# ORDER MANAGEMENT APPLICATION USING SALESFORCE

**Major Project Submitted in Partial Fulfilment of the requirements for the degree of**
**Master Of Computer Application (2021-2023)**

***By***

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**(Maulana Abul Kalam Azad University of Technology)**

# Techno Main, Salt Lake FACULTY OF MCA DEPARTMENT

## Certificate of Recommendation

This is to certify that **Soumi Biswas, Barnik Jana, Gurudutta Pranav, Mainak Kar Chowdhury and Samrat Saha Roy** has completed their Major project (MCAN-381) work titled **"ORDER MANAGEMENT SYSTEM"**, under the direct supervision and guidance of **Prof. DEBASMITA CHATTERJEE**. We are satisfied with their work, which is being presented for the partial fulfilment of the degree of Master of Computer Application (MCA), Maulana Abul Kalam Azad University of Technology, Kolkata– 700064

Prof. DEBASMITA CHATTERJEE
Assistant Professor, Dept. of MCA
Date:

Prof. (Dr.) Shiladitya Chowdhury
HOD, Dept. of MCA
(Techno Main, Salt Lake)
Date:

(Maulana Abul Kalam Azad University of Technology)

# Techno Main, Salt Lake FACULTY OF MCA DEPARTMENT

## Certificate of Approval *

The foregoing Major project is hereby approved as a creditable study of Master of Computer Application (MCA) and presented in a manner satisfactory to warrant its acceptance as a pre-requisite to the degree for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or any statement made, opinion expressed or conclusion therein but approve this Major project only for the purpose for which it is submitted.

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_____

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Signature of the examiners

Final Examination for
Evaluation of the Project

- Only in case the Major project is approved

# Acknowledgement

We have put our fullest efforts into this project. However, it would not have been possible without the kind support and help of many individuals and the college department. We would like to extend our sincere thanks to all of them. We would like to express our deepest appreciation to all those who provided us with the opportunity to work on this project. We are highly indebted to our mentor **Prof. DEBASMITA CHATTERJEE** for mentoring us and providing necessary information regarding the project and for her support and the constant guidance in this project. Also, for being available at any time for any discussion regarding ideas and solutions for the issues faced. A special thanks to all our faculty members of Techno Main Salt Lake and our Head of the Department **Prof. (Dr.) Shiladitya Chowdhury** for teaching us and inculcating the knowledge within us and for giving us a chance to give that knowledge a new practical dimension. Last but not the least, we are beholden to our family members and friends for their support and cooperation throughout this time.

SOUMI BISWAS

BARNIK JANA

GURUDUTTA PRANAV

MAINAK KAR CHOWDHURY

SAMRAT SAHA ROY

# PREFACE

The order management system is a Salesforce app and environment meant to facilitate the creation and approval of orders generated by a firm's clients. The firm's order handing team comprises employees in sales, business and support roles. The system is meant to handle how an employee interacts with and handles order and client data, while overriding the standard sales cloud utility with customizable lightning web components.

# Goal of the Major project

1. Support user, Admin User and Sales User were given their own specific functionality as per the use case.

2. Order approval was automated.

3. Triggers were used to apply business logic.

4. Lightning Web Components used to create app home page and override actions(wrapped in aura component)

# Objective Of the Project

1. Ensuring code coverage using test classes, to prepare for deployment was not done.

2. Batch apex jobs which could remove completed orders one month ago.

3. Limited salesforce license reduced number of users.

# INDEX

## Table information and purpose:



## Image information and purpose:

# Major Project on

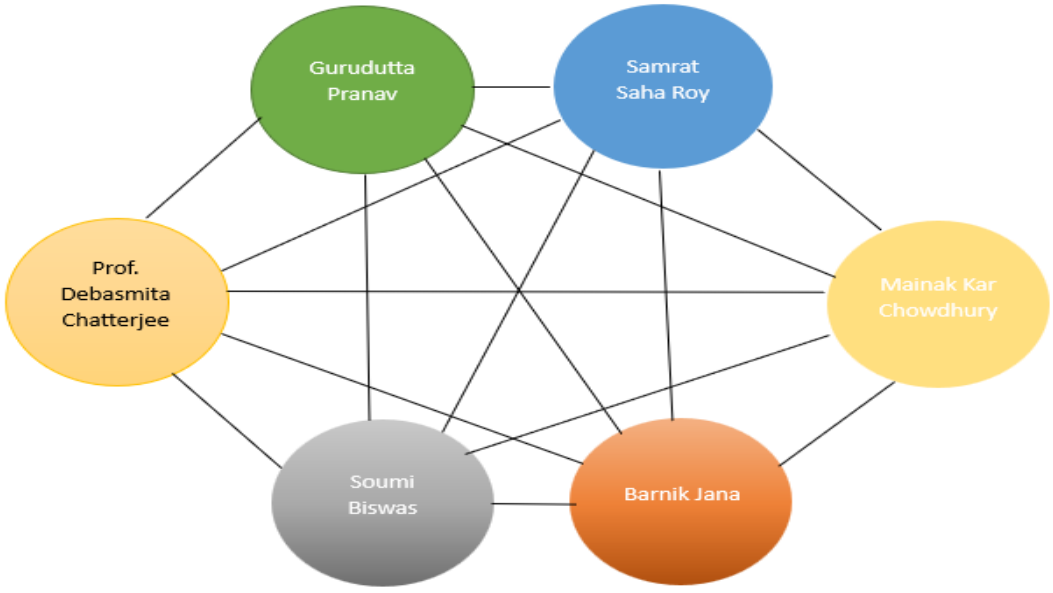
## ORDER MANAGEMENT APPLICATION USING SALESFORCE

## 1. Scope of the Project:

The order management system is a Salesforce app and environment meant to facilitate the creation and approval of orders generated by a firm's clients. The firm's order handing team comprises employees in sales, business and support roles. The system is meant to handle how an employee interacts with and handles order and client data, while overriding the standard sales cloud utility with customizable lightning web components

## 2. Concepts and Problem Analysis:

### 2.1 Team Structure:



## 2.2 Quality Assurance Plan:

Quality Assurance, or QA for short, is the systematic monitoring and evaluation of the various aspects of a project, service or facility to maximize the probability that minimum standards of quality are being attained by the production process. QA cannot absolutely guarantee the production of quality products. Two principles included in QA are: "Fit for purpose", the product should be suitable for the intended purpose; and "Right first time", mistakes should be eliminated. QA includes regulation of the quality of raw materials, assemblies, products and components, services related to production, and management, production and inspection processes. Quality is determined by the product users, clients or customers, not by society in general. It is not the same as 'expensive' or 'high quality'. Low priced products can be considered as having high quality if the product users determine them as such. · The QA Project Plan documents the results of a project's technical planning process, providing in one place a clear, concise, and complete plan for the environmental data operation and its quality objectives and identifying key project personnel.

