ORDER MANAGEMENT SYSTEM

PREPARED FOR
CRM SFDC Training Program
Capgemini Technology Services

PREPARED BY
Deepanshi Mittal

Abstract :

The Order Management System is an application based on Salesforce for automation of order creation process. This application is designed primarily for sales representatives who place orders on behalf of customers. To track order, email notifications and in app notifications are there for each order stage. A product inventory is maintained and updated according to the order. Orders with high value are approved by business users and on confirmation an invoice generates automatically.

Scopes :

In scope:
Functionality provided by the system are :

There types of users can access the system: Sales Users, Support Team and Business Users.
Privileges for each type of user are:

1. The sales user can :
    a. Manage up to 5 accounts and related contacts
    b. Create Orders
    c. Edit or delete and confirm or cancel order summary
    d. Create Invoice
    e. View relevant dashboards and reports

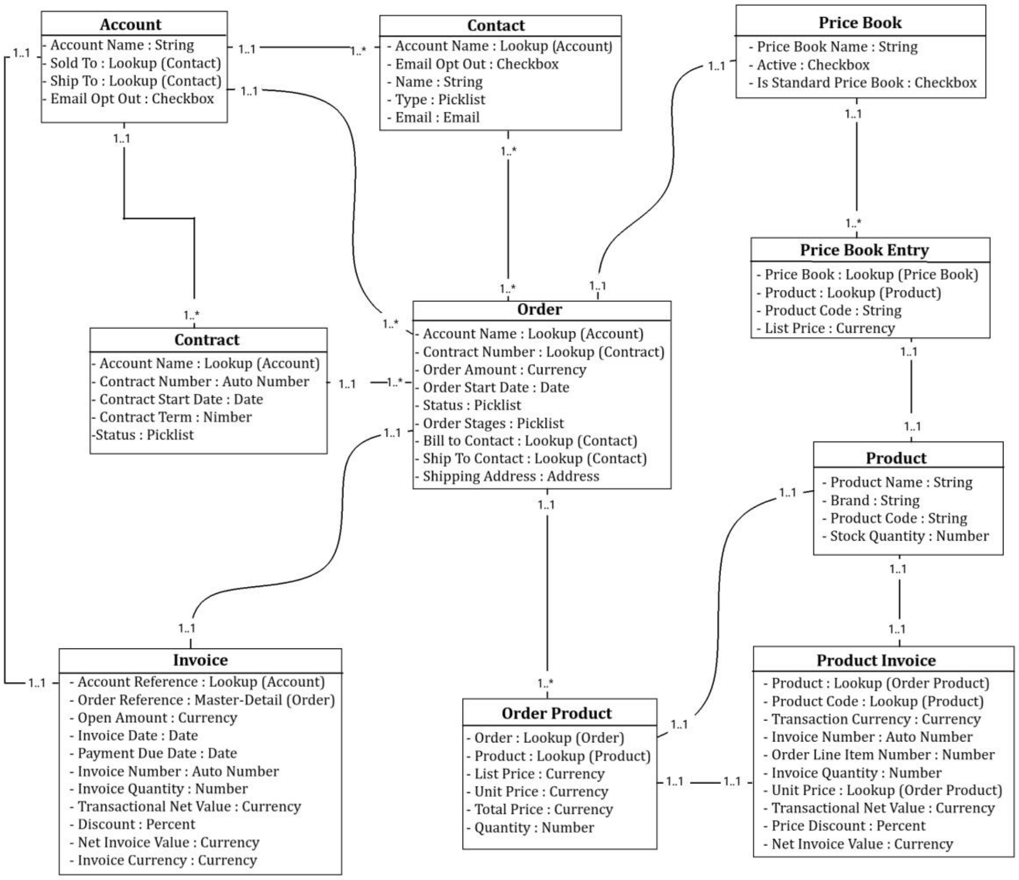
2. The business user can :
    a. Manage 2 sales users and view their records
    b. View accounts, related contacts, orders and invoices
    c. Approve or reject orders
    d. View relevant reports and dashboards

3. The support team can :
    a. Create business and sales users
    b. Assign roles to users
    c. View all data including reports and dashboards

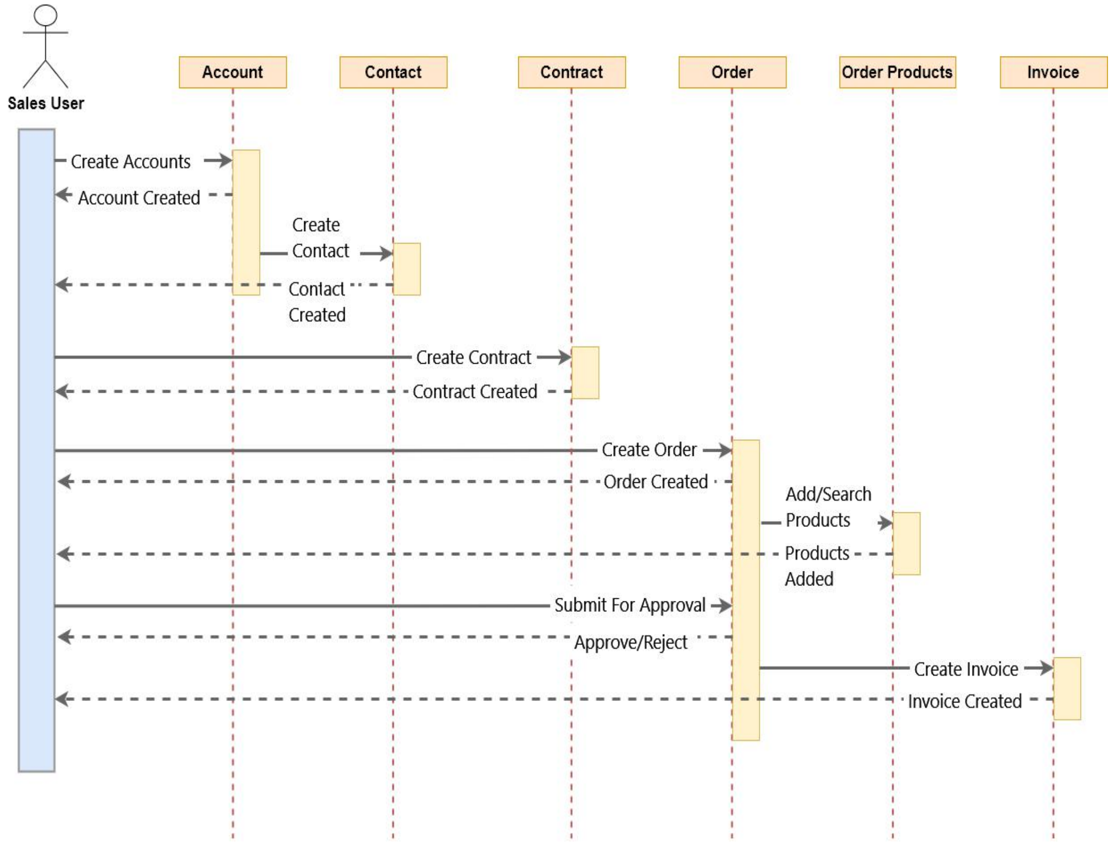
Out of scope :
The functionalities that are not covered in this application are as follows:

1. Application supports only two active users at a time due to limitation of Salesforce license users.
2. Delivery process is not implemented.

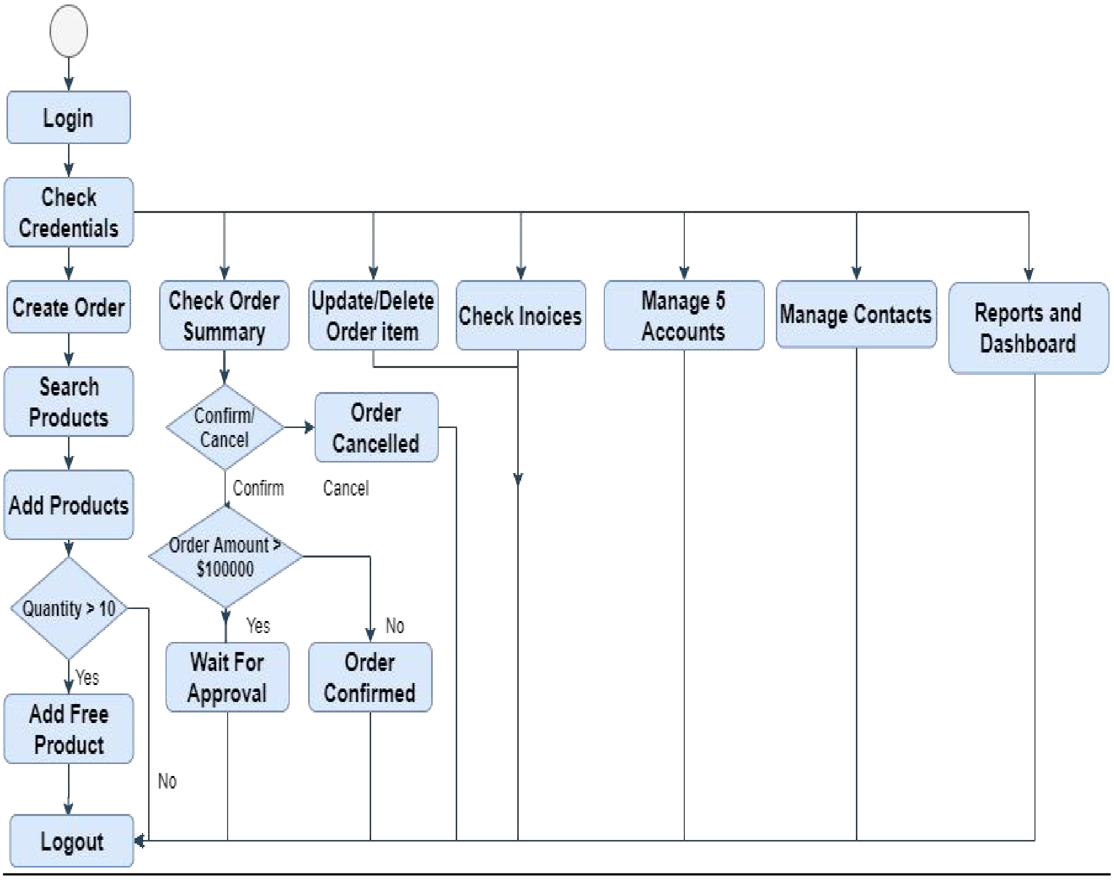
CLASS DIAGRAM :


