delete Products
5. Back to Main Menu
Enter your choice: 2
Enter product ID to update: 22
Enter new product name: sony led
Enter new product description: OLED
Enter new product price: 2342
Enter categoryElectronics
Product updated successfully.
```

	ProductID	ProductName	Description	Price	Categories
9	9	Monitor	27-inch 4K display	399	Displays
10	10	External SSD	1TB, USB-C, Portable	149	Storage
11	11	Portable Charger	10,000mAh, fast charging	49	Power
12	12	Smart Speaker	Voice-controlled, built-in assistant	129	Smart Home
13	13	Bluetooth Earbuds	Wireless, noise-canceling	89	Accessories
14	14	VR Headset	Virtual reality, high resolution	599	Gaming
15	15	Smart Home Hub	Control smart devices, voice assistant	99	Smart Home
16	16	Drone	4K camera, GPS navigation	799	Drones
17	17	Fitness Band	Activity tracker, heart-rate monitor	59	Wearables
18	18	Camera	DSLR, 24MP, 18-55mm lens	899	Cameras
19	19	Smart Thermostat	WiFi-enabled, energy saving	199	Smart Home
20	20	E-reader	6-inch display, 8GB storage	141	Electronics
21	21	SAMSUNG	OLED TV	79...	Electronics
22	22	sony led	OLED	2342	Electronics

Get all products

```
Product Operations:
1. Add Product
2. Update Product
3. View All Products
4. Delete Products
5. Back to Main Menu
Enter your choice: 3
(1, 'Laptop', '15-inch display, 8GB RAM', 878, 'Electronics')
(2, 'Smartphone', '5G enabled, 64GB storage', 658, 'Electronics')
(3, 'Tablet', '10-inch screen, 32GB storage', 328, 'Electronics')
(4, 'Headphones', 'Noise-canceling, over-ear', 199, 'Accessories')
(5, 'Smartwatch', 'Fitness tracker, heart-rate monitor', 149, 'Wearables')
(6, 'Gaming Console', 'Next-gen gaming console', 499, 'Gaming')
(7, 'Wireless Mouse', 'Bluetooth mouse, ergonomic design', 29, 'Accessories')
(8, 'Mechanical Keyboard', 'RGB backlit, Cherry MX switches', 99, 'Accessories')
(9, 'Monitor', '27-inch 4K display', 399, 'Displays')
(10, 'External SSD', '1TB, USB-C, Portable', 149, 'Storage')
(11, 'Portable Charger', '10,000mAh, fast charging', 49, 'Power')
(12, 'Smart Speaker', 'Voice-controlled, built-in assistant', 129, 'Smart Home')
(13, 'Bluetooth Earbuds', 'Wireless, noise-canceling', 89, 'Accessories')
(14, 'VR Headset', 'Virtual reality, high resolution', 599, 'Gaming')
(15, 'Smart Home Hub', 'Control smart devices, voice assistant', 99, 'Smart Home')
(16, 'Drone', '4K camera, GPS navigation', 799, 'Drones')
(17, 'Fitness Band', 'Activity tracker, heart-rate monitor', 59, 'Wearables')
(18, 'Camera', 'DSLR, 24MP, 18-55mm lens', 899, 'Cameras')
(19, 'Smart Thermostat', 'WiFi-enabled, energy saving', 199, 'Smart Home')
(20, 'E-reader', '6-inch display, 8GB storage', 141, 'Electronics')
(21, 'SAMSUNG', 'OLED TV', 79099, 'Electronics')
(22, 'sony led', 'OLED', 2342, 'Electronics')
(24, 'smartphone tablet', 'tablet', 23424, None)
(26, 'Monitor', '27-inch 4K display', 23123, None)
```

Deletion

Validation:

Prod_Id not found ?

