

Order Management Application

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Course:

Salesforce Admin and Developer

Abstract

The Order Management System is a Salesforce based application to simplify your sales operations. It features process automation which reduces the workload for the employees. The stock quantity of the products updates dynamically. The Sales User can create, review and edit the orders. The application allows them to view, edit, confirm or cancel the order before the order is activated. The Approval request is sent automatically to the Business User for large Orders. Email and In App notifications are configured to automatically notify the related Contacts and Users at each stage of the Order. All the data in the application can be viewed and modified by the Support Team.

Scope

There are three categories of user using the application : Sales User, Business User, Support Team. Each of these would have some exclusive privileges.

1. The Support Team can:
 - a. Create Business and Sales Users.
 - b. Assign users to roles and account teams.
 - c. View all the data in the application.
 - d. Delete any record.
 - e. View Dashboards and Reports for all Orders.
2. The Business Users can:
 - a. Manage 2 Sales Users.
 - b. Manage 10 Accounts.
 - c. View all related data for their respective Accounts.
 - d. Approve Orders with Amount greater than 100000.
 - e. View Dashboards and Reports on Orders for their Accounts.
3. The Sales Users can:
 - a. Manage 5 Accounts.
 - b. Create Orders for those Accounts.
 - c. Create Invoice(using Data Loader in this Application).
 - d. View Dashboards and Reports on Orders for their Accounts.

Automations:

- Adding 1 free product if order product quantity is greater than 10.
- Stock Quantity auto updates with every Order.
- Order automatically gets accepted when Amount is less than 100000.
- Order automatically goes for managing Business Users approval when Amount is greater than 100000.
- Order Status changes automatically with different inputs.
- Email Notification is sent out at each Order status to related Contacts and Users.
- In App Notifications for related Users at each Order status.

Apex Classes

1. OrderManagementController : This is the controller class which contains all methods for the CRUD operations required to be done using the LWC.
 - a. Inner Class :
 - i. ProductDetail : The OrderManagementController class contains a utility inner-class which helps us parse the JSON sent from LWC.
 - b. Methods :
 - i. getPriceBooks() : This method returns the list of Pricebooks.
 - ii. getAccounts() : This method returns the list of Accounts.
 - iii. getProducts() : This method returns the list of searched products present in the selected pricebook.
 - iv. createOrder() : This method is used to create the Order and OrderProducts.
 - v. changeOrderStatus() : This method is used to change the order status to according to the order summary displayed while Order creation.
 - vi. getOrderAndProducts() : This returns the Order details and Order products during view and edit.
 - vii. updateOrderItems() : This method is used to update the Order Products.
2. EmailNotification: This class is responsible to send Email Notification regarding Order Status.
 - a. Methods :
 - i. getRecipients() : This method returns the list of related Contacts based on the EmailOptOut field in Account and Contacts objects.
 - ii. sendOrderStatusNotification() : This method sends the Email notification using the custom Email Template.

Triggers

1. AccountTeamMemberTrigger : On AccountTeamMember object to validate : Sales User can manage 5 Accounts and Business User can manage 10 Accounts.
2. ManagingUserTrigger : On User object to validate : one Business User can manage only two Sales User.
3. TriggerToUpdateStockQuantity : On OrderItem object to update the stock quantity of the products dynamically.
4. OrderTrigger : On Order object and performs two functions:
 - a. Prevent Order Status to be set to previous Status.
 - b. Send Email Notification using Email Template to related Contacts.

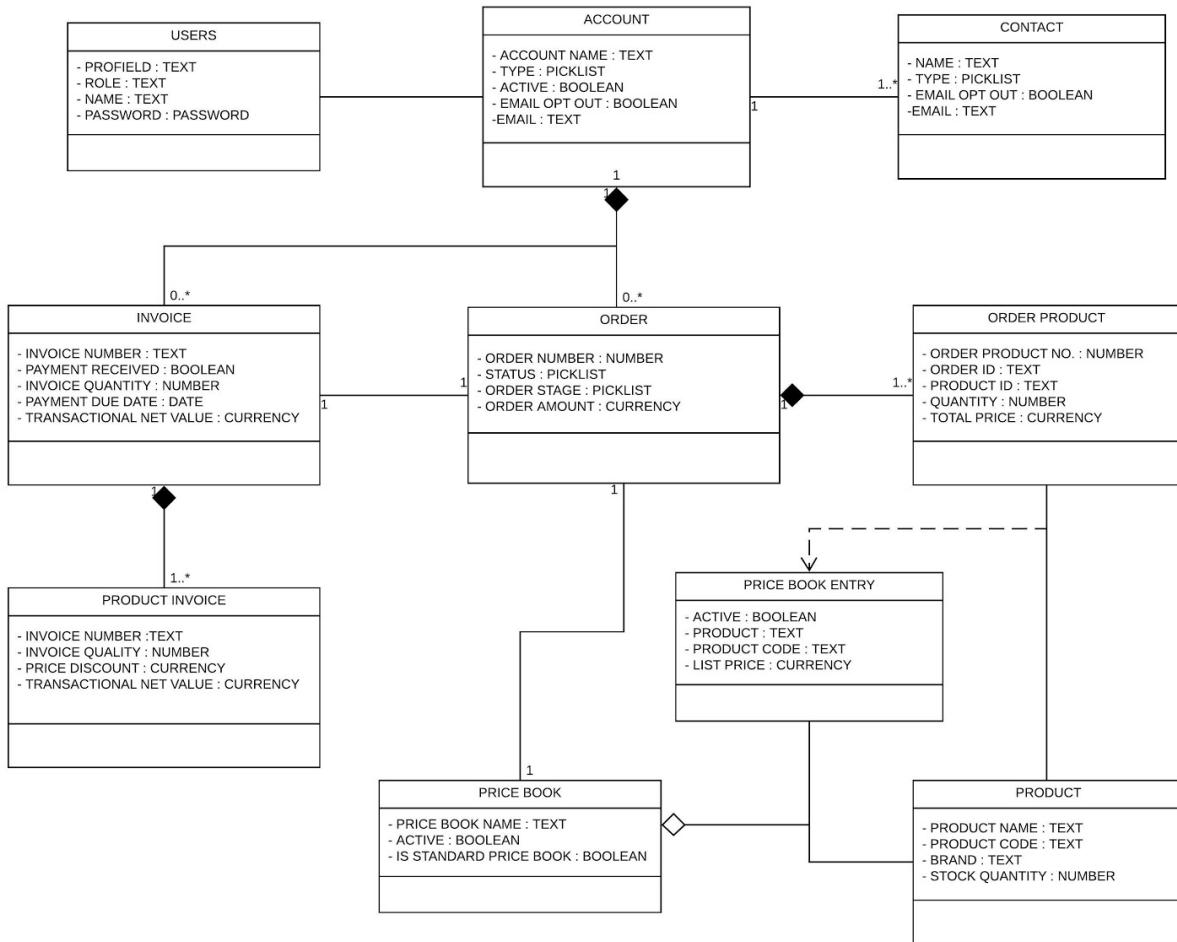
Approval Process

- Order Approval : This approval process send an approval request to the Business User Managing the Sales User creating the Order if Order Amount is greater than 100000.

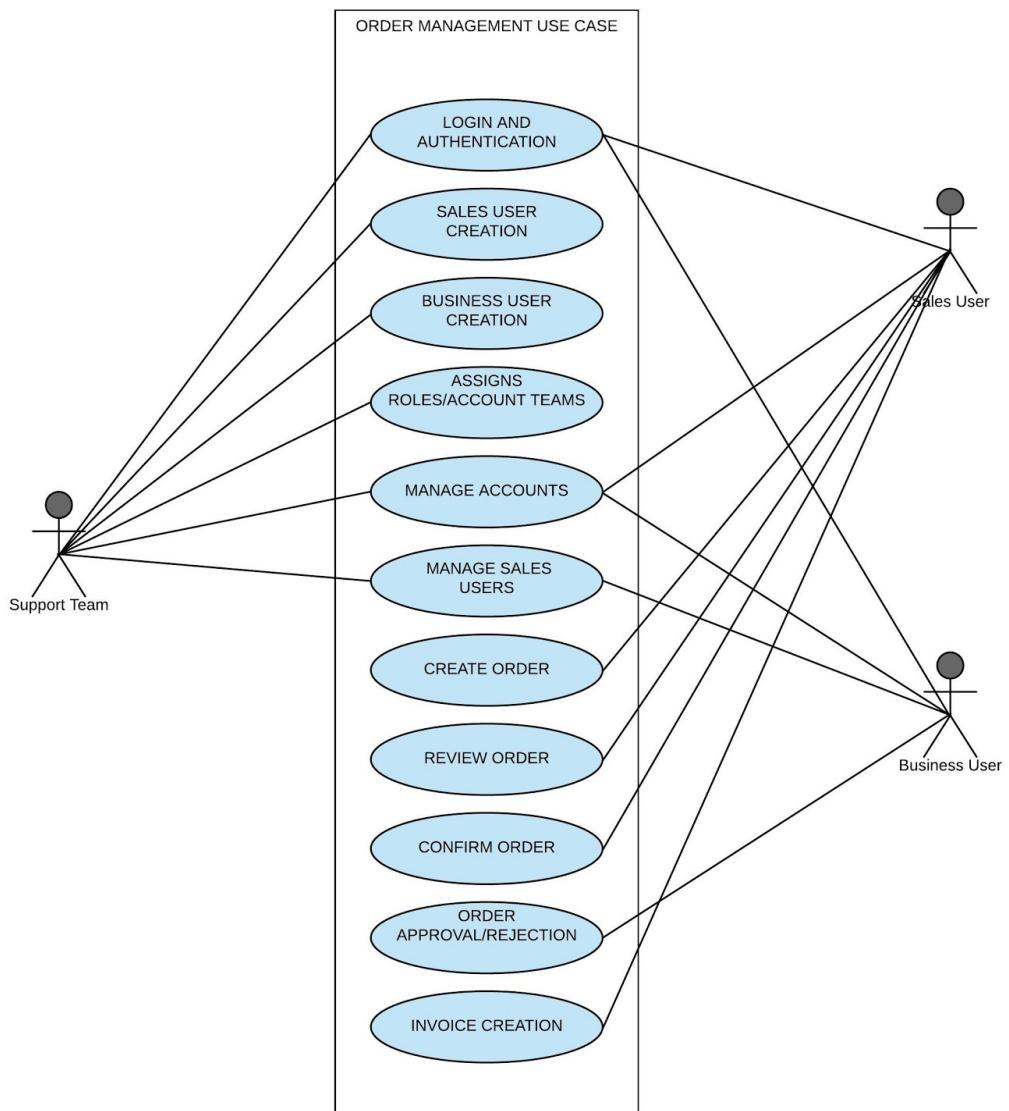
Processes

1. Order: Used to perform the following function based on the criteria.
 - a. Submit Order for Approval if Amount \geq 100000.
 - b. Change Order Status if Amount $<$ 100000.
 - c. Send in App Notifications to Users.
2. Process On Invoice: Used to update Order Status when Invoice is created.