Account
- Account Name : String
- Sold To : Lookup (Contact)
- Ship To : Lookup (Contact)
- Email Opt Out : Checkbox
Contact
- Account Name : Lookup (Account)
- Email Opt Out : Checkbox
- Name : String
- Type : Picklist
- Email : Email
Price Book
- Price Book Name : String
- Active : Checkbox
- Is Standard Price Book : Checkbox
Price Book Entry
- Price Book : Lookup (Price Book)
- Product : Lookup (Product)
- Product Code : String
- List Price : Currency
Contract
- Account Name : Lookup (Account)
- Contract Number : Auto Number
- Contract Start Date : Date
- Contract Term : Nimber
-Status : Picklist
Order
- Account Name : Lookup (Account)
- Contract Number : Lookup (Contract)
- Order Amount : Currency
- Order Start Date : Date
- Status : Picklist
- Order Stages : Picklist
- Bill to Contact : Lookup (Contact)
- Ship To Contact : Lookup (Contact)
- Shipping Address : Address
Product
- Product Name : String
- Brand : String
- Product Code : String
- Stock Quantity : Number
Invoice
- Account Reference : Lookup (Account)
- Order Reference : Master-Detail (Order)
- Open Amount : Currency
- Invoice Date : Date
- Payment Due Date : Date
- Invoice Number : Auto Number
- Invoice Quantity : Number
- Transactional Net Value : Currency
- Discount : Percent
- Net Invoice Value : Currency
- Invoice Currency : Currency
Order Product
- Order : Lookup (Order)
- Product : Lookup (Product)
- List Price : Currency
- Unit Price : Currency
- Total Price : Currency
- Quantity : Number
Product Invoice
- Product : Lookup (Order Product)
- Product Code : Lookup (Product)
- Transaction Currency : Currency
- Invoice Number : Auto Number
- Order Line Item Number : Number
- Invoice Quantity : Number
- Unit Price : Lookup (Order Product)
- Transactional Net Value : Currency
- Price Discount : Percent
- Net Invoice Value : Currency
1..1
1..*

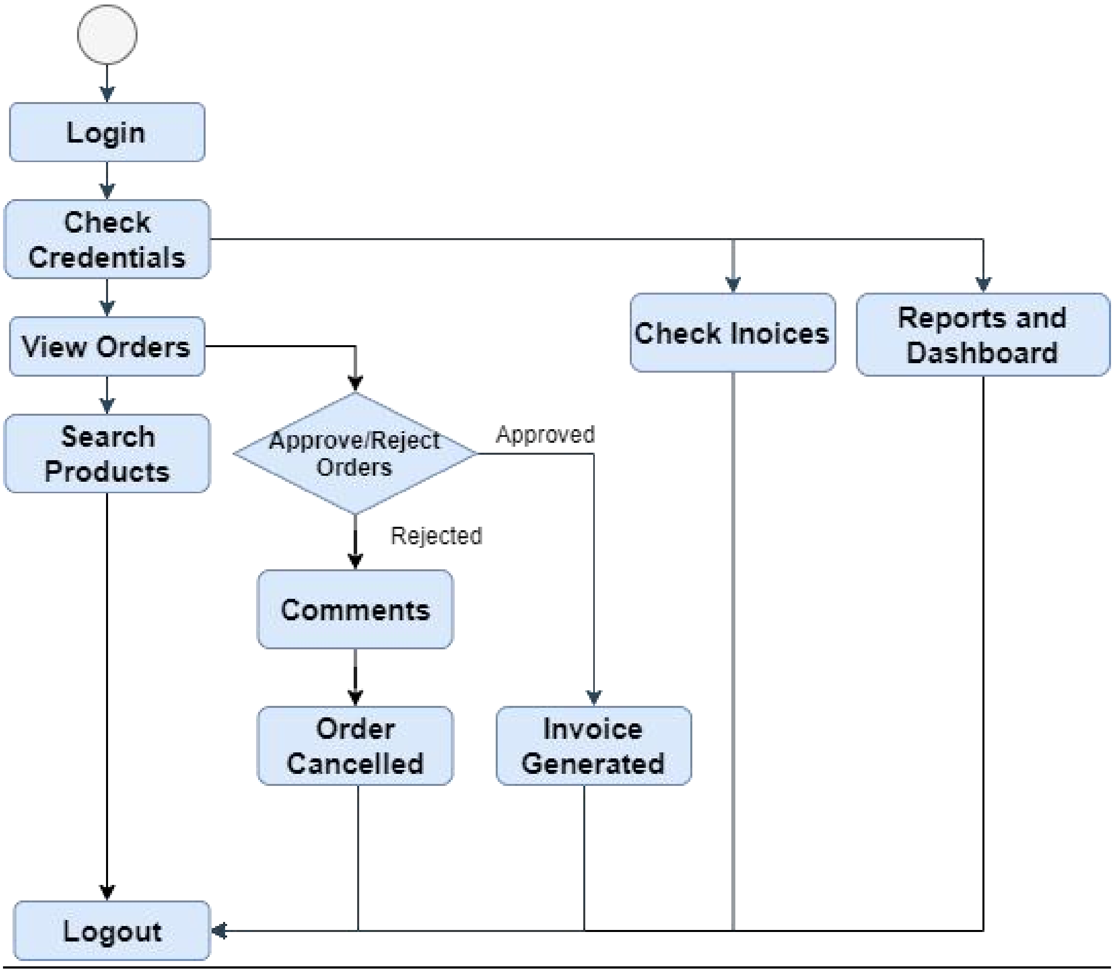
SEQUENCE DIAGRAM FOR SALES USER :



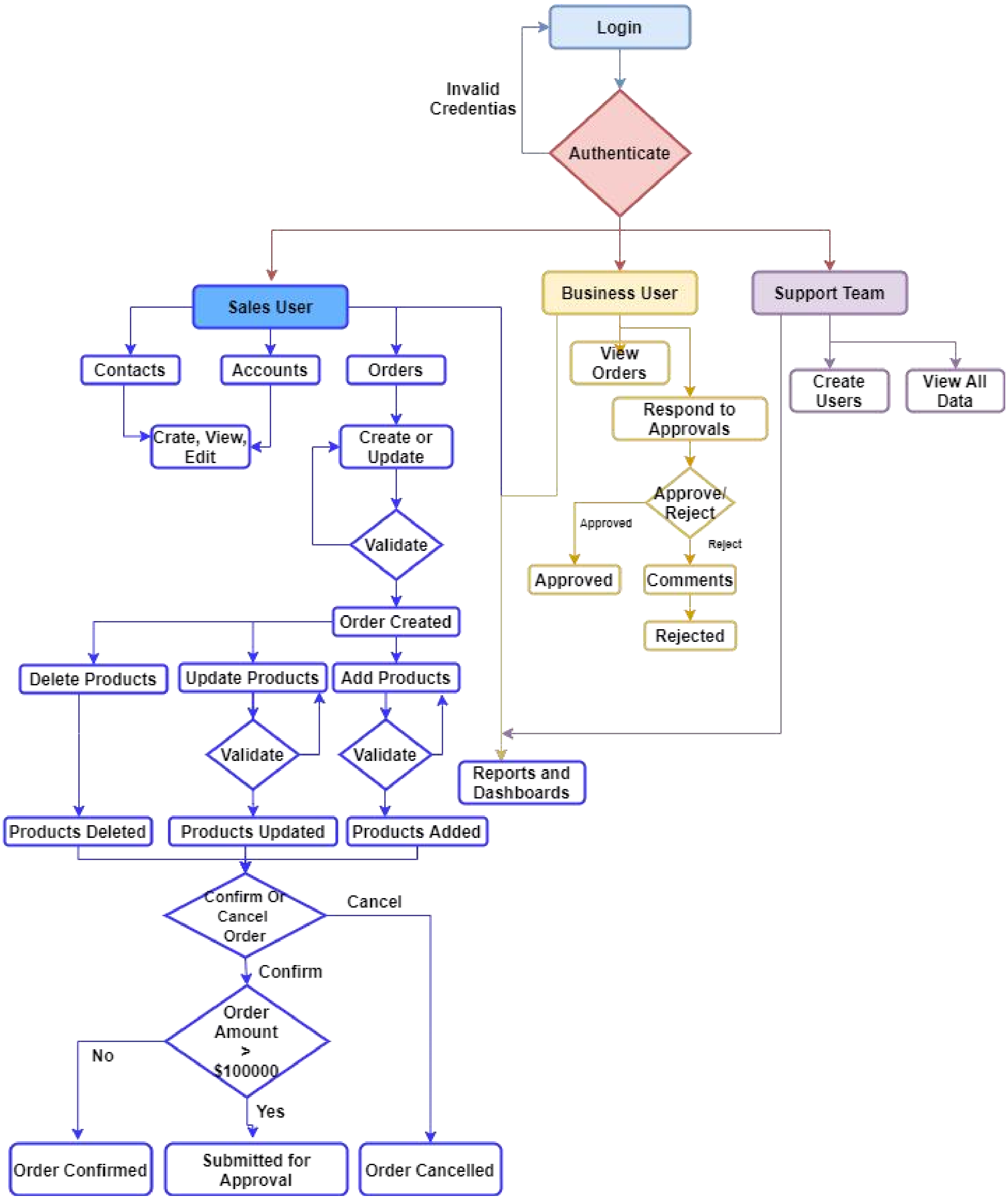
ACTIVITY DIAGRAM FOR SALES USER :



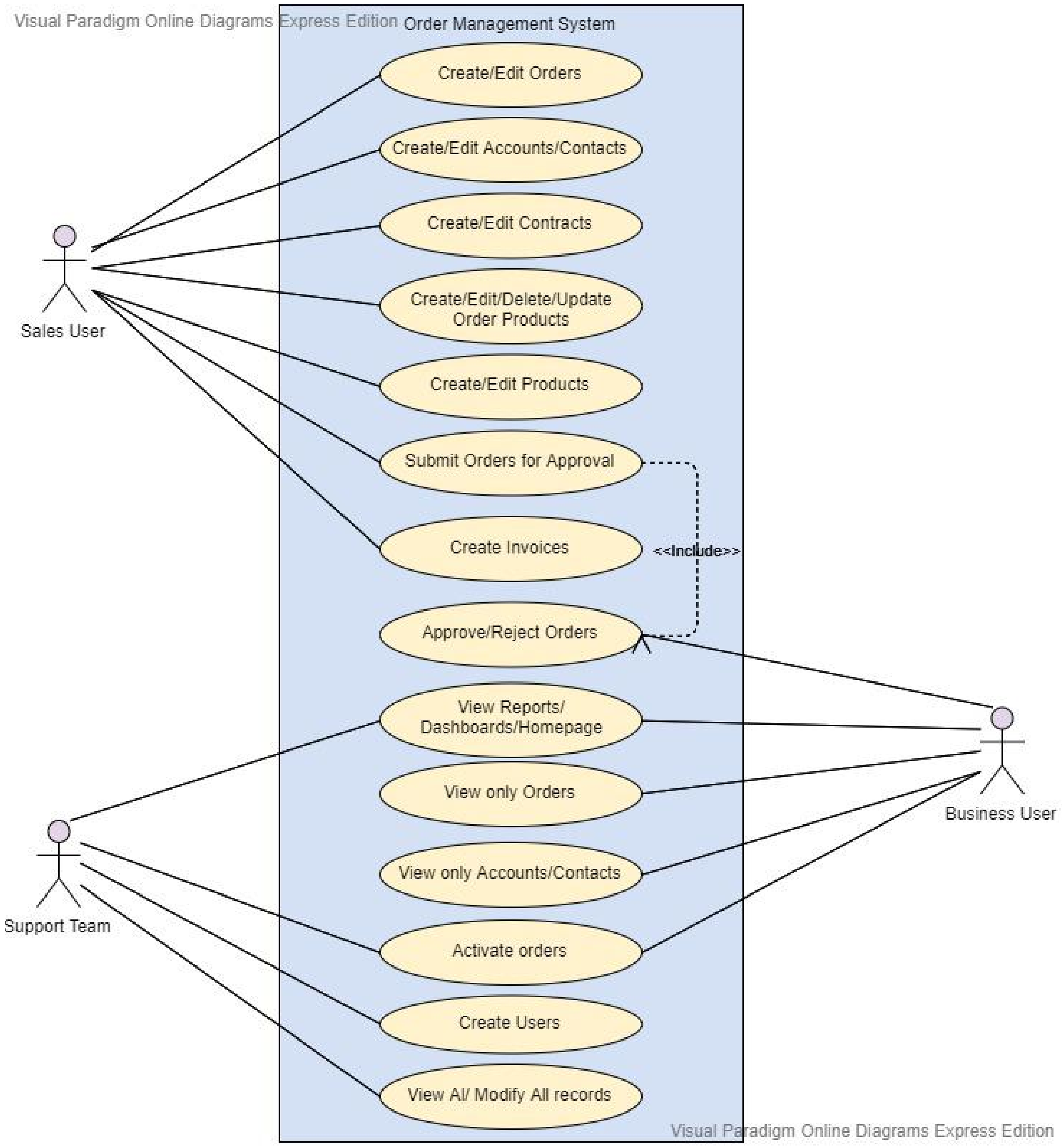
ACTIVITY DIAGRAM FOR BUSINESS USER :