```
1. Add Product
2. Update Product
3. View All Products
4. Delete Products
5. Back to Main Menu
Enter your choice: 4
enter Product ID: 234
Product with ID 234 not found.
None
```

Before deletion :

	ProductID	ProductName	Description	Price
8	8	Mechanical Keyboard	RGB backlit, Cherry MX switches	99
9	9	Monitor	27-inch 4K display	399
10	10	External SSD	1TB, USB-C, Portable	149
11	11	Portable Charger	10,000mAh, fast charging	49
12	12	Smart Speaker	Voice-controlled, built-in assistant	129
13	13	Bluetooth Earbuds	Wireless, noise-canceling	89
14	14	VR Headset	Virtual reality, high resolution	599
15	15	Smart Home Hub	Control smart devices, voice assistant	99
16	16	Drone	4K camera, GPS navigation	799
17	17	Fitness Band	Activity tracker, heart-rate monitor	59
18	18	Camera	DSLR, 24MP, 18-55mm lens	899
19	19	Smart Thermostat	WiFi-enabled, energy saving	199
20	20	E-reader	6-inch display, 8GB storage	141
21	21	SAMSUNG	OLED TV	79...
22	22	tv	samsung tv	23...
23	24	smartphone tablet	tablet	23...

```
Product Operations:
1. Add Product
2. Update Product
3. View All Products
4. Delete Products
5. Back to Main Menu
Enter your choice: 4
enter Product ID: 22
Related records in Inventory for Product ID 22 removed successfully.
Product with ID 22 removed successfully from Products.
None
```

After:

16	16	Drone	4K camera, GPS navigation	799	Drones
17	17	Fitness Band	Activity tracker, heart-rate monitor	59	Wearables
18	18	Camera	DSLR, 24MP, 18-55mm lens	899	Cameras
19	19	Smart Thermostat	WiFi-enabled, energy saving	199	Smart Home
20	20	E-reader	6-inch display, 8GB storage	141	Electronics
21	21	SAMSUNG	OLED TV	79...	Electronics
22	24	smartphone tablet	tablet	23...	NULL
23	26	Monitor	27-inch 4K display	23...	NULL

	InventoryID	ProductID	QuantityInStock	LastStockUpdate
2	2	2	3	2024-10-15
3	5	5	10	2024-01-25
4	6	6	25	2024-01-28
5	7	7	40	2024-01-30
6	8	8	60	2024-02-02
7	9	9	5	2024-02-05
8	15	21	23	2024-10-15
9	16	1	22	2024-01-15

Removed from both Inventory and Products

Orders

Validation

If Product is in Inventory ?

```
Product ID: 14, Name: VR Headset, Price: 599
Product ID: 15, Name: Smart Home Hub, Price: 99
Product ID: 16, Name: Drone, Price: 799
Product ID: 17, Name: Fitness Band, Price: 59
Product ID: 18, Name: Camera, Price: 899
Product ID: 19, Name: Smart Thermostat, Price: 199
Product ID: 20, Name: E-reader, Price: 141
Product ID: 21, Name: SAMSUNG, Price: 79099
Product ID: 24, Name: smartphone tablet, Price: 23424
Product ID: 26, Name: Monitor, Price: 23123
Enter customer ID: 7
Enter product ID: 3
Enter total amount: 23333
Error: Product with Product ID 3 is not available in inventory.
```

Validation: <u>Cutomer</u> is Valid ?