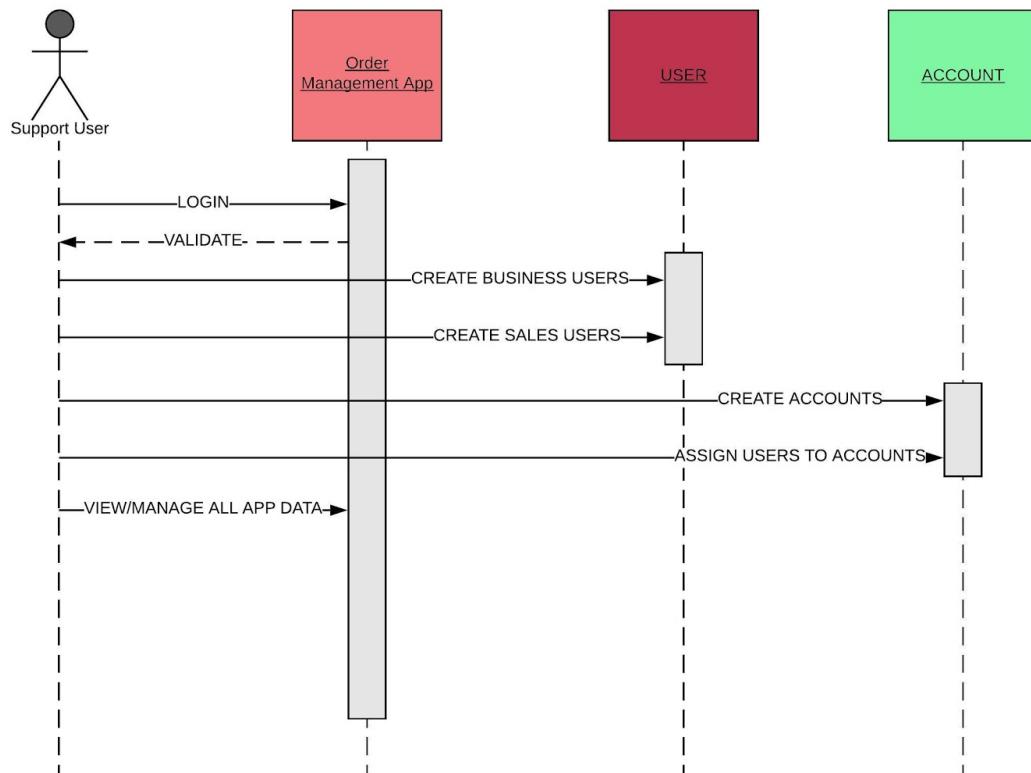
Class Diagram



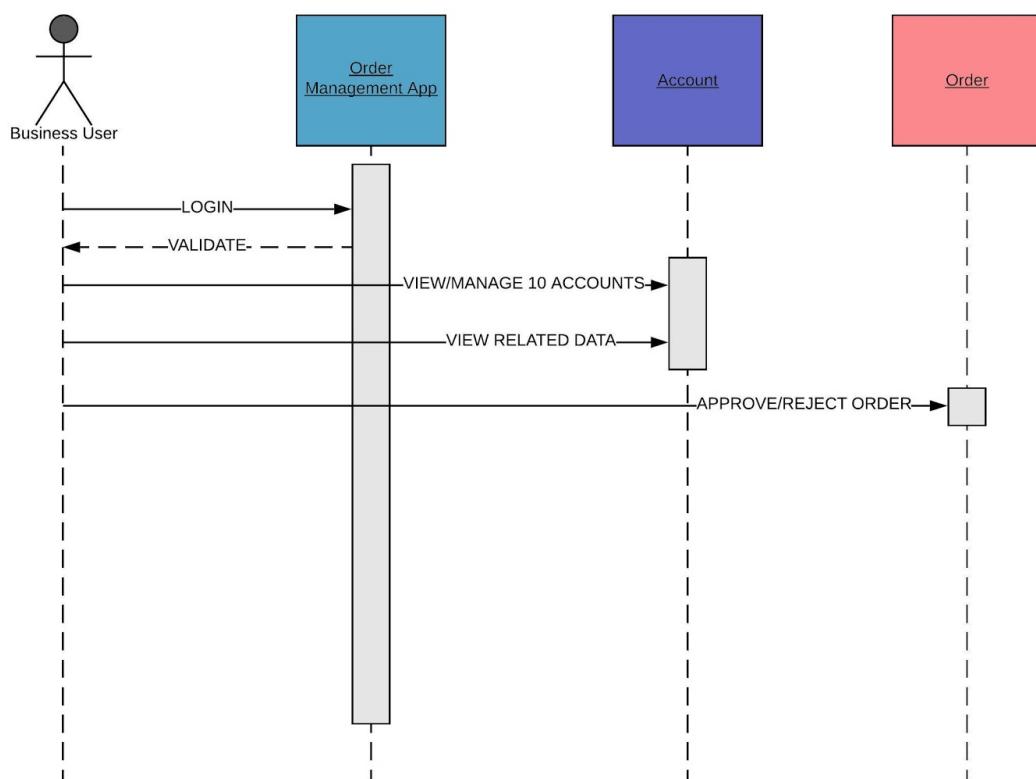
Use Case Diagram



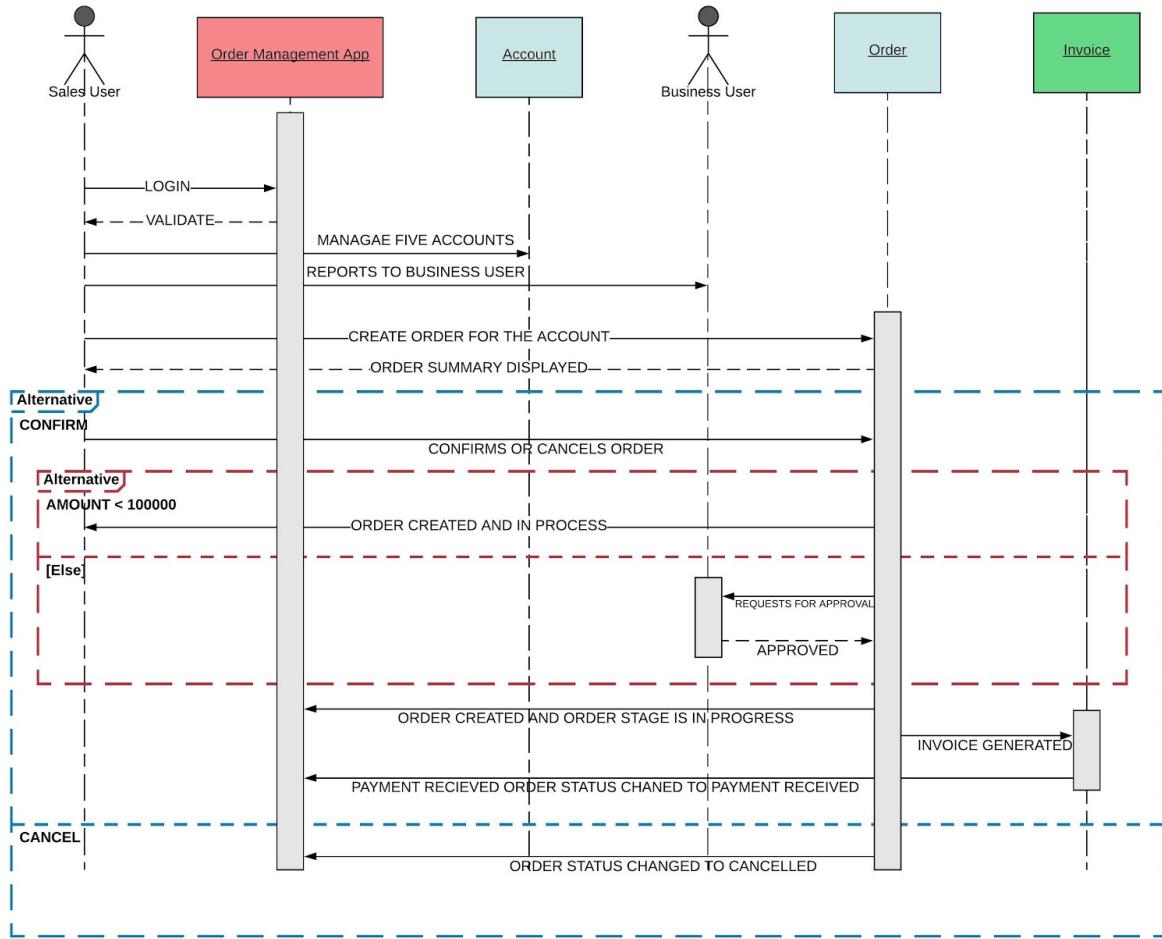
Sequence Diagram (Support Team)