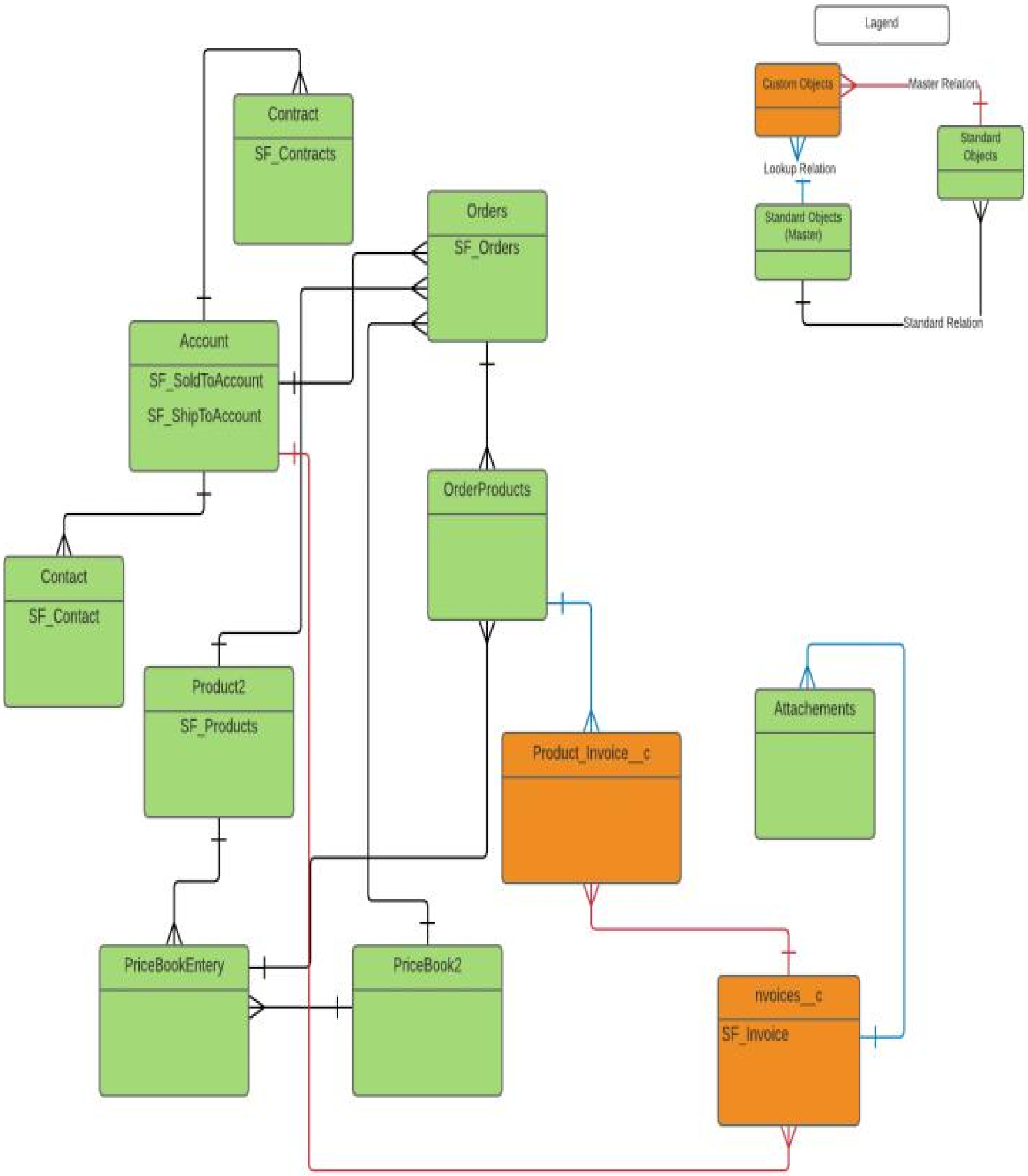
FLOW CHART :


Login
Invalid Credentias
Authenticate
Sales User
Business User
Support Team
Contacts
Accounts
Orders
Crate, View, Edit
Create or Update
Validate
View Orders
Respond to Approvals
Approve/ Reject
Approved
Reject
Approved
Comments
Rejected
Create Users
View All Data
Order Created
Delete Products
Update Products
Add Products
Validate
Validate
Reports and Dashboards
Products Deleted
Products Updated
Products Added
Confirm Or Cancel Order
Cancel
Confirm
Order Amount > $100000
No
Yes
Order Confirmed
Submitted for Approval
Order Cancelled

USE CASE DIAGRAM :

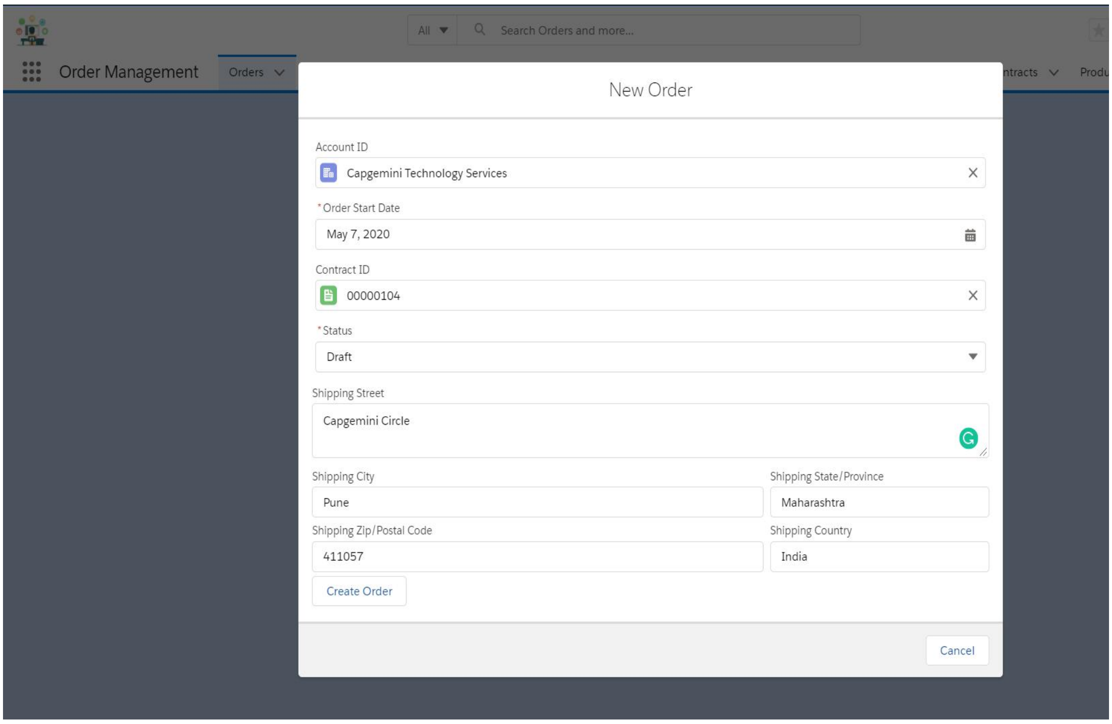

Visual Paradigm Online Diagrams Express Edition
Order Management System
Create/Edit Orders
Create/Edit Accounts/Contacts
Create/Edit Contracts
Create/Edit/Delete/Update Order Products
Create/Edit Products
Submit Orders for Approval
Create Invoices
<<Include>>
Approve/Reject Orders
View Reports/ Dashboards/Homepage
View only Orders
View only Accounts/Contacts
Activate orders
Create Users
View Al/ Modify All records
Sales User
Business User
Support Team
Visual Paradigm Online Diagrams Express Edition

ENTITY RELATION DIAGRAM :



WIREFRAME :