```
Order Operations:
1. Place Order
2. View Order Status
3. Back to Main Menu
Enter your choice: 1
Fetching all products...
Product Catalog:
Product ID: 1, Name: Laptop, Price: 878
Product ID: 2, Name: Smartphone, Price: 658
Product ID: 3, Name: Tablet, Price: 328
Product ID: 4, Name: Headphones, Price: 199
Product ID: 5, Name: Smartwatch, Price: 149
Product ID: 6, Name: Gaming Console, Price: 499
Product ID: 7, Name: Wireless Mouse, Price: 29
Product ID: 8, Name: Mechanical Keyboard, Price: 99
Product ID: 9, Name: Monitor, Price: 399
Product ID: 10, Name: External SSD, Price: 149
Product ID: 11, Name: Portable Charger, Price: 49
Product ID: 12, Name: Smart Speaker, Price: 129
Product ID: 13, Name: Bluetooth Earbuds, Price: 89
Product ID: 14, Name: VR Headset, Price: 599
Product ID: 15, Name: Smart Home Hub, Price: 99
Product ID: 16, Name: Drone, Price: 799
Product ID: 17, Name: Fitness Band, Price: 59
Product ID: 18, Name: Camera, Price: 899
Product ID: 19, Name: Smart Thermostat, Price: 199
Product ID: 20, Name: E-reader, Price: 141
Product ID: 21, Name: SAMSUNG, Price: 79099
Product ID: 24, Name: smartphone tablet, Price: 23424
Product ID: 26, Name: Monitor, Price: 23123
Enter customer ID: 234
Enter product ID: 23
Enter total amount: 2344
Error: Customer ID 234 not found.
```

Placing Orders:

```
Order Operations:
1. Place Order
2. View Order Status
3. Back to Main Menu
Enter your choice: 1
Fetching all products...
Product Catalog:
Product ID: 1, Name: Laptop, Price: 878
Product ID: 2, Name: Smartphone, Price: 658
Product ID: 3, Name: Tablet, Price: 328
Product ID: 4, Name: Headphones, Price: 199
Product ID: 5, Name: Smartwatch, Price: 149
Product ID: 6, Name: Gaming Console, Price: 499
Product ID: 7, Name: Wireless Mouse, Price: 29
Product ID: 8, Name: Mechanical Keyboard, Price: 99
Product ID: 9, Name: Monitor, Price: 399
Product ID: 10, Name: External SSD, Price: 149
Product ID: 11, Name: Portable Charger, Price: 49
Product ID: 12, Name: Smart Speaker, Price: 129
Product ID: 13, Name: Bluetooth Earbuds, Price: 89
Product ID: 14, Name: VR Headset, Price: 599
Product ID: 15, Name: Smart Home Hub, Price: 99
Product ID: 16, Name: Drone, Price: 799
Product ID: 17, Name: Fitness Band, Price: 59
Product ID: 18, Name: Camera, Price: 899
Product ID: 19, Name: Smart Thermostat, Price: 199
Product ID: 20, Name: E-reader, Price: 141
Product ID: 21, Name: SAMSUNG, Price: 79099
Product ID: 24, Name: smartphone tablet, Price: 23424
Product ID: 26, Name: Monitor, Price: 23123
Enter customer ID: 7
Enter product ID: 7
Enter total amount: 324
Decremented quantity for Product ID 7 in inventory.
Order placed successfully. Total amount: 29.00
```

Status

```
Order Operations:
1. Place Order
2. View Order Status
3. Back to Main Menu
Enter your choice: 2
Enter order ID to check status: 6
Order Status: ('Pending',)
```

Inventory

Validation: If Products is Present ?

```
Inventory Operations:
1. Update Inventory
2. Delete Inventory Product
3. Add Product to Inventory
4. Back to Main Menu
Enter your choice: 1
Enter product ID to update: 14
Enter new quantity: 234
No product found with ID 14 to update.
```

Updated Succesfully

```
Inventory Operations:
1. Update Inventory
2. Delete Inventory Product
3. Add Product to Inventory
4. Back to Main Menu
Enter your choice: 1
Enter product ID to update: 2
Enter new quantity: 234
Inventory updated successfully.
```

Rmoving product

```
Inventory Operations:
1. Update Inventory
2. Delete Inventory Product
3. Add Product to Inventory
4. Back to Main Menu
Enter your choice: 2
Enter inventory ID to delete: 1
Product removed from inventory.
```

	InventoryID	ProductID	QuantityInStock	LastStockUpdate
1	2	2	234	2024-10-16
2	5	5	10	2024-01-25
3	6	6	25	2024-01-28
4	7	7	39	2024-01-30
5	8	8	60	2024-02-02
6	9	9	5	2024-02-05
7	15	21	23	2024-10-15
8	16	1	22	2024-01-15

Adding into inventory

<u>Validation</u>: Product Exist?