To ensure quality, the following documents will be produced during development:

- System design document
- Procedural design document
- Code Unit test report

It is felt that since the system is small, a detailed incremental testing is not required. Unit testing is employed. Our code is being continuously reviewed by our project guide at each level of coding. This continuous process of review has made our project to be assured and we have given our utmost to achieve its quality.

## 2.3 Risk Management:

To maximize the awareness of opportunities by minimizing, monitoring and controlling the probability of unfortunate events is known as Risk Management. It's the procedure to identify, assess and prioritize the risk followed by synchronized and inexpensive application of resources. The fear from project failures (at any phase such as during designing, development, production, or life-cycles), natural causes and disasters, purposeful attack from an opponent, or events of uncertain or unpredictable root-cause are the main sources of risk.

The two types of events considered during the risk management process are:

(a) Negative events

(b) Positive events.

These can be classified as the events that are negative and fall into the category of Risk whereas the positive events are classified as opportunities. The majority risks that are encountered during the development of a project are:

- Schedule risk
- Performance risk
- Governance risk
- Strategic risks
- Operational risk
- Risks associated with external hazards

There are various internal risks associated with each stage of the project, whereas some risks are beyond the scope of the project team. Such risks are external risks that could be arising from outside the organization.

# 2.4)Basic COCOMO Analysis :

**EFFORT**= a (KLOC) $^{b}$ Person-Month

**DEVELOPMENT TIME**= c (EFFORT) $^{d}$ Months

**AVERAGE STUFF SIZE**= EFFORT/ DEVELOPMENT TIME Persons

**PRODUCTIVITY**= KLOC/ EFFORT KLOC/ Person-Month

| Type | a | b | c | d |
|---|---|---|---|---|
| **ORGANIC** | **2.4** | **1.05** | **2.5** | **0.38** |
| **SEMI-ORGANIC** | **3.0** | **1.12** | **2.5** | **0.35** |
| **DETACHED** | **3.6** | **1.20** | **2.5** | **0.32** |

**SOLUTION:**

**Total line of codes**: 190

We know for the **ORGANIC COCOMO** model

a=2.4, b=1.05, c=2.5, d=0.38

**Effort**= a (KLOC) $^{b}$ $=2.4(0.19)^{1.05}$ = 0.419664779 Person-Month

**Development Time**= c (EFFORT) $^{d}$ $= 2.5(0.419664779)^{0.38}$

= 1.797392674Months

**Average Stuff Size**= Effort/ Development Time = 0.419/1.797= 0.233166 Person

**Person Productivity** = KLOC/ Effort = 0.19/0.419 = 0.45346 KLOC/ Person-Month

# 3)Theoretical Background:

## Salesforce org:

Salesforce an org is: "A deployment of Salesforce with a defined set of licensed users. An organization is the virtual space provided to an individual customer of Salesforce. Your organization includes all of your data and applications, and is separate from all other organizations."

## Apex:

Apex enables developers to access the Salesforce platform back-end database and client-server interfaces to create third-party SaaS applications. Apex includes an application programming interface (API) that Salesforce developers can use to access user data on the platform.

## LWC:

Lightning Web Components (LWC) are a user interface (UI) framework that Salesforce Developers use to create customized pages and functions on the Salesforce platform. LWCs use a standardized JavaScript framework, HTML, and CSS, without a third-party framework.

## Vs code:

Visual Studio Code is the go-to code editor for Salesforce developers. It's free, open-source, and available for Windows, Linux, and macOS. This editor has easy-to-install extensions for syntax highlighting, code completion, and more.

# 4) Software Requirement Specifications:

## SYSTEM REQUIREMENT

### CLIENT SIDE

| ***Minimum Hardware Requirements*** | ***Minimum Software Requirements*** |
|---|---|
| Processor: 1.5 GHz | Minimum SDK Supported: 24<br>Internet Connectivity |

### DEVELOPER'S SIDE

| ***Minimum Hardware Requirements*** | ***Minimum Software Requirements*** |
|---|---|
| Processor: 2 GHz<br>RAM: 4 GB<br>Hard Disk: 100GB | Operating System: Windows 10 or higher<br>Web Browser: Chrome |