1. New Order



New Order

Account ID
Capgemini Technology Services

* Order Start Date
May 7, 2020

Contract ID
00000104

* Status
Draft

Shipping Street
Capgemini Circle

Shipping City
Pune

Shipping State/Province
Maharashtra

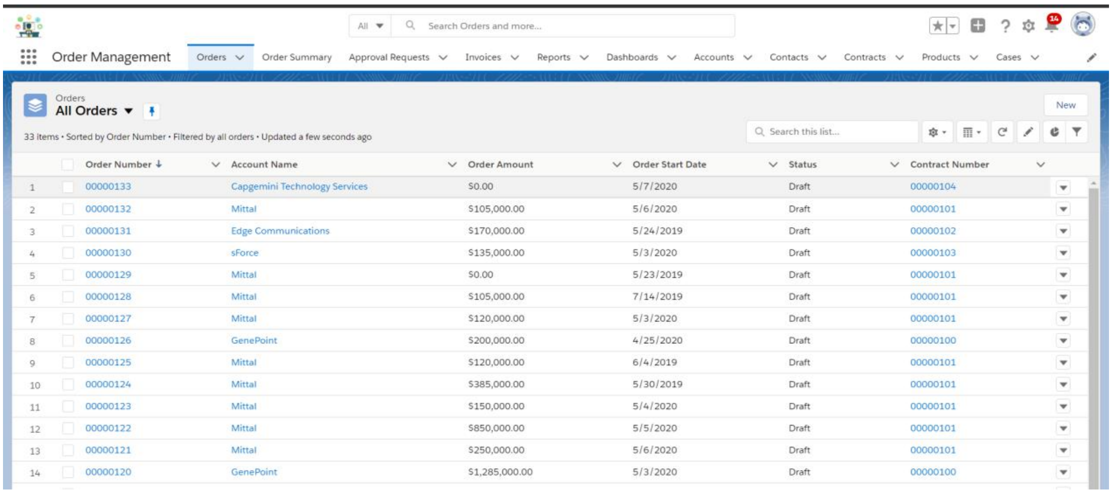
Shipping Zip/Postal Code
411057

Shipping Country
India

Create Order

Cancel

2. Order Created

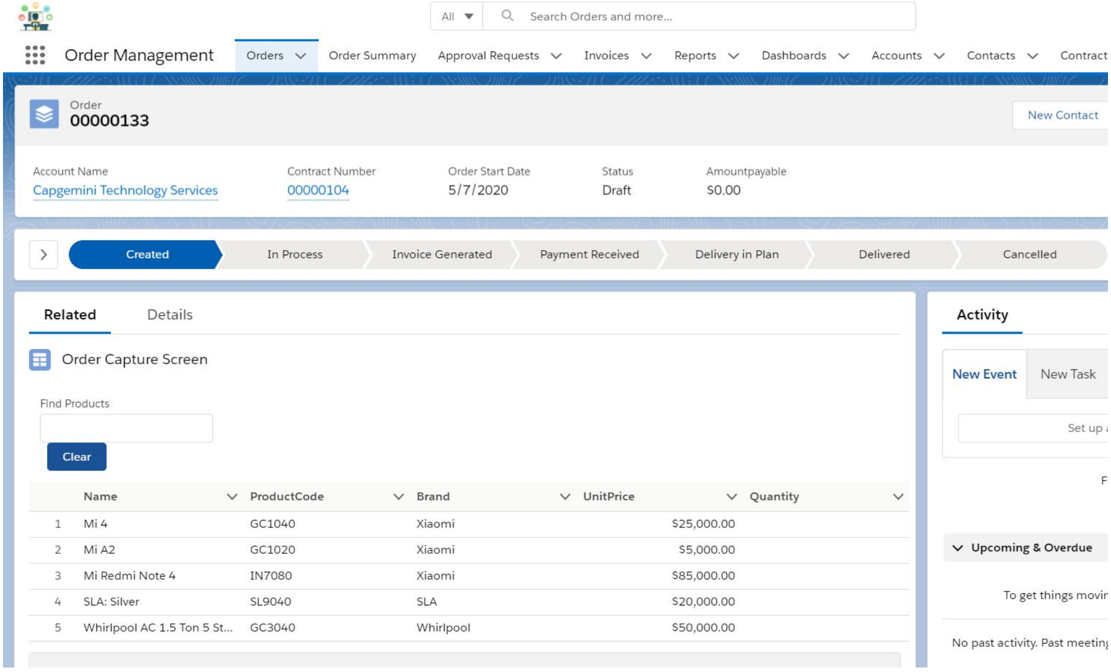


Orders
All Orders

33 items • Sorted by Order Number • Filtered by all orders • Updated a few seconds ago

	Order Number	Account Name	Order Amount	Order Start Date	Status	Contract Number
1	00000133	Capgemini Technology Services	$0.00	5/7/2020	Draft	00000104
2	00000132	Mittal	$105,000.00	5/6/2020	Draft	00000101
3	00000131	Edge Communications	$170,000.00	5/24/2019	Draft	00000102
4	00000130	sForce	$135,000.00	5/3/2020	Draft	00000103
5	00000129	Mittal	$0.00	5/23/2019	Draft	00000101
6	00000128	Mittal	$105,000.00	7/14/2019	Draft	00000101
7	00000127	Mittal	$120,000.00	5/3/2020	Draft	00000101
8	00000126	GenePoint	$200,000.00	4/25/2020	Draft	00000100
9	00000125	Mittal	$120,000.00	6/4/2019	Draft	00000101
10	00000124	Mittal	$385,000.00	5/30/2019	Draft	00000101
11	00000123	Mittal	$150,000.00	5/4/2020	Draft	00000101
12	00000122	Mittal	$850,000.00	5/5/2020	Draft	00000101
13	00000121	Mittal	$250,000.00	5/6/2020	Draft	00000101
14	00000120	GenePoint	$1,285,000.00	5/3/2020	Draft	00000100

3. Search or Add Products



Order
00000133

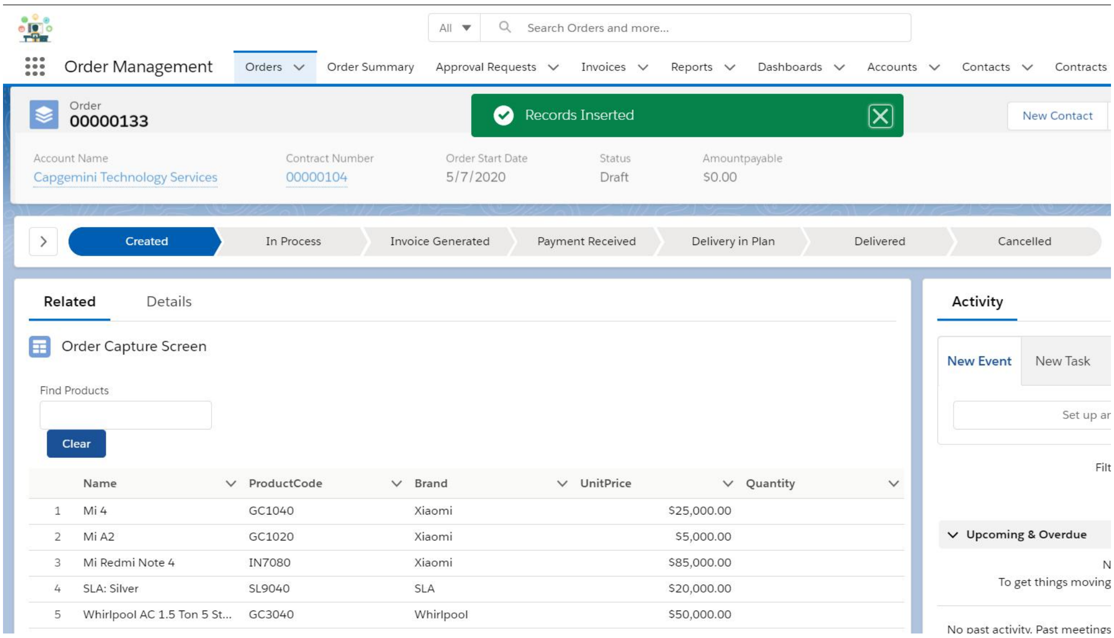
Account Name: Capgemini Technology Services
Contract Number: 00000104
Order Start Date: 5/7/2020
Status: Draft
Amountpayable: $0.00

Order Capture Screen

Find Products

	Name	ProductCode	Brand	UnitPrice	Quantity
1	Mi 4	GC1040	Xiaomi	$25,000.00	
2	Mi A2	GC1020	Xiaomi	$5,000.00	
3	Mi Redmi Note 4	IN7080	Xiaomi	$85,000.00	
4	SLA: Silver	SL9040	SLA	$20,000.00	
5	Whirlpool AC 1.5 Ton 5 St...	GC3040	Whirlpool	$50,000.00	

4. Products Inserted



Records Inserted

Order
00000133

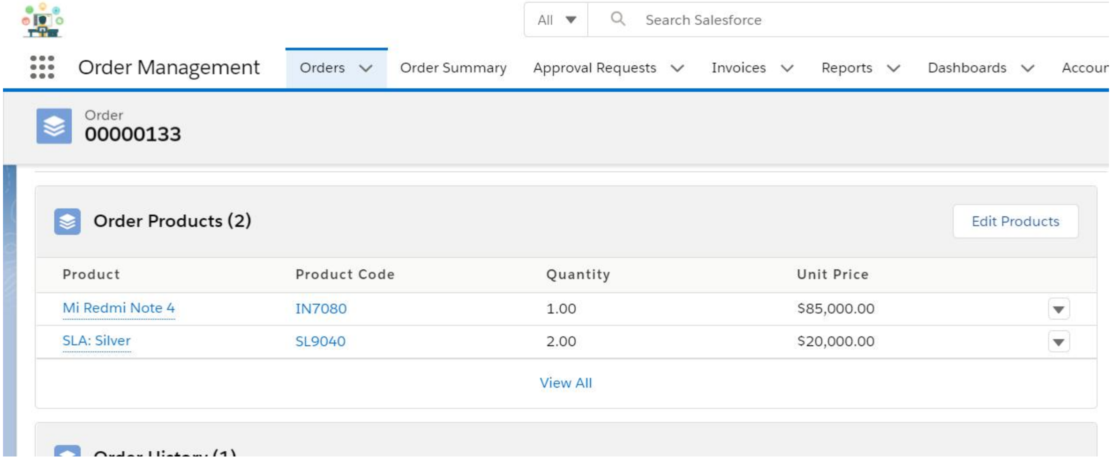
Account Name: Capgemini Technology Services
Contract Number: 00000104
Order Start Date: 5/7/2020
Status: Draft
Amountpayable: $0.00

Order Capture Screen

Find Products

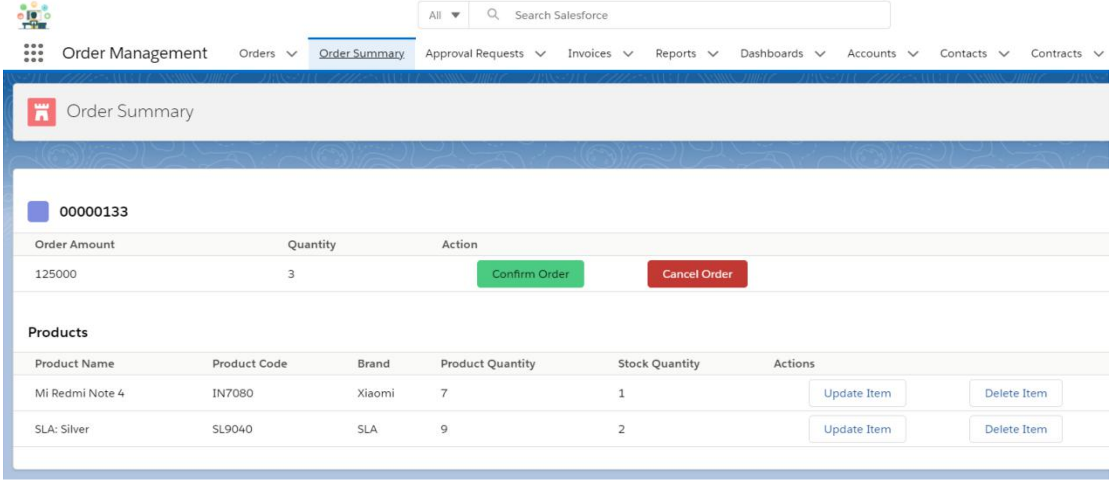
	Name	ProductCode	Brand	UnitPrice	Quantity
1	Mi 4	GC1040	Xiaomi	$25,000.00	
2	Mi A2	GC1020	Xiaomi	$5,000.00	
3	Mi Redmi Note 4	IN7080	Xiaomi	$85,000.00	
4	SLA: Silver	SL9040	SLA	$20,000.00	
5	Whirlpool AC 1.5 Ton 5 St...	GC3040	Whirlpool	$50,000.00	