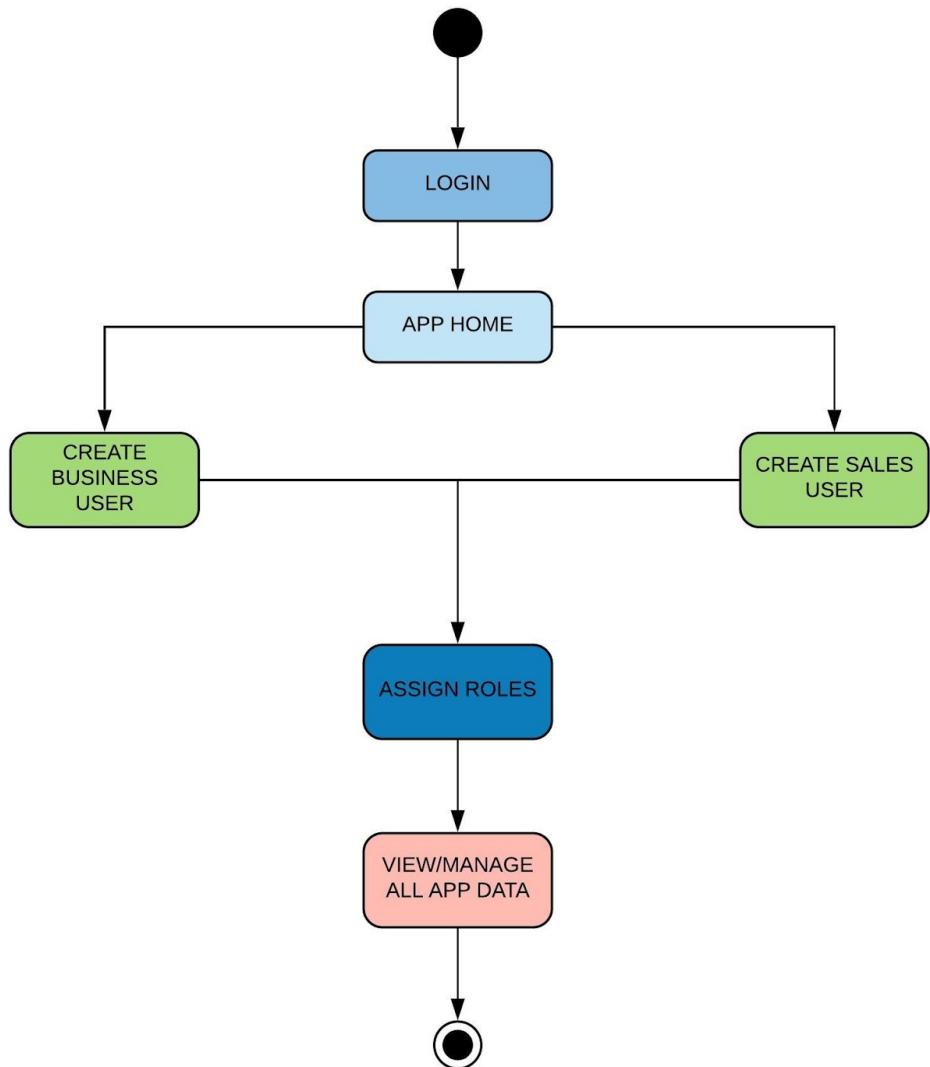
Sequence Diagram (Business User)



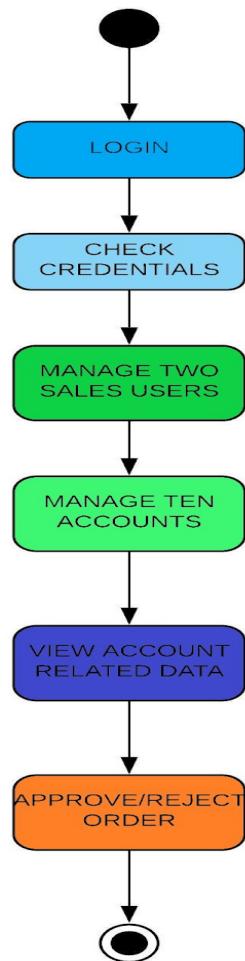
Sequence Diagram (Sales User)



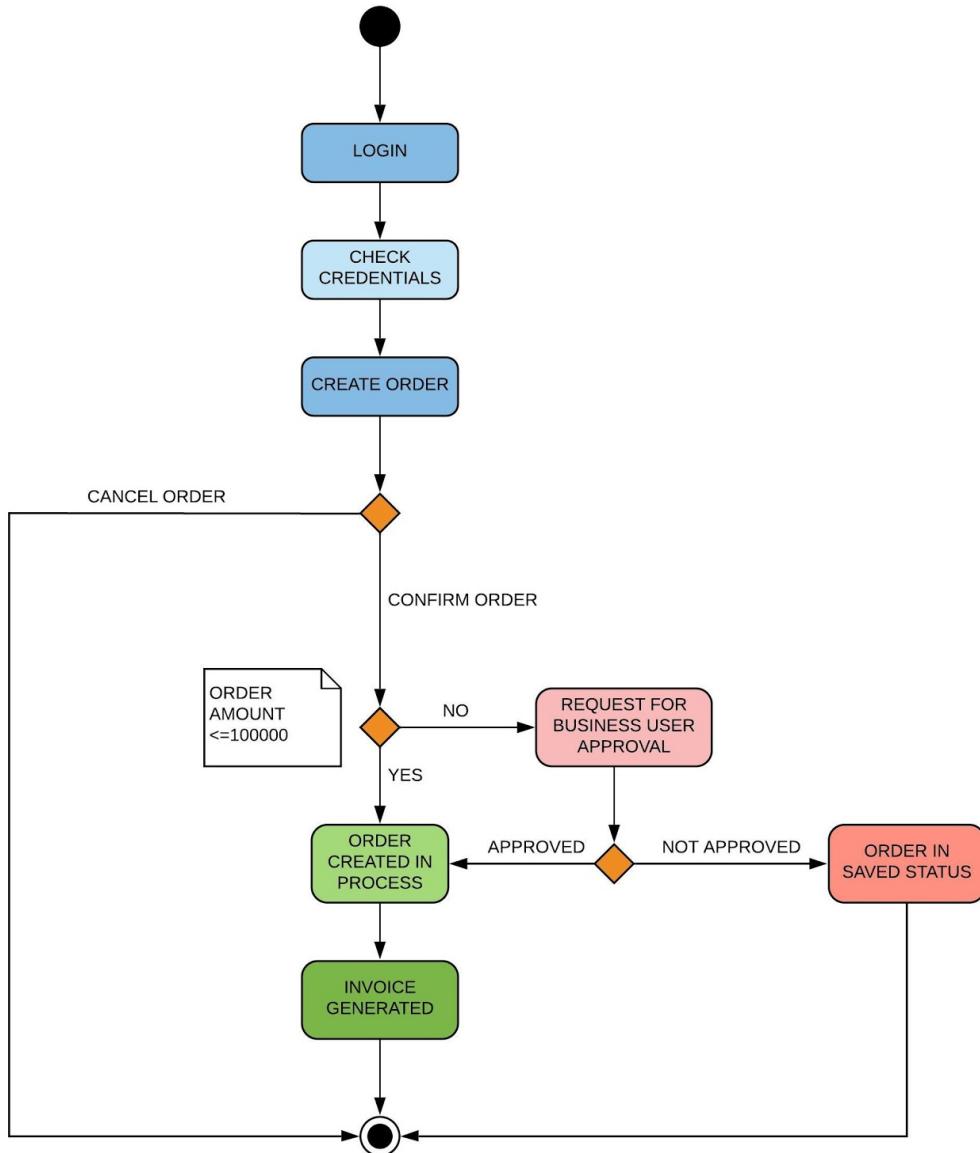
Activity Diagram (Support Team)