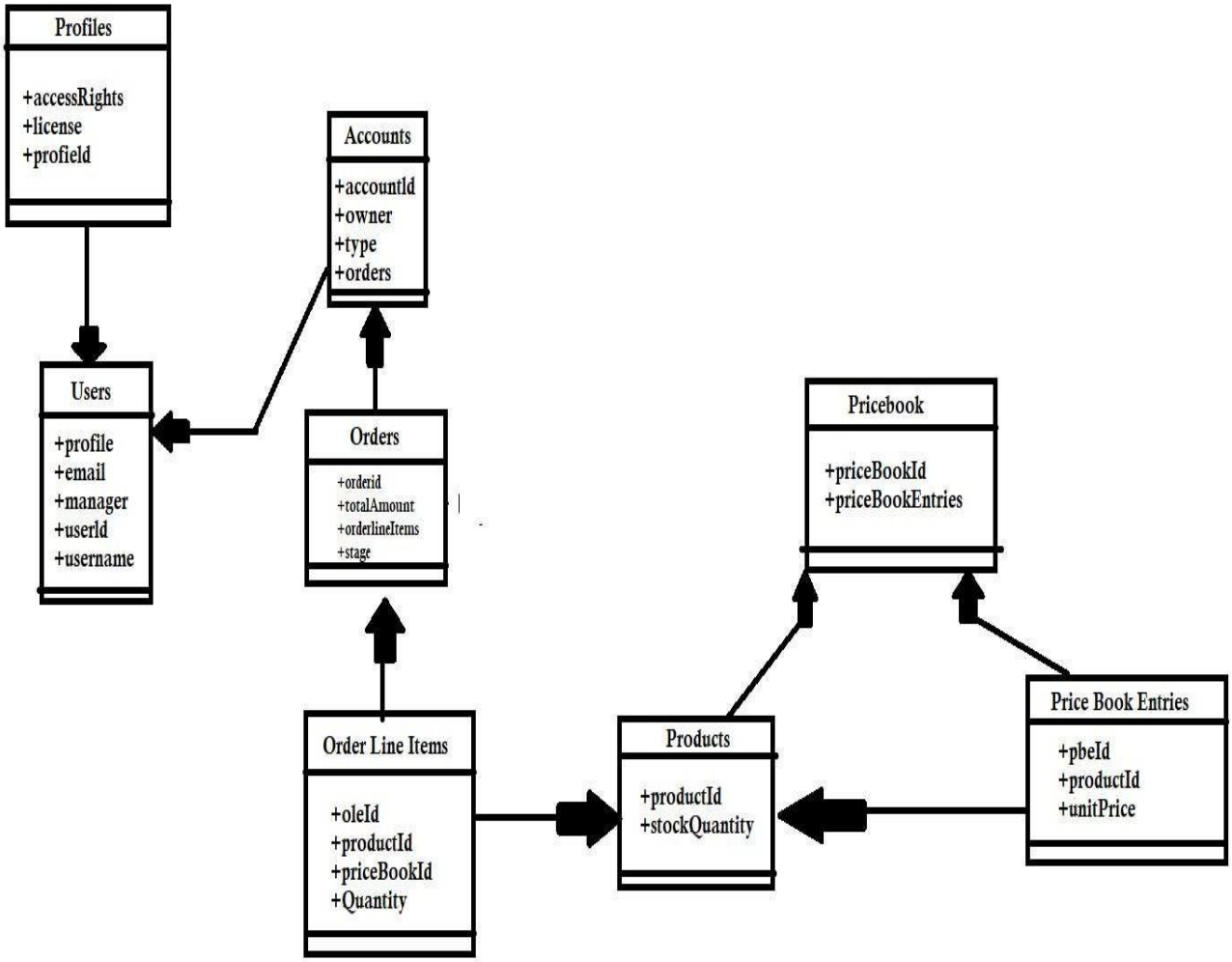
## PROJECT REQUIREMENT

**Front end**: Salesforce org, LWC

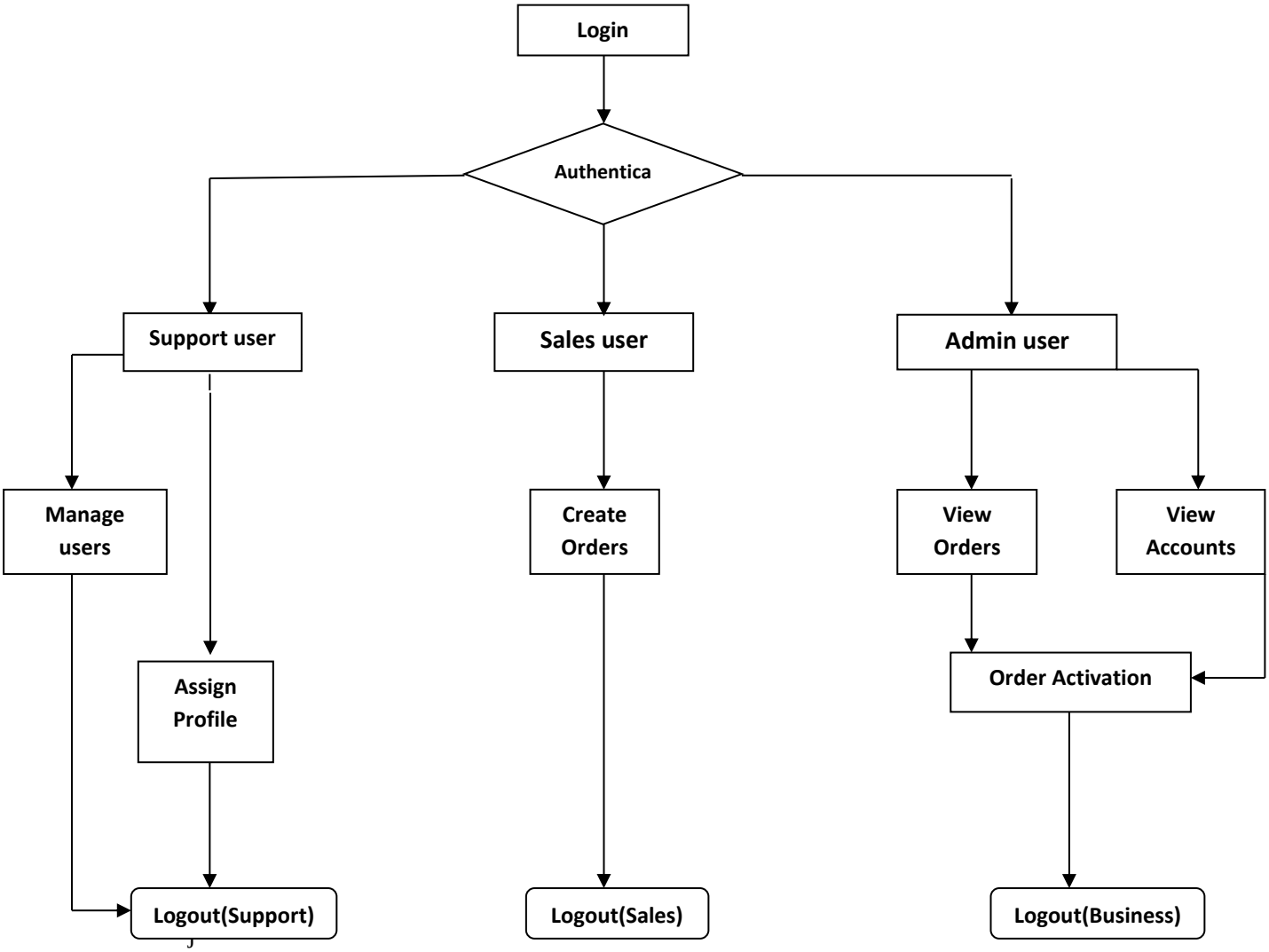
**Back end**: Apex

# 5) Related UML Diagram:

## Class diagram:

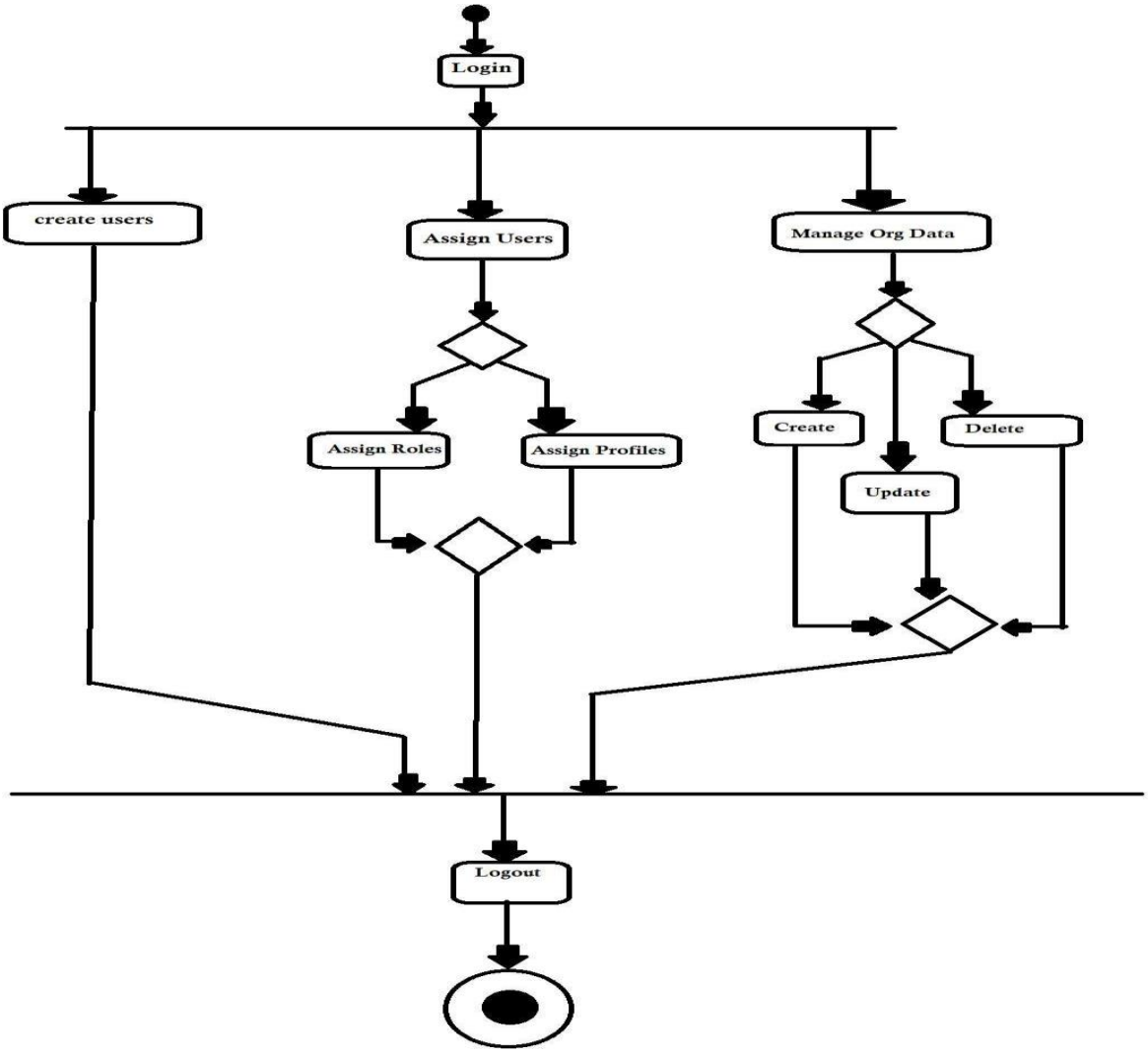