5. Order Products



Product	Product Code	Quantity	Unit Price
Mi Redmi Note 4	IN7080	1.00	$85,000.00
SLA: Silver	SL9040	2.00	$20,000.00

6. Inserted in Order Summary

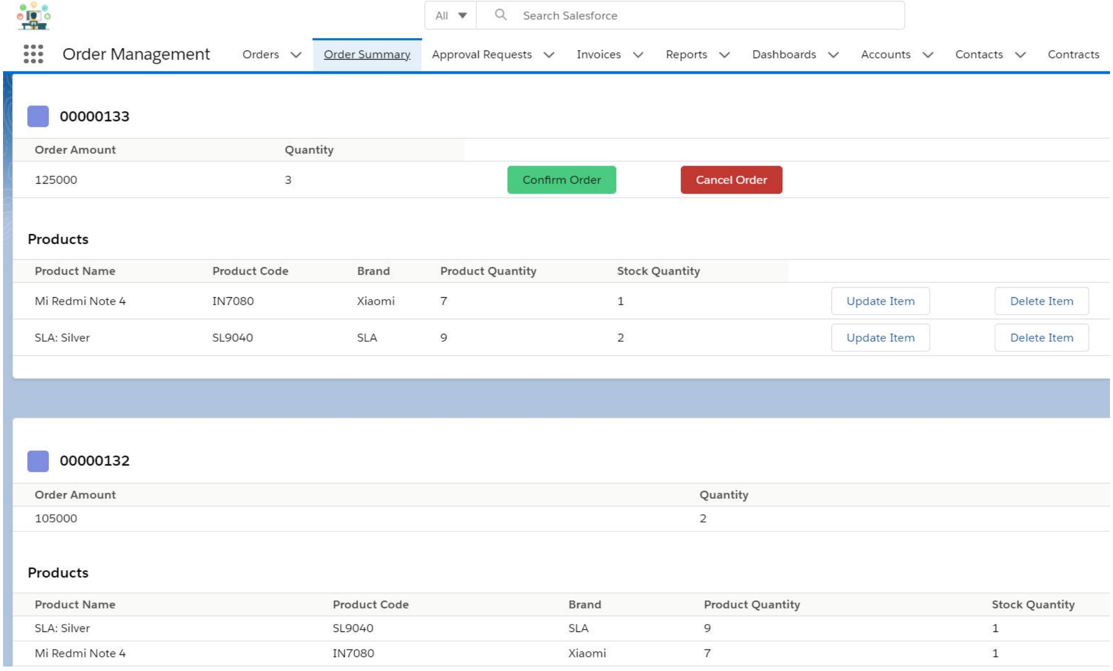


Order Amount	Quantity	Action	
125000	3	Confirm Order	Cancel Order

Products

Product Name	Product Code	Brand	Product Quantity	Stock Quantity	Actions	
Mi Redmi Note 4	IN7080	Xiaomi	7	1	Update Item	Delete Item
SLA: Silver	SL9040	SLA	9	2	Update Item	Delete Item

7. Order Summary



00000133

Order Amount	Quantity		
125000	3	Confirm Order	Cancel Order

Products

Product Name	Product Code	Brand	Product Quantity	Stock Quantity		
Mi Redmi Note 4	IN7080	Xiaomi	7	1	Update Item	Delete Item
SLA: Silver	SL9040	SLA	9	2	Update Item	Delete Item

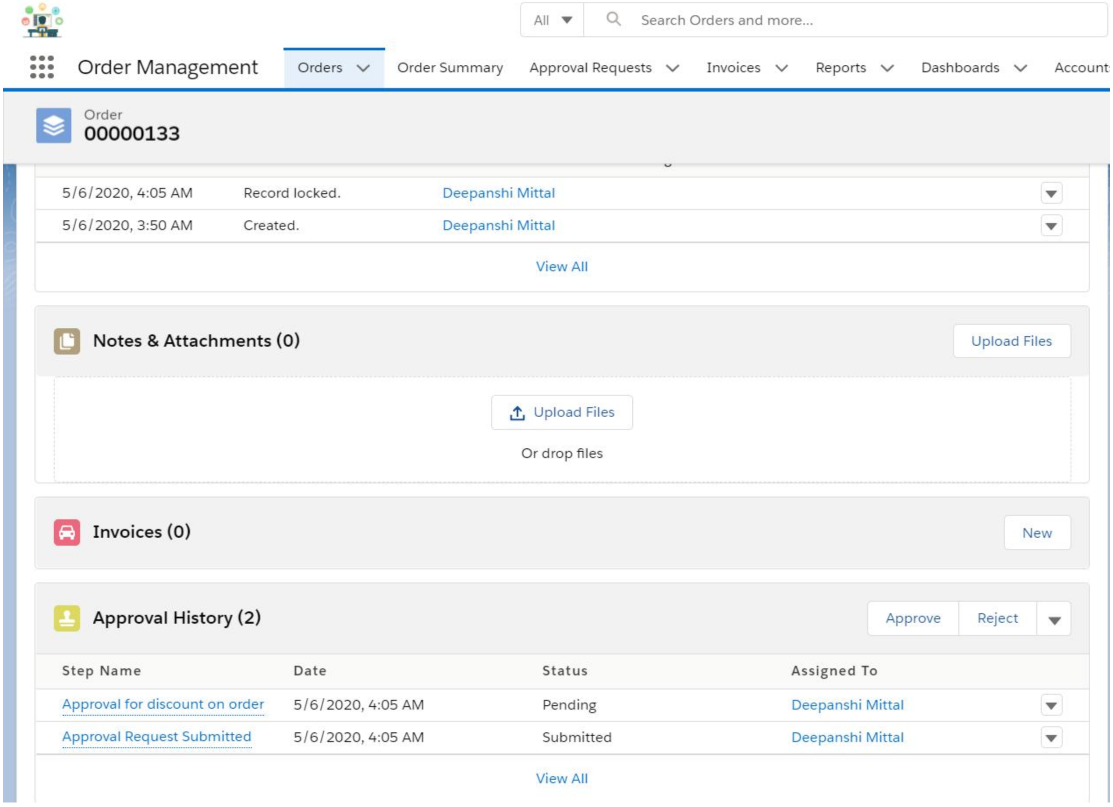
00000132

Order Amount	Quantity
105000	2

Products

Product Name	Product Code	Brand	Product Quantity	Stock Quantity
SLA: Silver	SL9040	SLA	9	1
Mi Redmi Note 4	IN7080	Xiaomi	7	1

8. Submitted for approval once confirm button is clicked



Order
00000133

5/6/2020, 4:05 AM	Record locked.	Deepanshi Mittal
5/6/2020, 3:50 AM	Created.	Deepanshi Mittal

View All

Notes & Attachments (0)

Upload Files

Or drop files

Invoices (0)

New

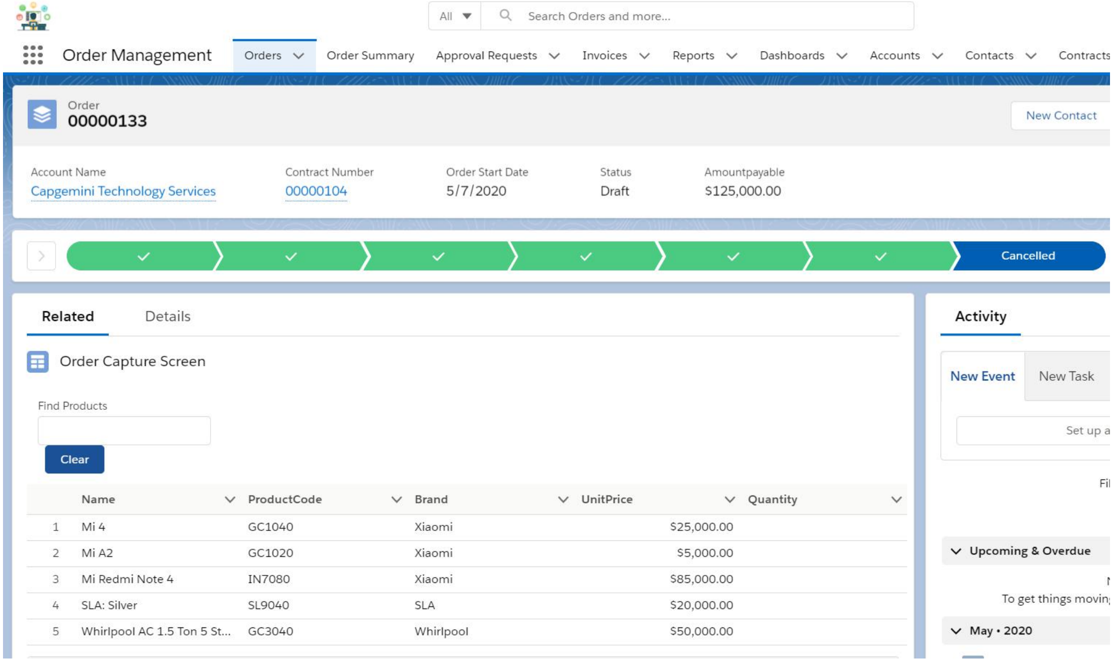
Approval History (2)

Approve Reject

Step Name	Date	Status	Assigned To
Approval for discount on order	5/6/2020, 4:05 AM	Pending	Deepanshi Mittal
Approval Request Submitted	5/6/2020, 4:05 AM	Submitted	Deepanshi Mittal

View All

9. Order Stage changes to "Cancelled" when cancel button clicked



Order
00000133

Account Name: Capgemini Technology Services
Contract Number: 00000104
Order Start Date: 5/7/2020
Status: Draft
Amountpayable: $125,000.00