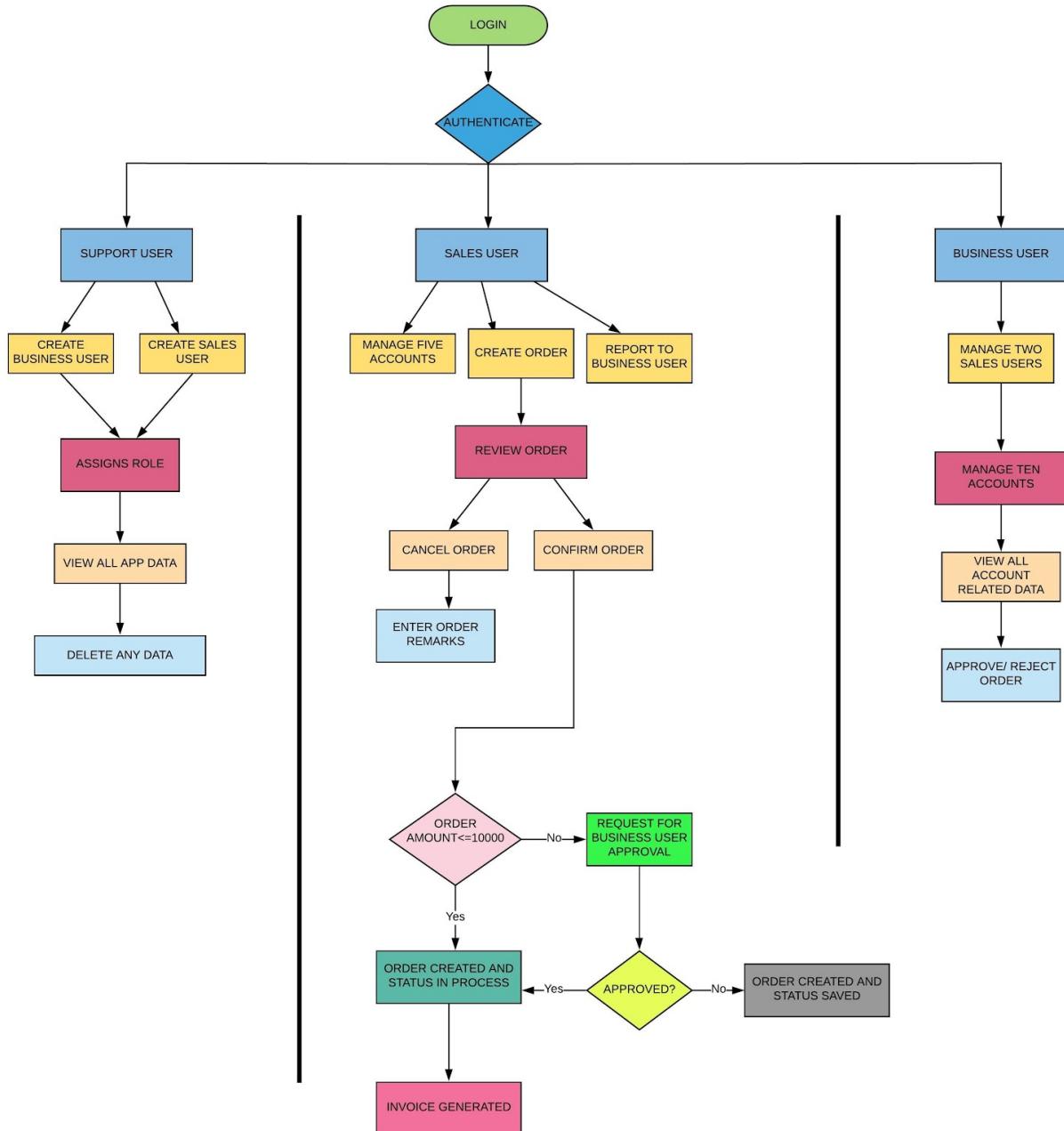
Activity Diagram (Business User)



Activity Diagram (Sales User)

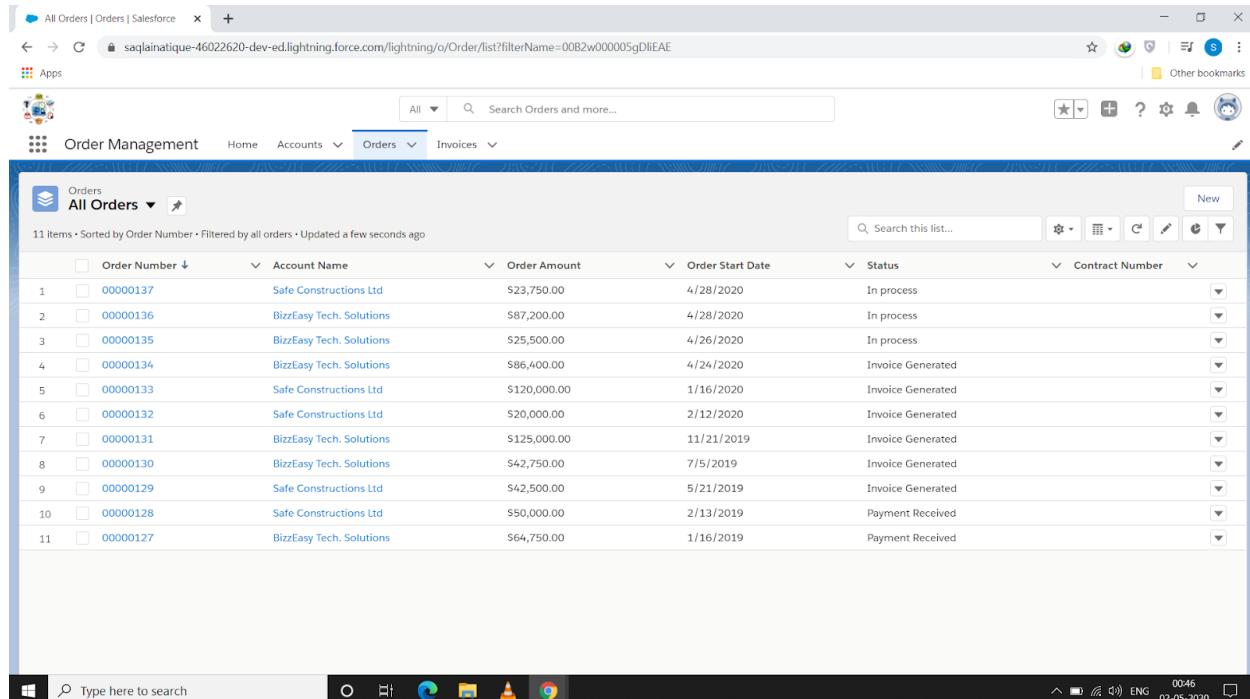


Flow Chart



Screens Order Creation

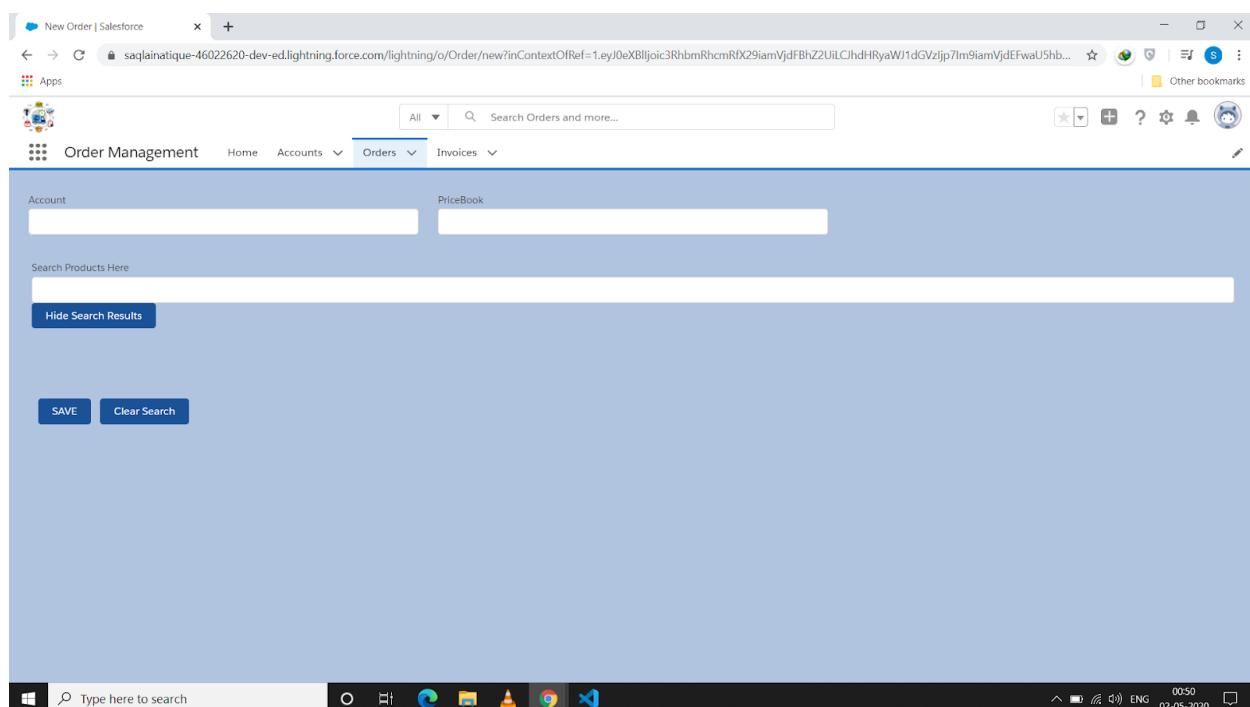
To place an Order the Sales User has to open the Orders Tab first.



The screenshot shows the Salesforce Lightning Experience interface for Order Management. The top navigation bar includes tabs for Home, Accounts, Orders (which is currently selected), and Invoices. A search bar at the top right says "Search Orders and more...". Below the navigation is a table titled "All Orders" with 11 items. The columns are: Order Number, Account Name, Order Amount, Order Start Date, Status, and Contract Number. The data in the table is as follows:

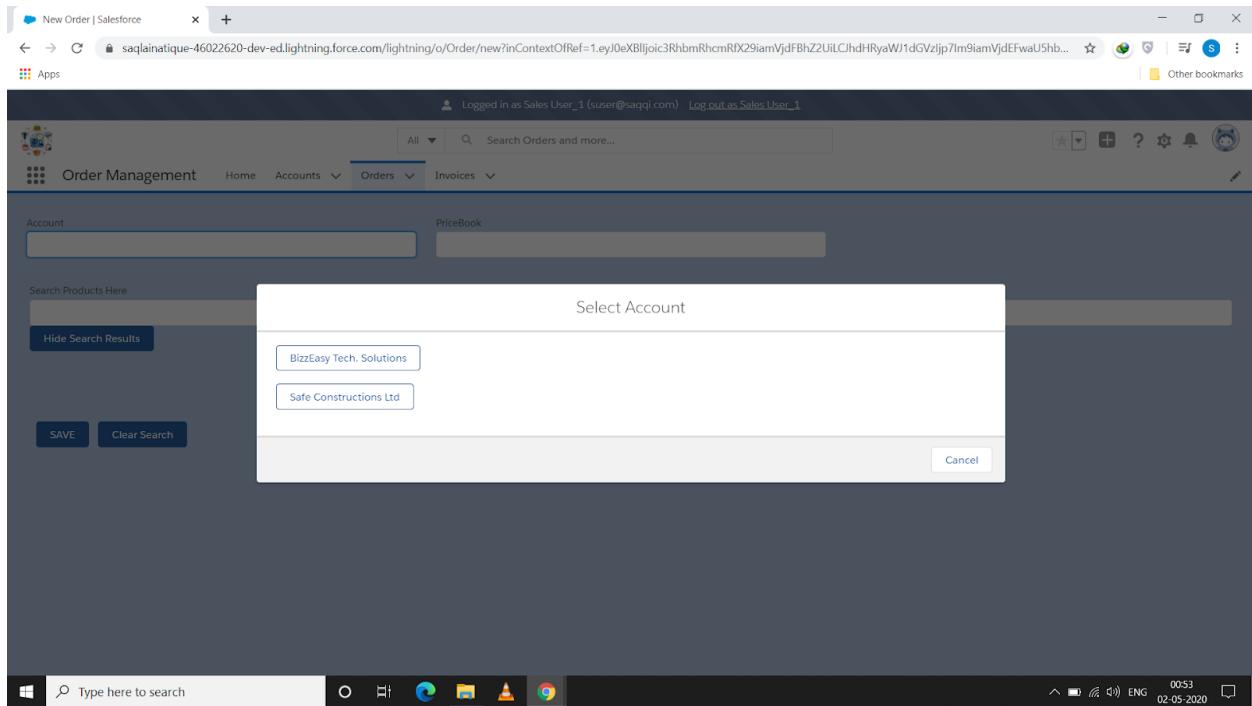
	Order Number	Account Name	Order Amount	Order Start Date	Status	Contract Number
1	00000137	Safe Constructions Ltd	\$23,750.00	4/28/2020	In process	
2	00000136	BizzEasy Tech. Solutions	\$87,200.00	4/28/2020	In process	
3	00000135	BizzEasy Tech. Solutions	\$25,500.00	4/26/2020	In process	
4	00000134	BizzEasy Tech. Solutions	\$86,400.00	4/24/2020	Invoice Generated	
5	00000133	Safe Constructions Ltd	\$120,000.00	1/16/2020	Invoice Generated	
6	00000132	Safe Constructions Ltd	\$20,000.00	2/12/2020	Invoice Generated	
7	00000131	BizzEasy Tech. Solutions	\$125,000.00	11/21/2019	Invoice Generated	
8	00000130	BizzEasy Tech. Solutions	\$42,750.00	7/5/2019	Invoice Generated	
9	00000129	Safe Constructions Ltd	\$42,500.00	5/21/2019	Invoice Generated	
10	00000128	Safe Constructions Ltd	\$50,000.00	2/13/2019	Payment Received	
11	00000127	BizzEasy Tech. Solutions	\$64,750.00	1/16/2019	Payment Received	

When the User clicks on New, the below screen appears.

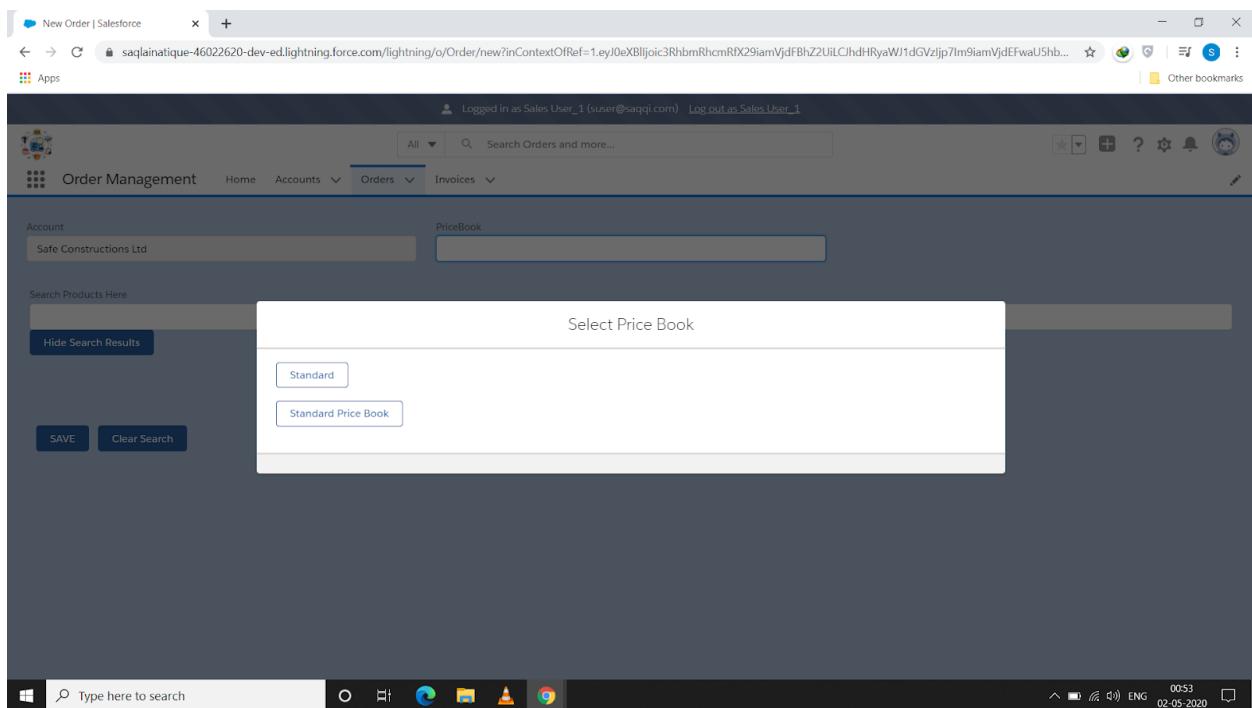


The screenshot shows the "New Order" creation screen in the Salesforce Lightning Experience. The top navigation bar includes tabs for Home, Accounts, Orders (selected), and Invoices. A search bar at the top right says "Search Orders and more...". The main area is titled "New Order" and contains fields for "Account" and "PriceBook". Below these are sections for "Search Products Here" and "Hide Search Results". At the bottom are "SAVE" and "Clear Search" buttons. The status bar at the bottom right shows "00:46 02-05-2020".

When the user clicks on Account Input Box, the following popup allows the user to select from his dedicated Accounts.



After selecting the Account, the users clicks on the Pricebook Input Box, the following popup appears.



After selecting Pricebook the user searches the products using the search section.

Product Code	Product Name	Brand	MRP	Action
ONE006	ONEPLUS 6	ONEPLUS	30000	<button>Add Item</button>
ONE007	ONEPLUS 7	ONEPLUS	45000	<button>Add Item</button>

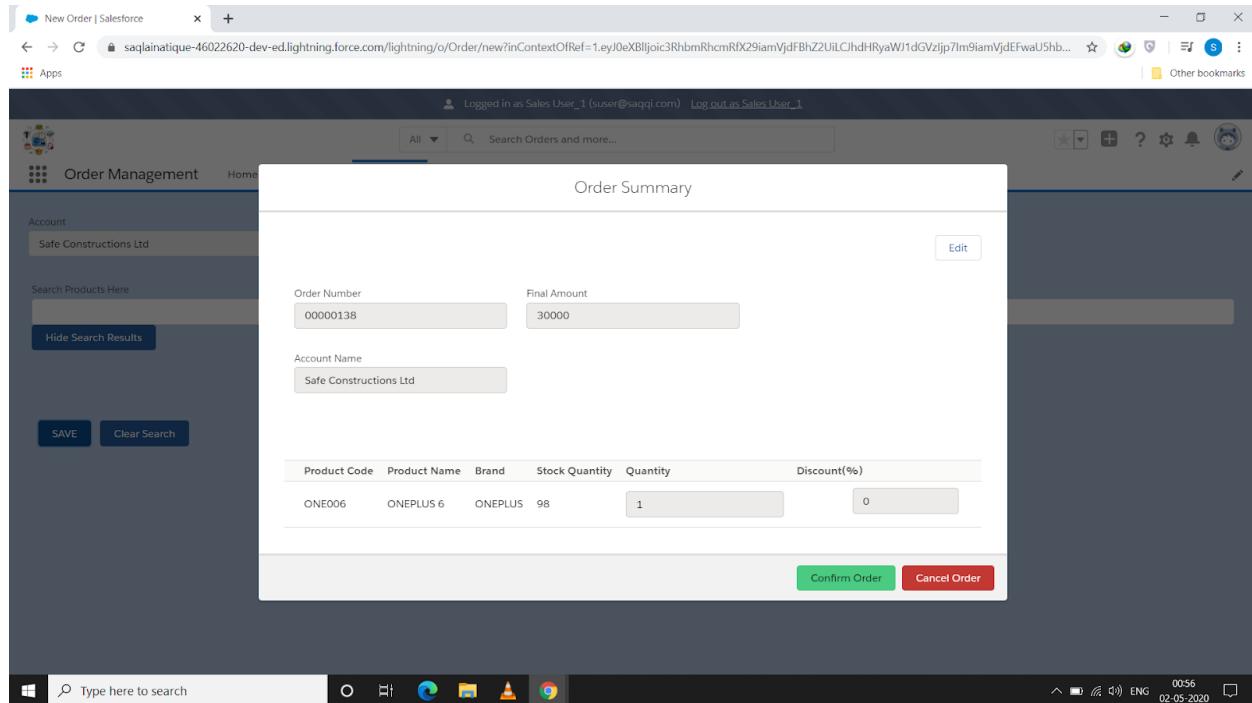
On clicking on Add Item the Item is selected and added to a separate Table(User can select as many products required using this search section).