# Flowchart:

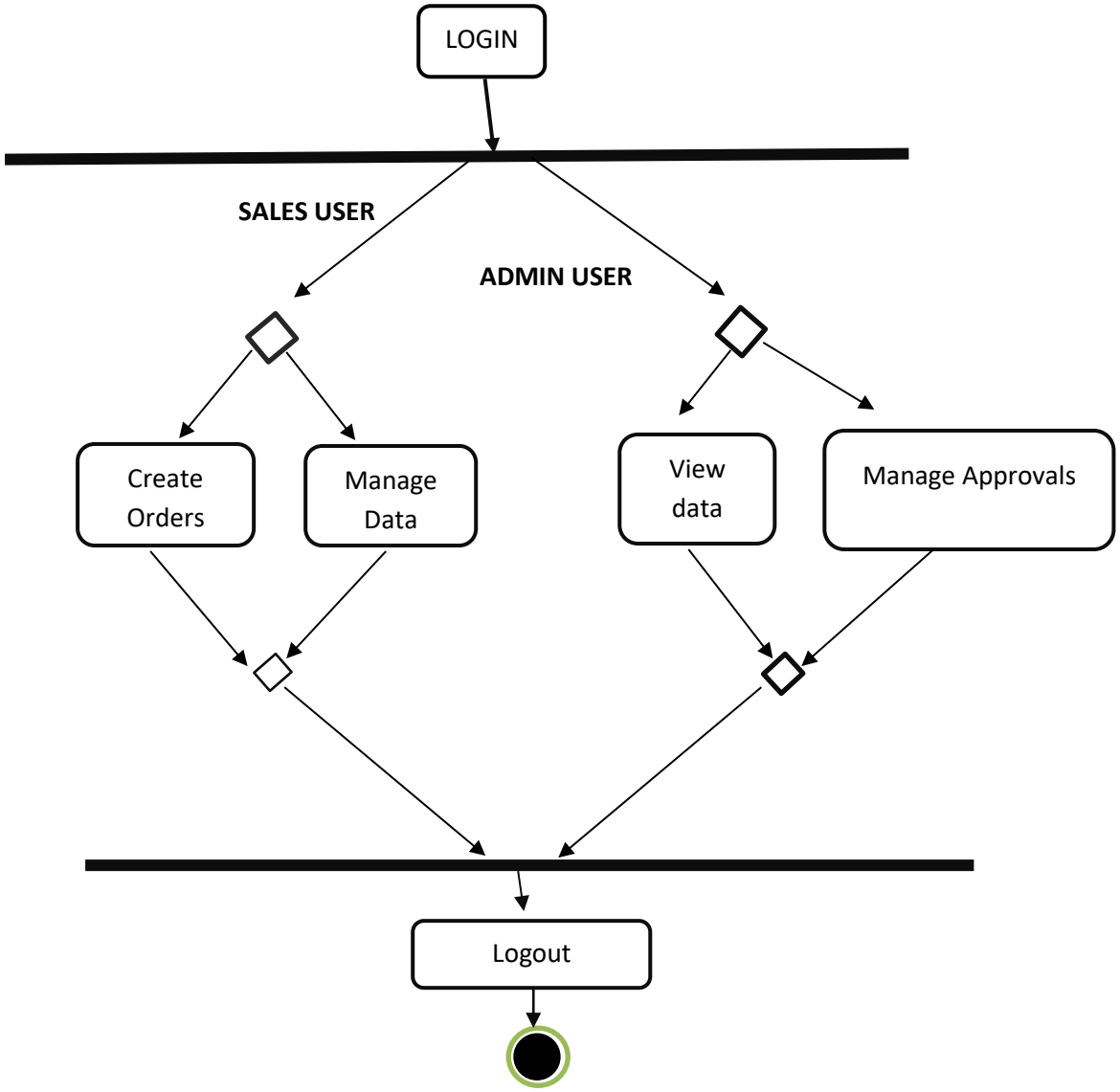

Login
Authentica
Support user
Sales user
Admin user
Manage users
Assign Profile
Create Orders
View Orders
View Accounts
Order Activation