Order Capture Screen

Find Products

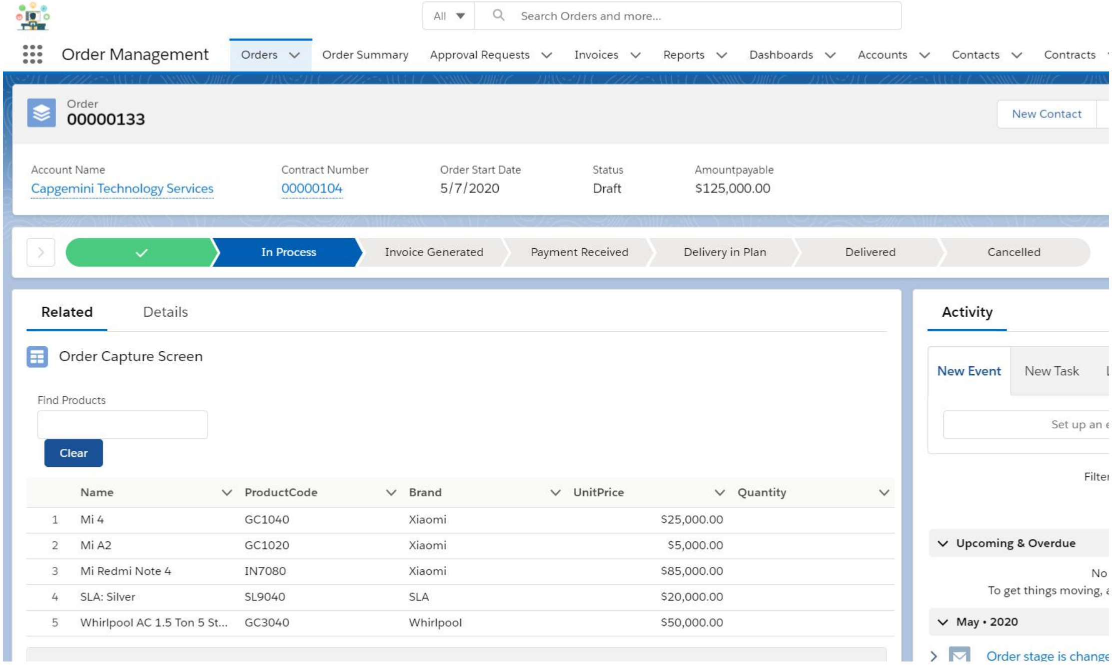
	Name	ProductCode	Brand	UnitPrice	Quantity
1	Mi 4	GC1040	Xiaomi	$25,000.00	
2	Mi A2	GC1020	Xiaomi	$5,000.00	
3	Mi Redmi Note 4	IN7080	Xiaomi	$85,000.00	
4	SLA: Silver	SL9040	SLA	$20,000.00	
5	Whirlpool AC 1.5 Ton 5 St...	GC3040	Whirlpool	$50,000.00	

Upcoming & Overdue

To get things movin

May • 2020

10. Order Stage changed to “In Process” when submitted for approval



Order
00000133

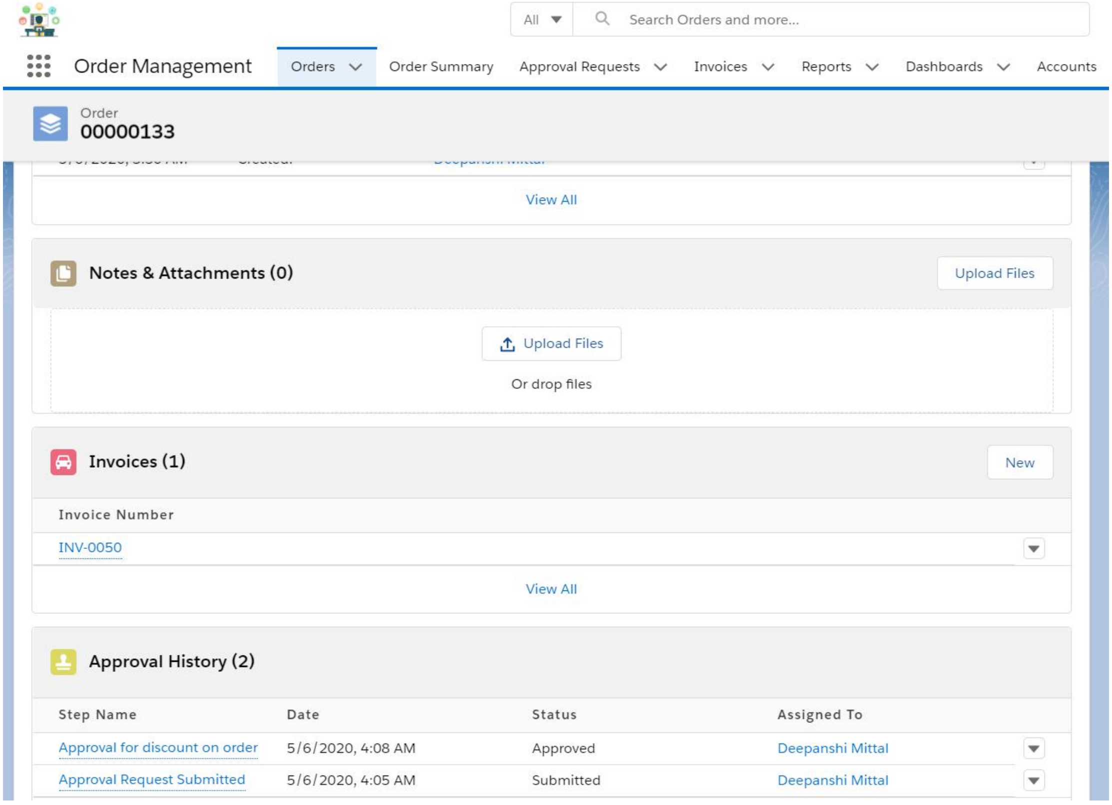
Account Name	Contract Number	Order Start Date	Status	Amountpayable
Capgemini Technology Services	00000104	5/7/2020	Draft	$125,000.00

Order Capture Screen

Find Products

	Name	ProductCode	Brand	UnitPrice	Quantity
1	Mi 4	GC1040	Xiaomi	$25,000.00	
2	Mi A2	GC1020	Xiaomi	$5,000.00	
3	Mi Redmi Note 4	IN7080	Xiaomi	$85,000.00	
4	SLA: Silver	SL9040	SLA	$20,000.00	
5	Whirlpool AC 1.5 Ton 5 St...	GC3040	Whirlpool	$50,000.00	

11. Approval by Business User (Approved)



Order
00000133

Notes & Attachments (0)

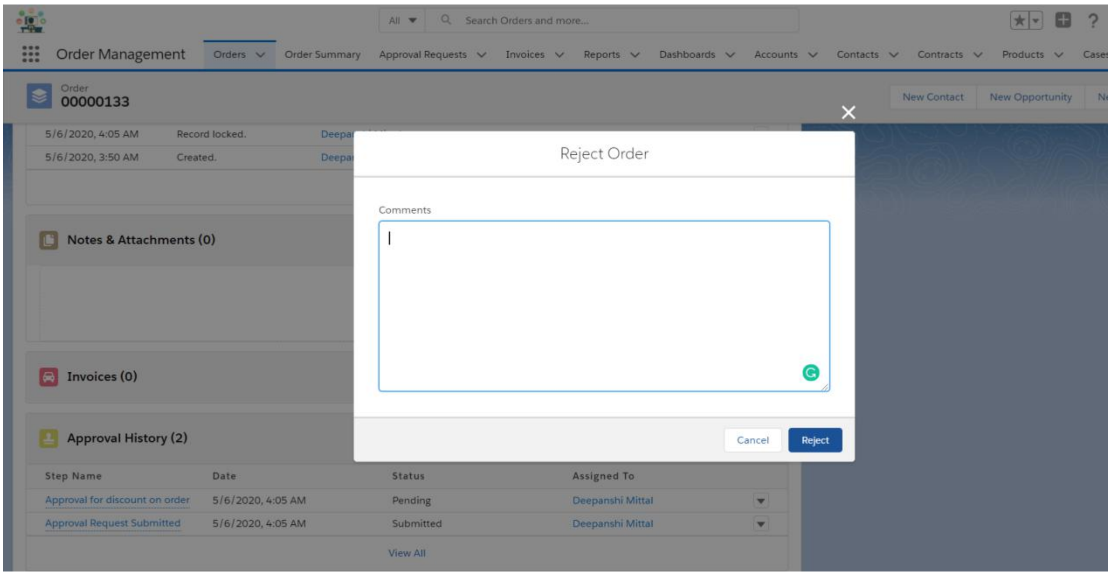
Invoices (1)

Invoice Number
INV-0050

Approval History (2)

Step Name	Date	Status	Assigned To
Approval for discount on order	5/6/2020, 4:08 AM	Approved	Deepanshi Mittal
Approval Request Submitted	5/6/2020, 4:05 AM	Submitted	Deepanshi Mittal

12. Approval by Business User (Rejected Without Comments)



Order
00000133

5/6/2020, 4:05 AM	Record locked.	Deepa
5/6/2020, 3:50 AM	Created.	Deepa

Notes & Attachments (0)

Invoices (0)

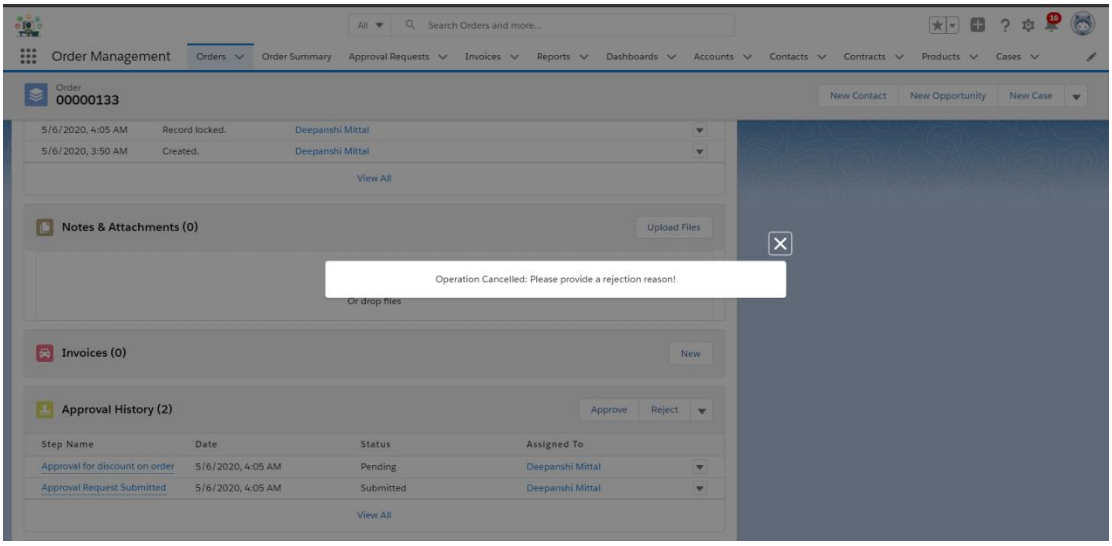
Approval History (2)

Step Name	Date	Status	Assigned To
Approval for discount on order	5/6/2020, 4:05 AM	Pending	Deepanshi Mittal
Approval Request Submitted	5/6/2020, 4:05 AM	Submitted	Deepanshi Mittal