Product Code	Product Name	Brand	Stock Quantity	Quantity	Discount(%)	Action
ONE006	ONEPLUS 6	ONEPLUS	99	1	0	<button>Remove</button>

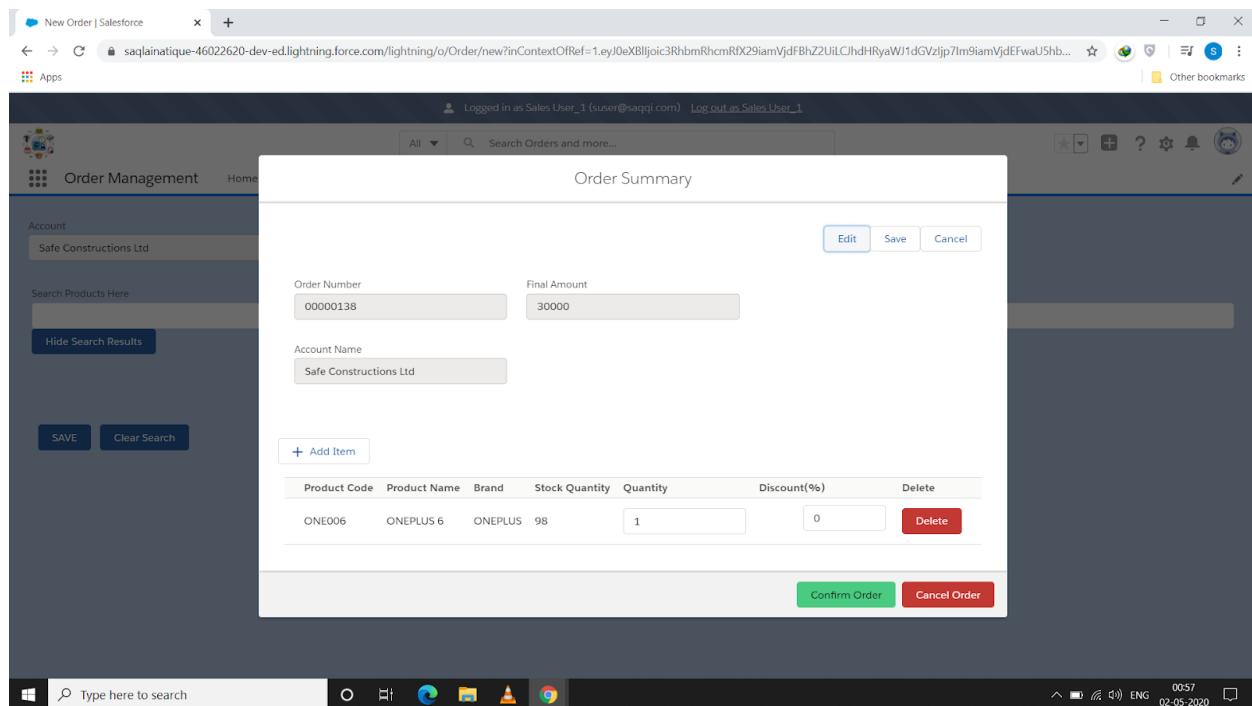
Here the User enters the Quantity and Discount(By default Quantity is 1 and Discount is 0).

Clicking on Clear Search in the above screen refreshes the page.

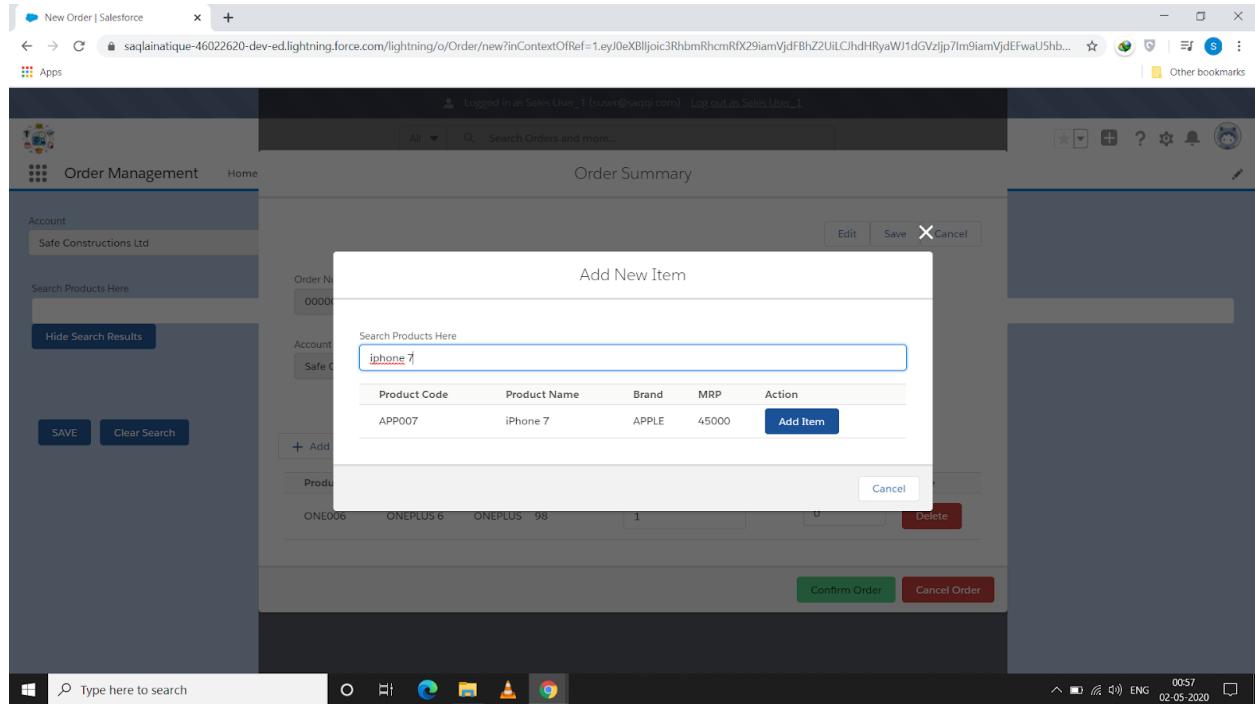
When the User clicks on SAVE, the below screen displays the Order Summary.



Here the User has the option to edit the Order. As the User clicks on Edit in the above screen the view changes as below.



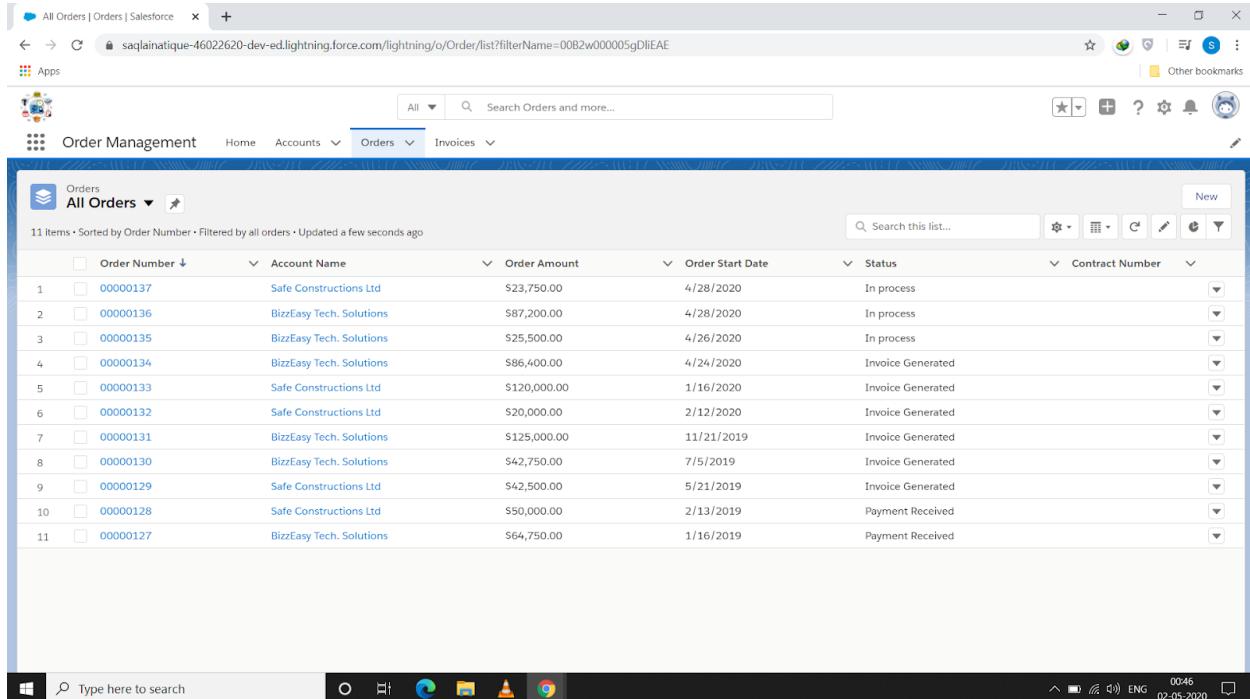
The User has the provision to edit the Order as required from the above screen. If a new item is to be added “+Add Item” must be clicked. The below screen allows the user to select new products.



The User has to complete editing and click Save and then Confirm Order.