Logout(Support)
Logout(Sales)
Logout(Business)

# Activity Diagram:

## 1.For support user:



# 2.For Sales/Admin User



# 6) Result Set Analysis:

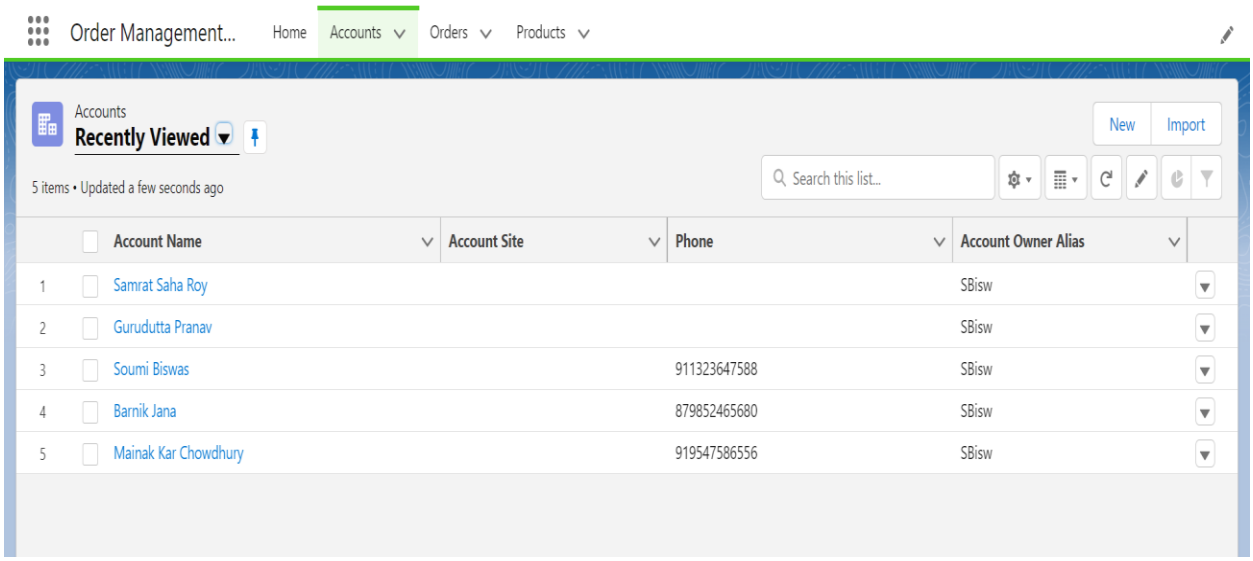
## a) PRODUCT DETAILS:

All Products
Displaying records 1 - 17

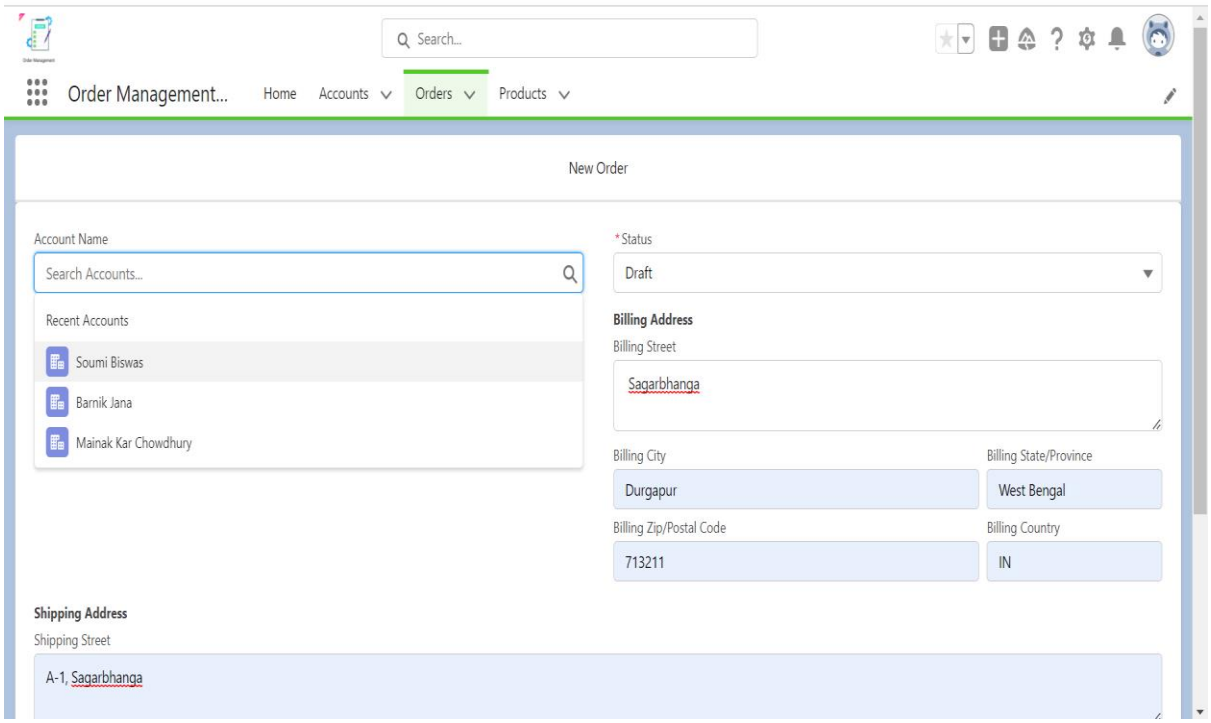
Number of records 17

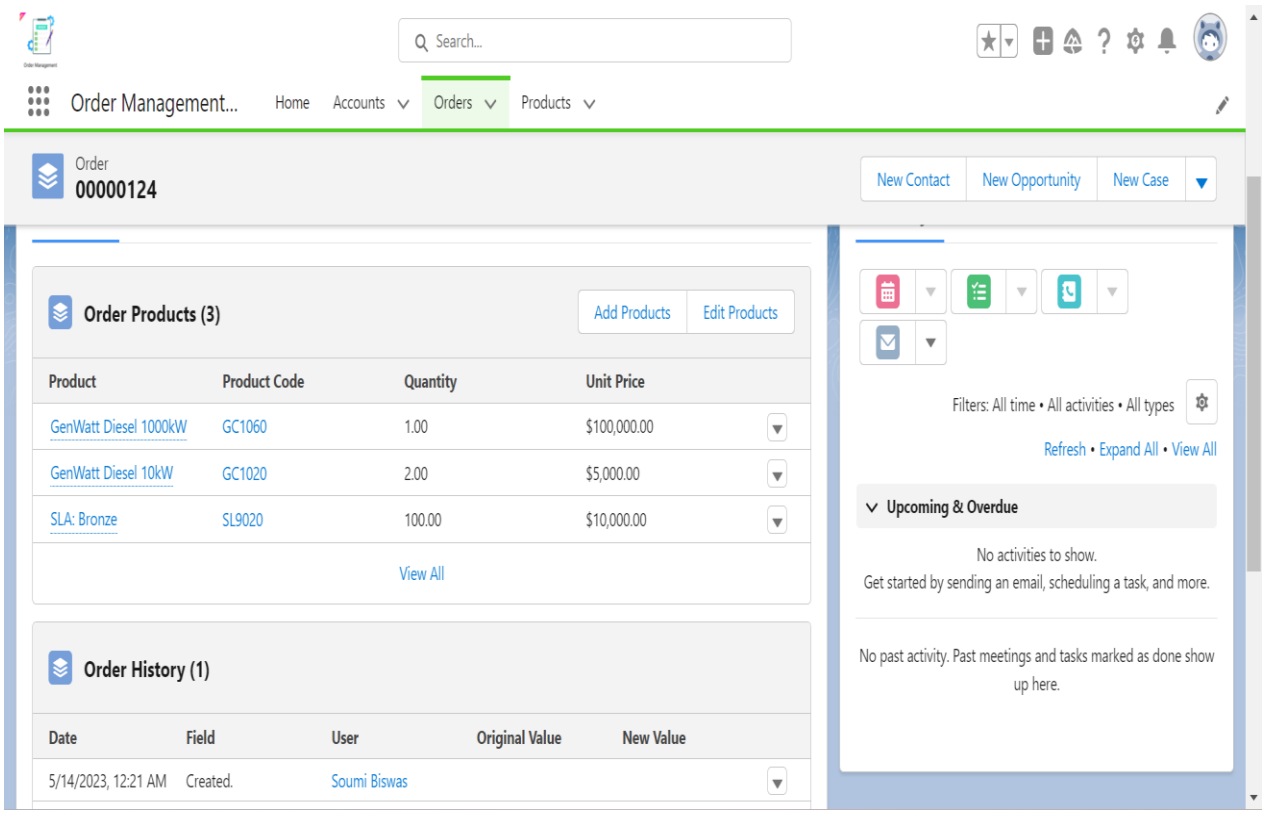
| Product Name | Product Class | Product Code | Product Description | Product Family |
|---|---|---|---|---|
| GenWatt Diesel 1000kW | Simple | GC1060 | | |
| GenWatt Diesel 10kW | Simple | GC1020 | | |
| GenWatt Diesel 200kW | Simple | GC1040 | | |
| GenWatt Gasoline 2000kW | Simple | GC5060 | | |
| GenWatt Gasoline 300kW | Simple | GC5020 | | |
| GenWatt Gasoline 750kW | Simple | GC5040 | | |
| GenWatt Propane 100kW | Simple | GC3020 | | |
| GenWatt Propane 1500kW | Simple | GC3060 | | |
| GenWatt Propane 500kW | Simple | GC3040 | | |
| Installation: Industrial - High | Simple | IN7080 | | |
| Installation: Industrial - Low | Simple | IN7040 | | |
| Installation: Industrial - Medium | Simple | IN7060 | | |
| Installation: Portable | Simple | IN7020 | | |
| SLA: Bronze | Simple | SL9020 | | |
| SLA: Gold | Simple | SL9060 | | |
| SLA: Platinum | Simple | SL9080 | | |
| SLA: Silver | Simple | SL9040 | | |