Reject Order

Comments

13. Error if no comments for rejection



Order
00000133

5/6/2020, 4:05 AM	Record locked.	Deepanshi Mittal
5/6/2020, 3:50 AM	Created.	Deepanshi Mittal

Notes & Attachments (0)

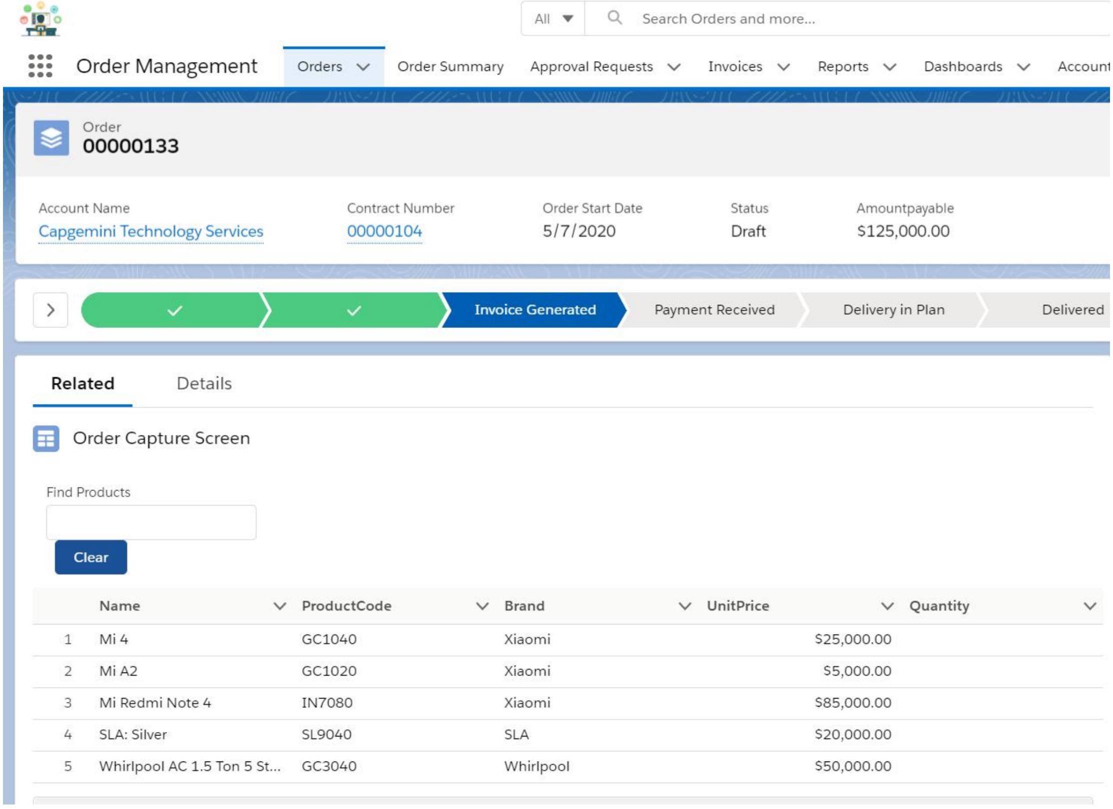
Operation Cancelled: Please provide a rejection reason!

Invoices (0)

Approval History (2)

Step Name	Date	Status	Assigned To
Approval for discount on order	5/6/2020, 4:05 AM	Pending	Deepanshi Mittal
Approval Request Submitted	5/6/2020, 4:05 AM	Submitted	Deepanshi Mittal

14. Order Stage changes to “Invoice Generated” once approved



Order
00000133

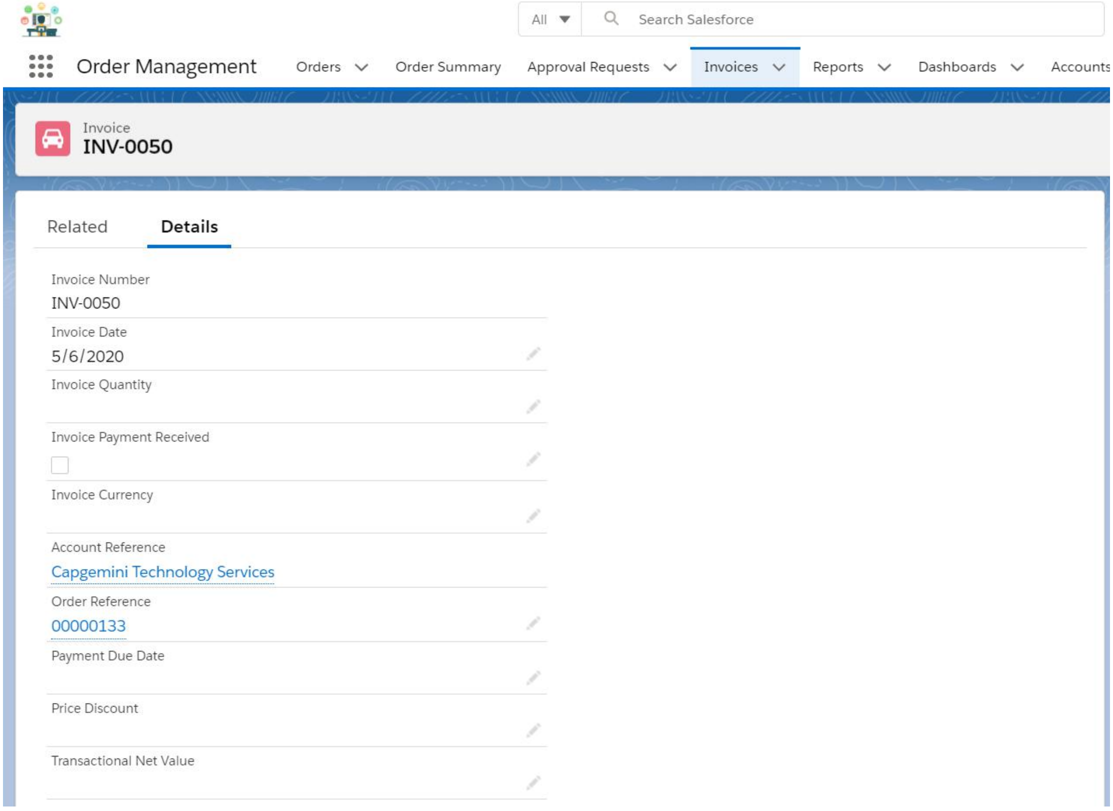
Account Name	Contract Number	Order Start Date	Status	Amountpayable
Capgemini Technology Services	00000104	5/7/2020	Draft	$125,000.00

Order Capture Screen

Find Products

	Name	ProductCode	Brand	UnitPrice	Quantity
1	Mi 4	GC1040	Xiaomi	$25,000.00	
2	Mi A2	GC1020	Xiaomi	$5,000.00	
3	Mi Redmi Note 4	IN7080	Xiaomi	$85,000.00	
4	SLA: Silver	SL9040	SLA	$20,000.00	
5	Whirlpool AC 1.5 Ton 5 St...	GC3040	Whirlpool	$50,000.00	