Screens Order View

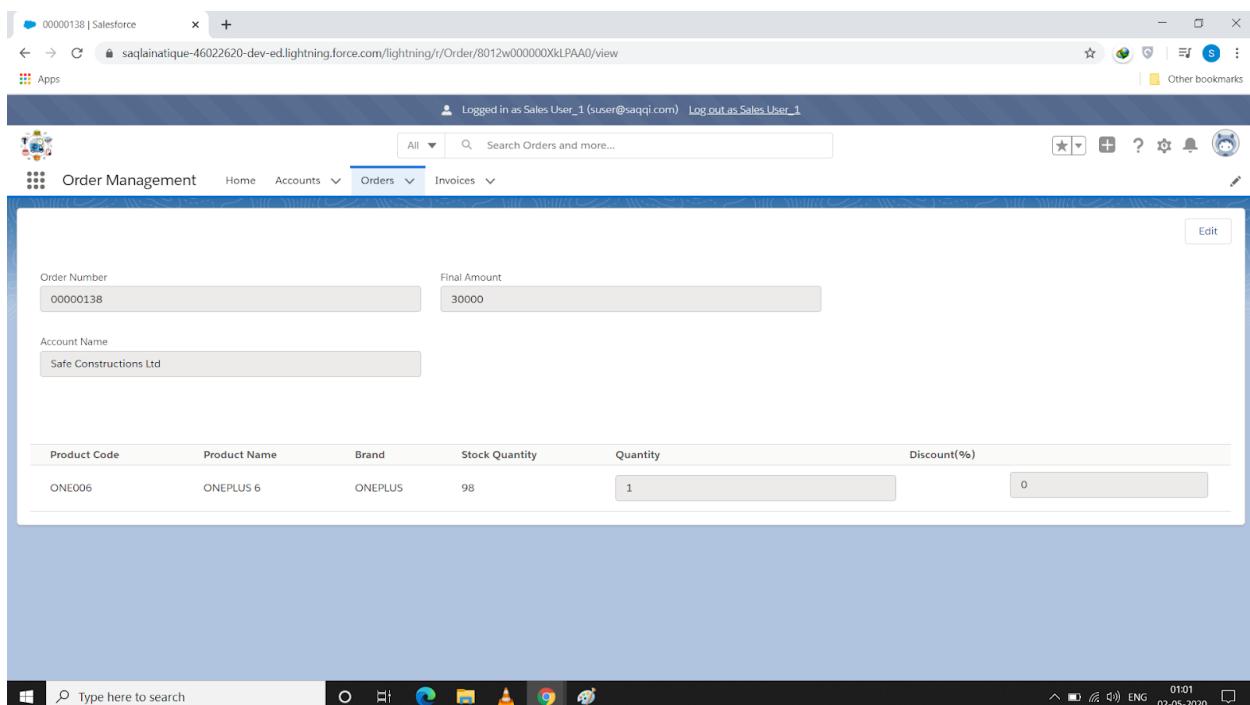
To view any Order the User has to open the Orders Tab first.



The screenshot shows the Salesforce Lightning Order Management interface. The top navigation bar includes tabs for Home, Accounts, Orders (which is currently selected), and Invoices. A search bar at the top right says "Search Orders and more...". Below the navigation is a table titled "All Orders" with 11 items. The columns are Order Number, Account Name, Order Amount, Order Start Date, Status, and Contract Number. The data in the table is as follows:

	Order Number	Account Name	Order Amount	Order Start Date	Status	Contract Number
1	00000137	Safe Constructions Ltd	\$23,750.00	4/28/2020	In process	
2	00000136	BizzEasy Tech. Solutions	\$87,200.00	4/28/2020	In process	
3	00000135	BizzEasy Tech. Solutions	\$25,500.00	4/26/2020	In process	
4	00000134	BizzEasy Tech. Solutions	\$86,400.00	4/24/2020	Invoice Generated	
5	00000133	Safe Constructions Ltd	\$120,000.00	1/16/2020	Invoice Generated	
6	00000132	Safe Constructions Ltd	\$20,000.00	2/12/2020	Invoice Generated	
7	00000131	BizzEasy Tech. Solutions	\$125,000.00	11/21/2019	Invoice Generated	
8	00000130	BizzEasy Tech. Solutions	\$42,750.00	7/5/2019	Invoice Generated	
9	00000129	Safe Constructions Ltd	\$42,500.00	5/21/2019	Invoice Generated	
10	00000128	Safe Constructions Ltd	\$50,000.00	2/13/2019	Payment Received	
11	00000127	BizzEasy Tech. Solutions	\$64,750.00	1/16/2019	Payment Received	

On clicking on any Order Number the below screen displays the Order Details.



The screenshot shows the Order Details page for Order Number 00000138. The top navigation bar includes tabs for Home, Accounts, Orders (selected), and Invoices. The main content area displays the following details:

- Order Number: 00000138
- Final Amount: 30000
- Account Name: Safe Constructions Ltd

Below these details is a table showing product information:

Product Code	Product Name	Brand	Stock Quantity	Quantity	Discount(%)
ONE006	ONEPLUS 6	ONEPLUS	98	1	0

Screens Order Edit

To edit any Order the User has to open the Orders Tab first.

The screenshot shows the 'Order Management' tab selected in the top navigation bar. Below it, the 'Orders' tab is also active. The main area displays a table titled 'All Orders' with 11 items. The columns include Order Number, Account Name, Order Amount, Order Start Date, Status, and Contract Number. The data is sorted by Order Number. The status column shows various stages like 'In process', 'Invoice Generated', and 'Payment Received'. The bottom of the screen shows the Windows taskbar with icons for File Explorer, Task View, Edge, File History, and Google Chrome.

	Order Number	Account Name	Order Amount	Order Start Date	Status	Contract Number
1	00000137	Safe Constructions Ltd	\$23,750.00	4/28/2020	In process	
2	00000136	BizzEasy Tech. Solutions	\$87,200.00	4/28/2020	In process	
3	00000135	BizzEasy Tech. Solutions	\$25,500.00	4/26/2020	In process	
4	00000134	BizzEasy Tech. Solutions	\$86,400.00	4/24/2020	Invoice Generated	
5	00000133	Safe Constructions Ltd	\$120,000.00	1/16/2020	Invoice Generated	
6	00000132	Safe Constructions Ltd	\$20,000.00	2/12/2020	Invoice Generated	
7	00000131	BizzEasy Tech. Solutions	\$125,000.00	11/21/2019	Invoice Generated	
8	00000130	BizzEasy Tech. Solutions	\$42,750.00	7/5/2019	Invoice Generated	
9	00000129	Safe Constructions Ltd	\$42,500.00	5/21/2019	Invoice Generated	
10	00000128	Safe Constructions Ltd	\$50,000.00	2/13/2019	Payment Received	
11	00000127	BizzEasy Tech. Solutions	\$64,750.00	1/16/2019	Payment Received	

The User can edit an Order either by viewing the Order and clicking on Edit or click on the actions button in the above screen and select Edit. The below page allows you to edit Orders.

The screenshot shows the 'Edit' screen for Order 00000138. The top navigation bar shows the URL as 'Edit 00000138 | Salesforce'. The main area contains fields for Order Number (00000138), Final Amount (30000), and Account Name (Safe Constructions Ltd). Below these are sections for 'Add Item' and a table showing product details. The table includes columns for Product Code, Product Name, Brand, Stock Quantity, Quantity, Discount(%), and Delete. One item is listed: ONE006, ONEPLUS 6, ONEPLUS, 98, 1, 0, and a red 'Delete' button. The bottom of the screen shows the Windows taskbar with icons for File Explorer, Task View, Edge, File History, and Google Chrome.

Product Code	Product Name	Brand	Stock Quantity	Quantity	Discount(%)	Delete
ONE006	ONEPLUS 6	ONEPLUS	98	1	0	<button>Delete</button>

After making any changes the User has to click on Save. The below screen appears.

The screenshot shows a Salesforce Lightning interface for Order Management. The top navigation bar includes links for Home, Accounts, Orders, and Invoices. The Orders section is currently selected. The main content area displays a sales order for Order Number 00000138, final amount 27000, and Account Name Safe Constructions Ltd. A table details the order items:

Product Code	Product Name	Brand	Stock Quantity	Quantity	Discount(%)
ONE006	ONEPLUS 6	ONEPLUS	98	1	10

The bottom of the screen shows a taskbar with icons for search, file operations, and system status (01:04, 02-05-2020).

For demonstration I have changed the Discount to 10%.

Screens Invoice

To create Invoices I have used Data Loader and used the following CSV files.

ProductInvoice_1 - Excel

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do Sign in Share

Cut Copy Format Painter Paste Clipboard

Font Alignment Number Conditional Formats as Table Styles

AutoSum Fill - Sort & Filter Select Cells Insert Delete Format

POSSIBLE DATA LOSS Some features might be lost if you save this workbook in the comma-delimited (.csv) format. To preserve these features, save it in an Excel file format. Don't show again Save As...

R27

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Invoice Number	Product Invoice Number	Invoice Quantity	Unit Price	Net Invoice Value	Price Discount	Product	Product Code	Transactional Net Value									
2	1001	1001001	1	35000	35000	0	LEN330	LEN330	35000									
3	1001	1001002	1	29750	29750	0	LEN320	LEN320	29750									
4	1002	1002001	2	11250	22500	0	GC1040	GC1040	22500									
5	1002	1002002	1	5000	5000	0	IN7020	IN7020	5000									
6	1003	1003001	1	42500	42500	0	GC3040	GC3040	42500									
7	1004	1004001	1	42750	42750	0	ONE007	ONE007	42750									
8	1005	1005001	2	20000	40000	0	SL9040	SL9040	40000									
9	1005	1005002	1	85000	85000	0	IN7080	IN7080	85000									
10	1006	1006001	1	5000	5000	0	IN7020	IN7020	5000									
11	1006	1006002	1	15000	15000	0	GC3020	GC3020	15000									
12	1007	1007001	3	40000	120000	0	SL9080	SL9080	120000									
13	1008	1008001	2	43200	86400	0	APP008	APP008	86400									
14																		
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ProductInvoice_1

After importing the invoices using Data Loader, the following screen shows the Invoices Tab.