```
Inventory Operations:
1. Update Inventory
2. Delete Inventory Product
3. Add Product to Inventory
4. Back to Main Menu
Enter your choice: 3
Enter product ID to add to inventory: 23
Enter quantity to add: 234
Product ID 23 does not exist in Products table.
```

Succesfully Added:

```
Inventory Operations:
1. Update Inventory
2. Delete Inventory Product
3. Add Product to Inventory
4. Back to Main Menu
Enter your choice: 3
Enter product ID to add to inventory: 4
Enter quantity to add: 23
Product added to inventory.
```

	InventoryID	ProductID	QuantityInStock	LastStockUpdate
1	2	2	234	2024-10-16
2	5	5	10	2024-01-25
3	6	6	25	2024-01-28
4	7	7	39	2024-01-30
5	8	8	60	2024-02-02
6	9	9	5	2024-02-05
7	15	21	23	2024-10-15
8	16	1	22	2024-01-15
9	17	4	23	2024-10-16

Sales Report

```
Report Operations:
1. Generate Sales Report
2. Back to Main Menu
Enter your choice: 1
Sales Report:
{'OrderID': 2, 'ProductID': 2, 'Quantity': '2023-02-18', 'OrderDate': 23123, 'TotalAmount': 'cash'}
{'OrderID': 6, 'ProductID': 6, 'Quantity': '2023-06-01', 'OrderDate': 13631, 'TotalAmount': None}
{'OrderID': 7, 'ProductID': 7, 'Quantity': '2023-06-15', 'OrderDate': 54524, 'TotalAmount': None}
{'OrderID': 8, 'ProductID': 8, 'Quantity': '2023-07-08', 'OrderDate': 40893, 'TotalAmount': None}
{'OrderID': 9, 'ProductID': 9, 'Quantity': '2023-07-22', 'OrderDate': 68155, 'TotalAmount': None}
{'OrderID': 10, 'ProductID': 10, 'Quantity': '2023-08-17', 'OrderDate': 27262, 'TotalAmount': None}
{'OrderID': 11, 'ProductID': 11, 'Quantity': '2023-08-25', 'OrderDate': 123123, 'TotalAmount': 'cash'}
{'OrderID': 12, 'ProductID': 12, 'Quantity': '2023-09-02', 'OrderDate': 123123, 'TotalAmount': 'cash'}
{'OrderID': 13, 'ProductID': 13, 'Quantity': '2023-09-12', 'OrderDate': 54524, 'TotalAmount': None}
{'OrderID': 14, 'ProductID': 14, 'Quantity': '2023-09-20', 'OrderDate': 27262, 'TotalAmount': None}
{'OrderID': 22, 'ProductID': 2, 'Quantity': '2024-10-15', 'OrderDate': 23, 'TotalAmount': None}
```

Validation: Order_ID is present ?

```
Payment Operations:
1. Record Payment
2. Back to Main Menu
Enter your choice: 1
Enter order ID for payment: 45
Enter payment method: cash
Enter payment amount: 2345
Order ID 45 does not exist.
```

Payments

```
Payment Operations:
1. Record Payment
2. Back to Main Menu
Enter your choice: 1
Enter order ID for payment: 8
Enter payment method: cash
Enter payment amount: 234
Payment recorded successfully.
```

	OrderID	CustomerID	OrderDate	TotalAmount	PaymentMethod
1	2	2	2023-02-18	23123	cash
2	3	3	2023-03-22	199	NULL
3	5	5	2023-05-05	299	NULL
4	6	6	2023-06-01	13631	NULL
5	7	7	2023-06-15	54524	NULL
6	8	8	2023-07-08	234	cash