15. Invoice record created



Invoice
INV-0050

Invoice Number
INV-0050

Invoice Date
5/6/2020

Invoice Quantity

Invoice Payment Received
□

Invoice Currency

Account Reference
Capgemini Technology Services

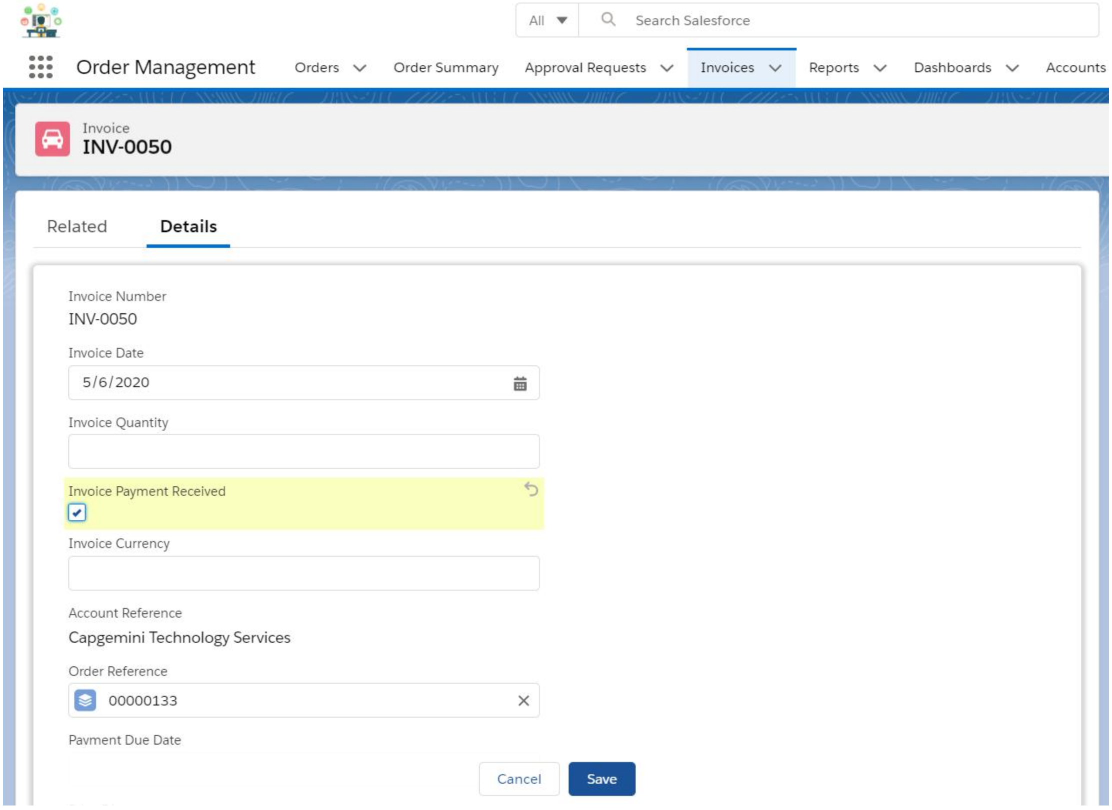
Order Reference
00000133

Payment Due Date

Price Discount

Transactional Net Value

16. Payment received checkbox in invoice record can be checked by Business user



Invoice
INV-0050

Invoice Number
INV-0050

Invoice Date
5/6/2020

Invoice Quantity

Invoice Payment Received
☑

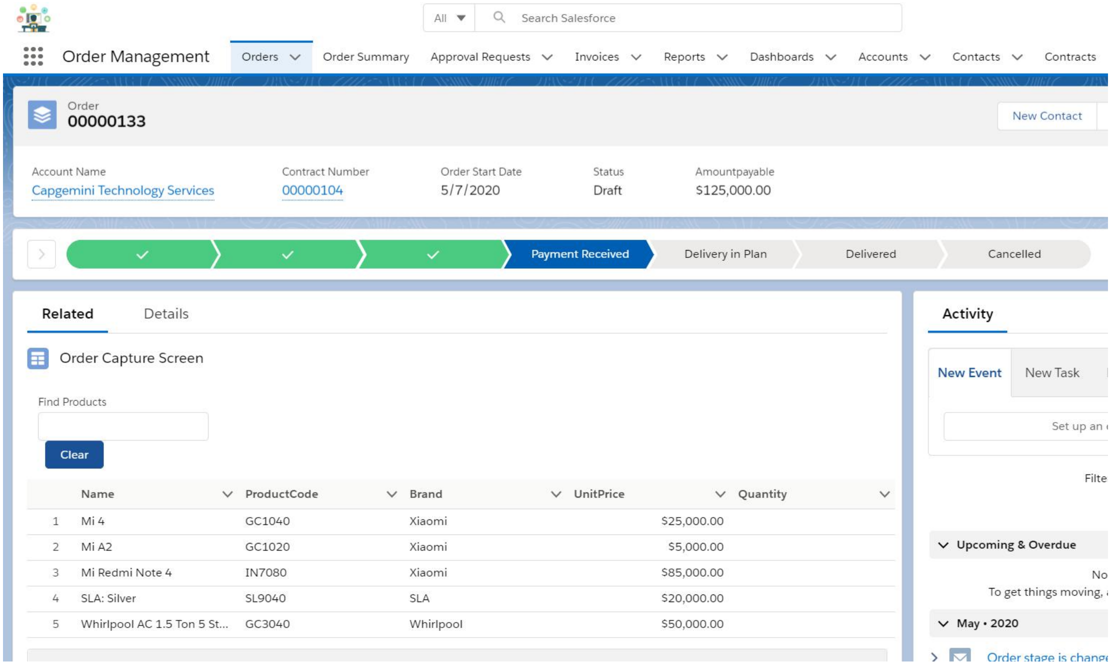
Invoice Currency

Account Reference
Capgemini Technology Services

Order Reference
00000133

Pavment Due Date

17. Once payment received checkbox checked order stage changed to "Payment Received"



Order
00000133

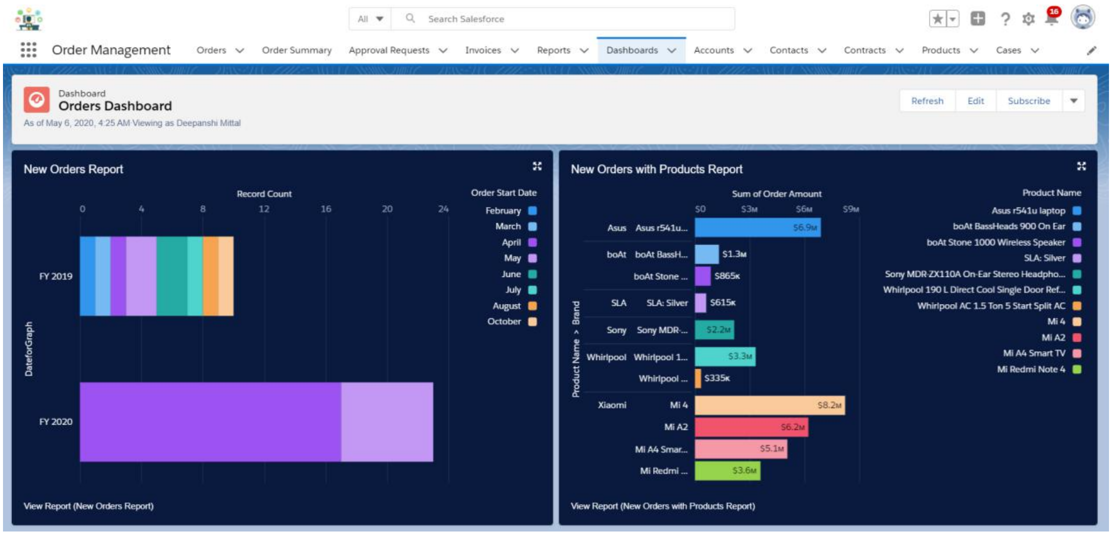
Account Name	Contract Number	Order Start Date	Status	Amountpayable
Capgemini Technology Services	00000104	5/7/2020	Draft	$125,000.00

Order Capture Screen

Find Products

	Name	ProductCode	Brand	UnitPrice	Quantity
1	Mi 4	GC1040	Xiaomi	$25,000.00	
2	Mi A2	GC1020	Xiaomi	$5,000.00	
3	Mi Redmi Note 4	IN7080	Xiaomi	$85,000.00	
4	SLA: Silver	SL9040	SLA	$20,000.00	
5	Whirlpool AC 1.5 Ton 5 St...	GC3040	Whirlpool	$50,000.00	

18. Dashboard of sales comparison and top brands reports



Dashboard
Orders Dashboard
As of May 6, 2020, 4:25 AM·Viewing as Deepanshi Mittal

OBJECTS :

Standard Objects:

1. **Account :** Stores details of an account

   Fields :

   a. Account Name : String
   b. Email Opt Out : Checkbox

   Relationships :

   a. Sold To : Lookup (Contact)
   b. Ship To : Lookup (Contact)

2. **Contact :** Stores details of a contact

   Fields :

   a. Name : String
   b. Type : Picklist
   c. Email : Email

   Relationships :

   a. Account Name : Lookup (Account)

3. **Contract :** Orders are made with reference to an existing contract

   Fields :

   a. Contract Number : Auto Number
   b. Contract Start Date : Date
   c. Contract Term : Number
   d. Status : Picklist

   Relationships :

   a. Account Name : Lookup (Account)

4. **Product :** Stores details for a product

   Fields :

   a. Product Name : String
   b. Brand : String
   c. Product Code : String
   d. Stock Quantity : Number

5. **Price Book Entry :** Price entry for a particular product in a price book

   Fields :

   a. Product Code : String
   b. List Price : Currency

   Relationships :

   a. Price Book : Lookup (Price Book)
   b. Product : Lookup (Product)

6. **Price Book :** Stores price listings of different products.

   Fields :

   a. Price Book Name : String
   b. Active : Checkbox
   c. Is Standard Price Book : Checkbox

7. **Order :** Stores details of a order

   Fields:

   a. Order Start Date : Date
   b. Stage : Picklist
   c. Status : Picklist
   d. Order Amount : Currency

   Relationships:

   a. Account Name : Lookup (Account)
   b. Contract Name : Lookup (Contract)
   c. Bill To Contact : Lookup (Contact)
   d. Ship To Contact : Lookup (Contact)

8. **Order Product :** Stores product entries for a particular order

   Fields :

   a. List Price : Currency
   b. Unit Price : Currency
   c. Total Price : Currency
   d. Quantity : Number

   Relationships:

   a. Order : Lookup (Order)
   b. Product : Lookup (Product)
   c. Invoice : Lookup (Invoice)

Custom Objects :

9. **Product Invoice :** Invoice details for a particular product in an order

   Fields:

   a. Invoice Number : Auto Number
   b. Invoice Quantity : Number
   c. Unit Price : Currency
   d. Transactional Net Value : Currency
   e. Discount : Percent
   f. Net Invoice Value : Currency
   g. Transaction Currency : Picklist

   Relationships:

   a. Order Line Item Number : Lookup (Order Product)
   b. Product : Lookup (Product)

10. **Invoice :** Stores details of an invoice of an order

    Fields:

    a. Invoice Number : Auto Number
    b. Invoice Quantity : Number
    c. Invoice Date : Date
    d. Open Amount : Currency
    e. Payment Due Date : Date
    f. Net Transactional Value : Currency
    g. Discount : Percent
    h. Net Invoice Value : Currency

i. Invoice Currency : Picklist

Relationships:

a. Account Reference : Lookup (Account)
b. Order Reference : Master-Detail (Order)

APEX CLASSES :

1. **orderSummaryController :**

   Fetches the details for order summary of all the orders using **getAllOrders** method. Order Number, TotalAmount, Order stage and the associated products are fetched from Order Products and Order. Updation and deletion of any order from the Order summary can be done through **updateOrderItem** method which takes orderId, itemId and quantity as parameters.

2. **submitForApproval :**

   When the order is confirmed by the sales user, then this apex class will submit the order for approval using **submitForApproval** method which takes Id as parameter.

3. **cancelOrder**

   If the order is cancelled through the button in order summary, then this apex class will be called and **cancelStatus** method will take the orderId as a parameter and changes the stage of the order to ‘Cancelled’.

4. **EmailNotification**

   The method **sendMail** takes a list of Ids including AccountId, OrderId, BillToContactId, ShipToContactId and TemplateId as input and then figures out the recipients and sends them the required mail using **SingleEmailMessage**.

5. **productAuraService**

   In this apex class, **getProductList** method will fetch the products based on key provided by the user for searching the product. **insertOrderItem** method will insert the order products selected by the user.

APEX TRIGGERS :

1. **RequireRejectionComment**

   This trigger is on Order object and is triggered before a record is updated. It comes in action while approving orders and doesn’t let the approval rejection without proper comments.

2. **RestrictAccount**

   This trigger is on Account object and is triggered before a record is inserted. It validates the use case that a particular Sales user should manage only 5 accounts.

3. **RestrictUser**

   This trigger is on the User object and is triggered before a record is inserted. It ensures that a proper manager is selected for a new user and also validates the use case that not more than two Sales users shall choose the same Business user as their manager.

4. **addPriceBookId**

   This trigger sets the pricebook to standard pricebook.

PROCESSES :

1. **Amount change**

   This process builder is responsible for updation of quantity of stock, adding free product and payable amount.

2. **Email on Stage Change**

   This process builder sends email notification by calling apex class whenever the order stage is changed.

3. **Generate an invoice**

   This process creates an invoice record when the order is confirmed through approval by higher authorities.

4. **Payment**

   When the payment received checkbox in invoice is checked, then this process builder updates the order stage to payment received.

5. **Stage Creation**

   This will send an email if the order is created.

APPROVAL PROCESS :

1. **Approval for order**

   This handles the order approval process and auto approves orders with an amount less than $100000 otherwise sends it to the designated approver. Upon approval it activates the order and upon rejection it also activates the order and locks it for further changes.

VALIDATION RULES :

1. **Quantity_is_0**

   This validation rule on Order Product verifies if the order quantity is more than the stock quantity or stock quantity for that order is available or not.

AURA COMPONENTS :

1. **orderManagement**

   This aura component overrides the standard New button on Order home page.

2. **orderedit**

   This aura component overrides the standard Edit button on the Order home page.

LIGHTNING WEB COMPONENTS :

1. **editbutton**

   This lightning web component displays the editing area for the Orders. When standard edit button is clicked, then this component is displayed.

2. **newbutton**

   This lightning web component displays when standard new button is clicked. The displayed user interface for new record is the lwc.

3. **orderSummary**

   This lightning web component the created orders with the products associated with that order.

4. **searchbar**

   This lightning web components displays the order capture screen to add products associated with the order. Products can be searched through the searchbar in this component.