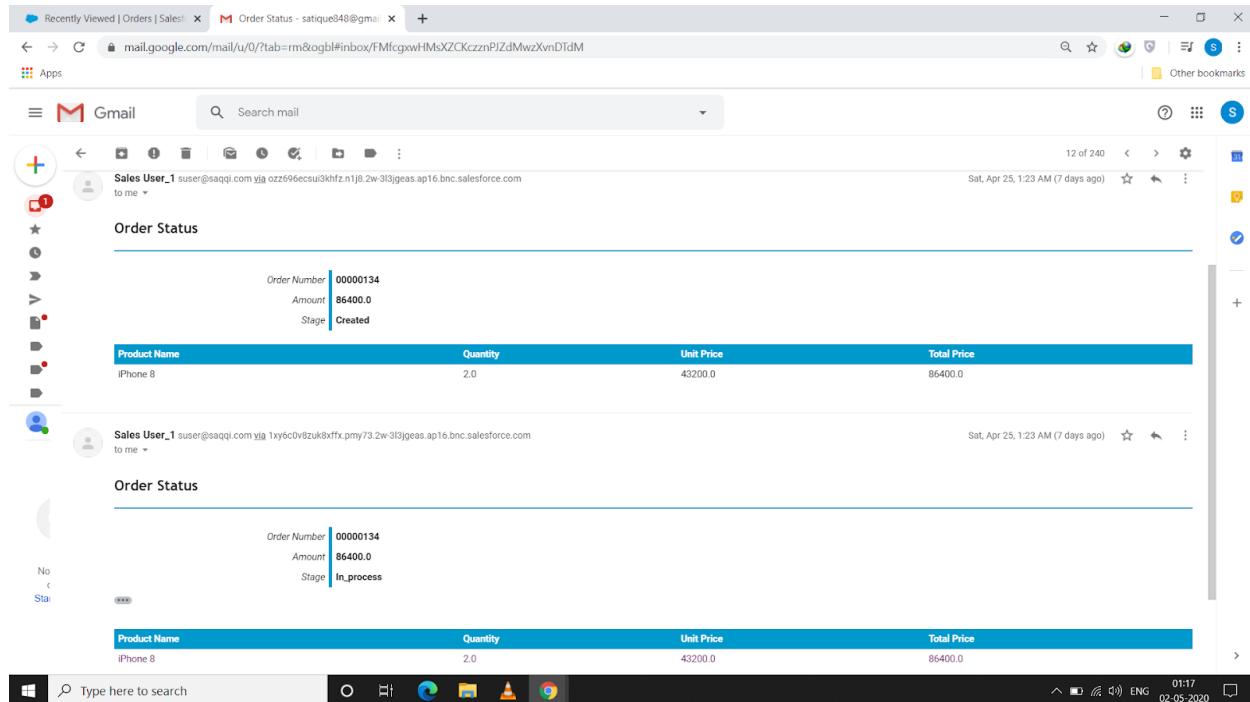
The screenshot shows the Salesforce Lightning Experience interface. The top navigation bar includes tabs for 'Recently Viewed' and 'Invoices'. The main content area displays a table titled 'Recently Viewed' with 8 items. The columns are: Invoice Number, Order Reference, Account Reference, Invoice Payment Received, Invoice Quantity, and Net Invoice Value. The data is as follows:

	Invoice Number	Order Reference	Account Reference	Invoice Payment Received	Invoice Quantity	Net Invoice Value
1	1001	00000127	BizzEasy Tech. Solutions	<input checked="" type="checkbox"/>	2	\$64,750.00
2	1002	00000128	Safe Constructions Ltd	<input checked="" type="checkbox"/>	3	\$50,000.00
3	1003	00000129	Safe Constructions Ltd	<input type="checkbox"/>	1	\$42,500.00
4	1004	00000130	BizzEasy Tech. Solutions	<input type="checkbox"/>	1	\$42,750.00
5	1005	00000131	BizzEasy Tech. Solutions	<input type="checkbox"/>	3	\$125,000.00
6	1006	00000132	Safe Constructions Ltd	<input type="checkbox"/>	2	\$20,000.00
7	1007	00000133	Safe Constructions Ltd	<input type="checkbox"/>	3	\$120,000.00
8	1008	00000134	BizzEasy Tech. Solutions	<input type="checkbox"/>	2	\$86,400.00

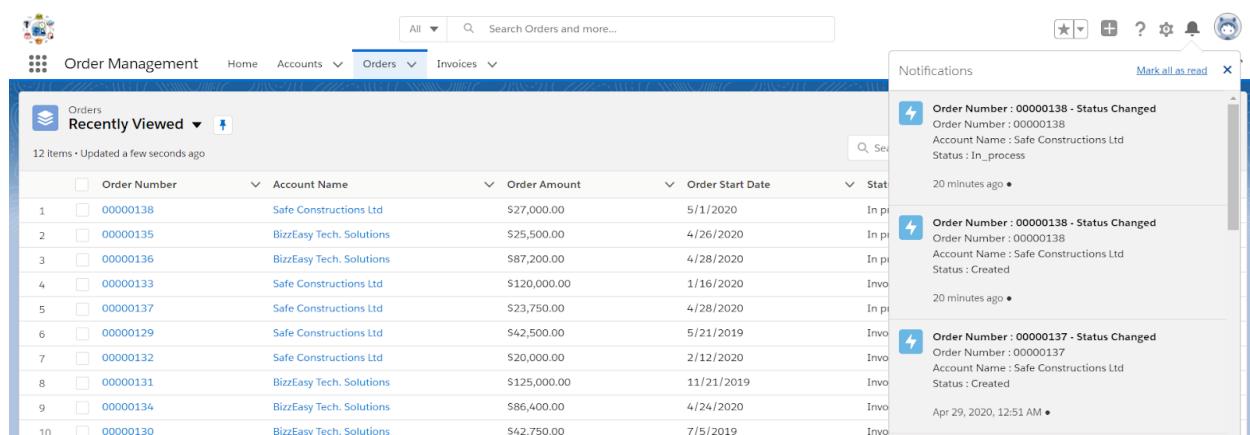
The screenshot shows the Salesforce Lightning Experience interface. The top navigation bar includes tabs for '1001' and 'Salesforce'. The main content area displays the details of an invoice. The left sidebar shows 'Product Invoices (2)' with two entries: 1001001 (LEN330) and 1001002 (LEN320). The right sidebar shows the 'Activity' section, which is currently empty. The status bar at the bottom indicates the date as 02-05-2020 and the time as 01:06.

Screens Order Stage Notifications

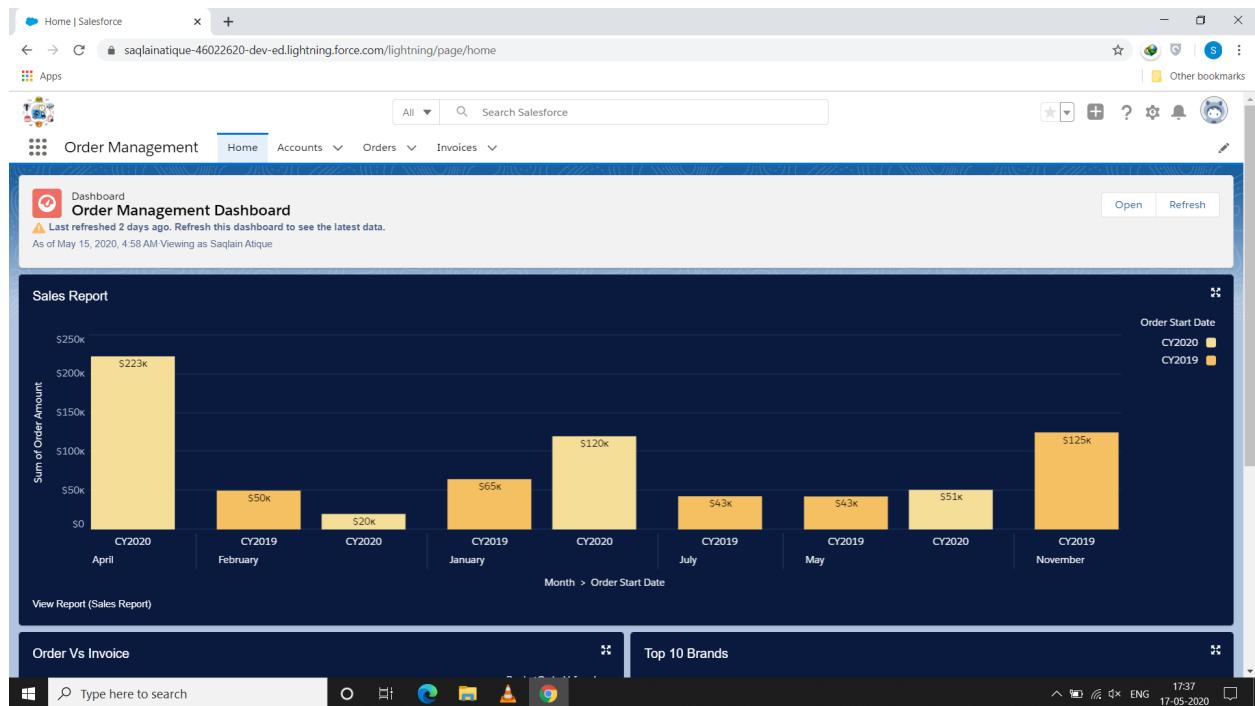
Email notification to related Contacts showing Order Stage and Order Products using Email Template.



In App notification for the Users.



Screen Order Management Dashboard



Validations

1. Order Status cannot be changed back to previous Status.
2. One Business user can be manager of at most Two Sales Users.
3. One Business User can manage Ten accounts.
4. One Sales User can create orders for Five accounts.
5. One must enter remarks if the order stage is cancelled.
6. Orders cannot be placed for products with stock quantity 0.