## b) Account Details:

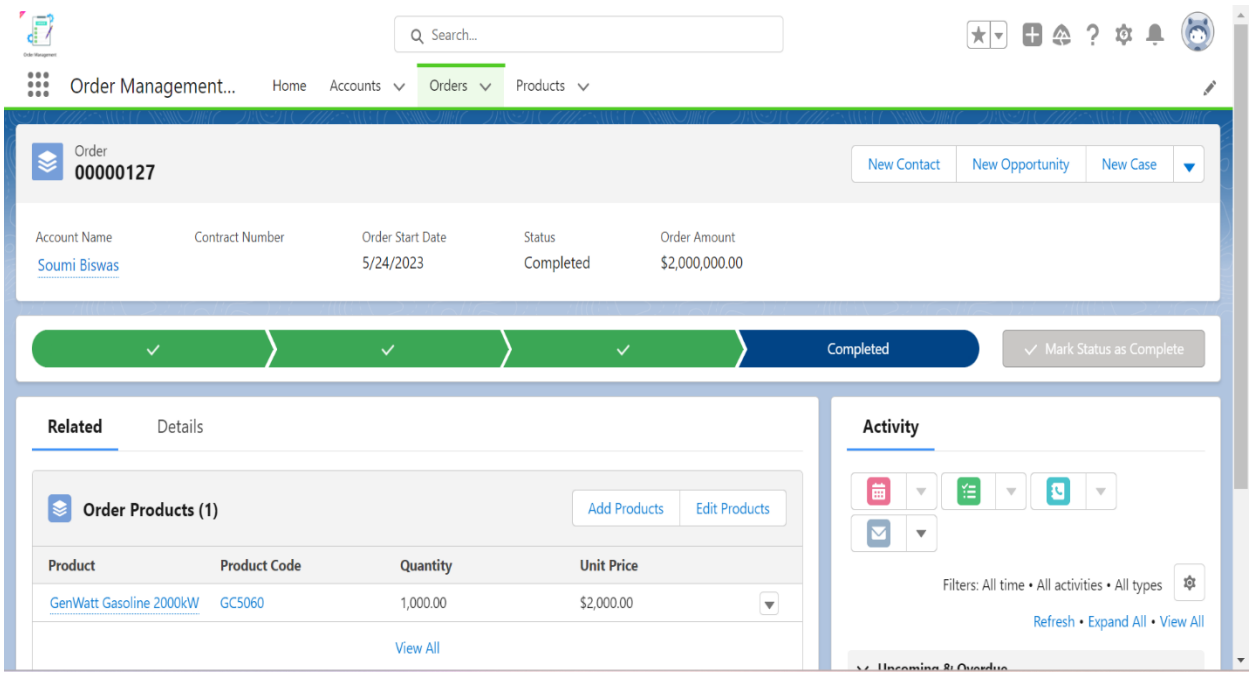


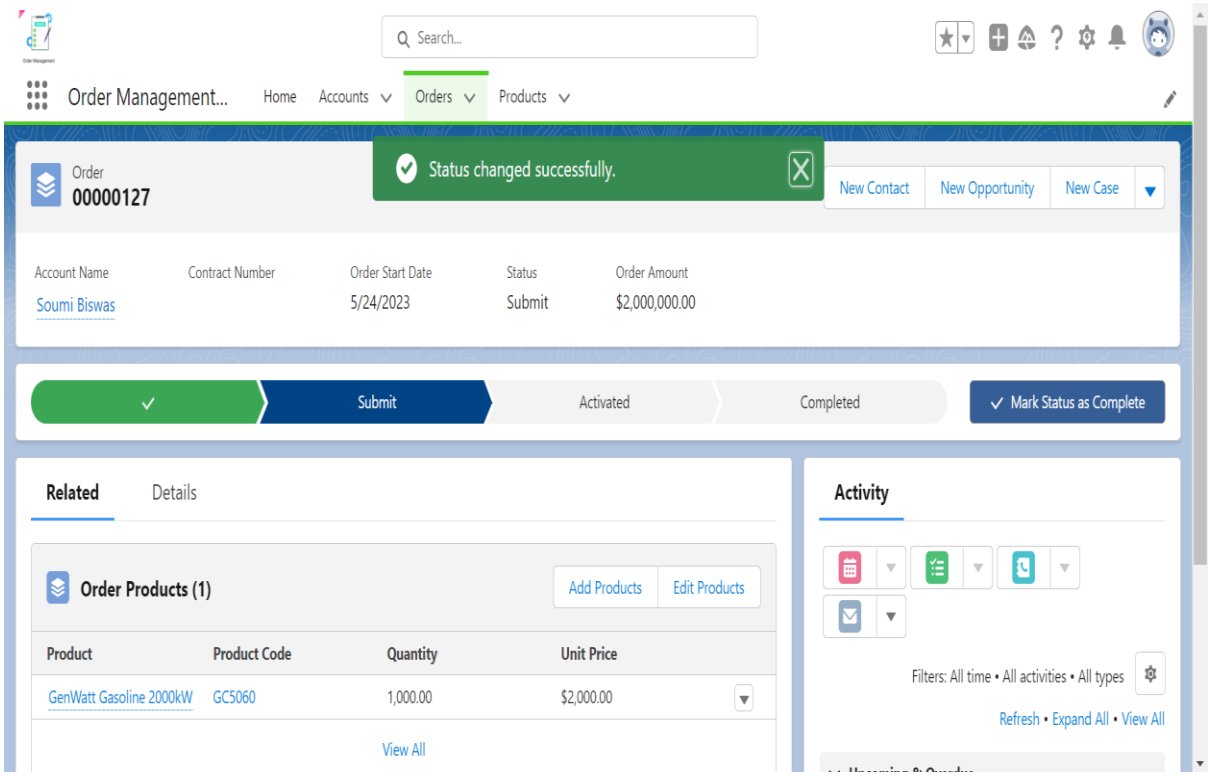
# C)CREATE ORDERS:



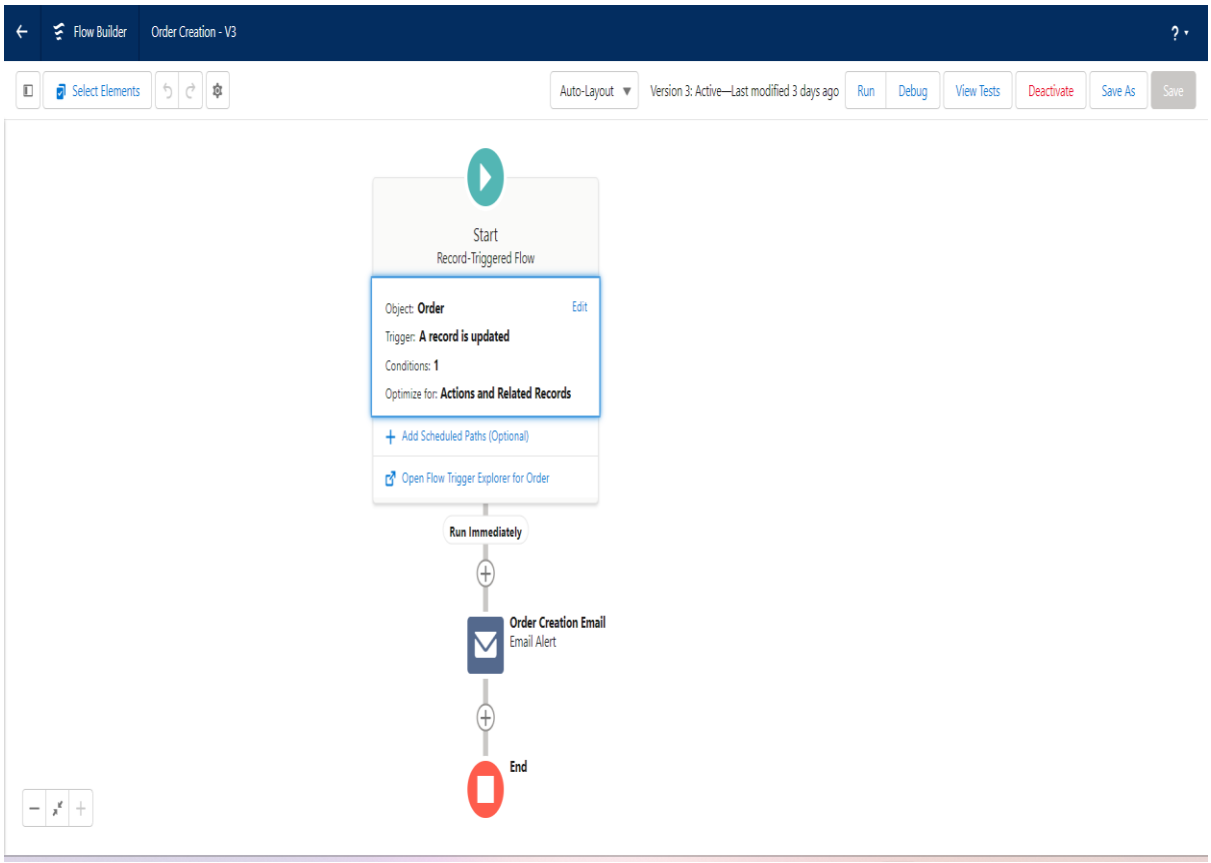



# d)Order Details:

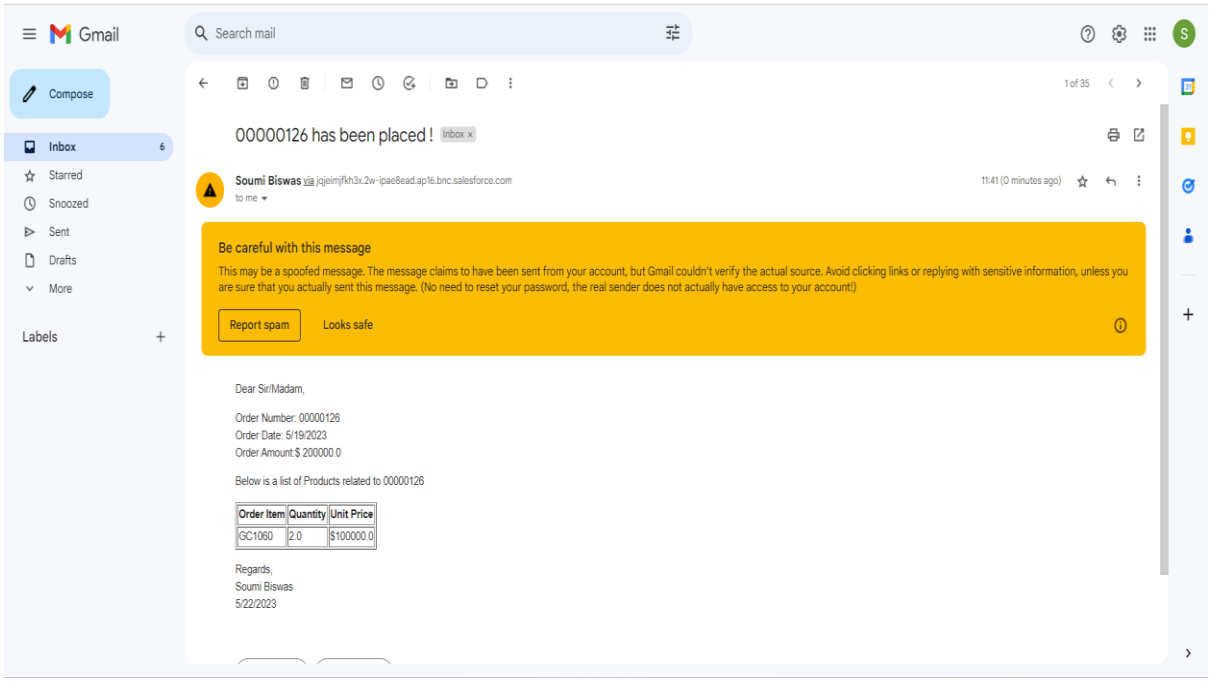


# e)Flow for email alert:




# f)Email:



# 7)Testing:

## 1: LOGIN FOR ALL USERS(ADMIN,SALES,SUPPORT)

| SL. NO | ACTION | INPUT | EXPECTED OUTPUT | ACTUAL OUTPUT | RESULT |
|---|---|---|---|---|---|
| 1 | LOGIN FOR ADMIN USER | LOGIN IN SALESFORCE ORG | GIVE MAIL ID AND PASSWORD THEN LOGIN | GIVE MAIL ID AND PASSWORD THEN LOGIN | SUCCESS |
| 2 | LOGIN FOR SALES USER | LOGIN IN SALESFORCE ORG | GIVE MAIL ID AND PASSWORD THEN LOGIN | GIVE MAIL ID AND PASSWORD THEN LOGIN | SUCCESS |
| 3 | LOGIN FOR SUPPORT USER | LOGIN IN SALESFORCE ORG | GIVE MAIL ID AND PASSWORD THEN LOGIN | GIVE MAIL ID AND PASSWORD THEN LOGIN | SUCCESS |

## 2: FOR SALES USER:

| SL. NO | ACTION | INPUT | EXPECTED OUTPUT | ACTUAL OUTPUT | RESULT |
|---|---|---|---|---|---|
| 1 | CREATE ORDERS | FILL ORDER DETAILS | DRAFT AND SUBMIT | DRAFT AND SUBMIT | SUCCESS |

## 3.FOR ADMIN USER:

| SL. NO | ACTION | INPUT | EXPECTED OUTPUT | ACTUAL OUTPUT | RESULT |
|---|---|---|---|---|---|
| 1 | VIEW DATA | CLICK ORDER MANAGEMENT APP | VIEW ALL DETAILS(ACCOUNTS, PRODUCTS, ORDERS) | VIEW ALL DETAILS( ACCOUNTS, PRODUCTS, ORDERS) | SUCCESS |
| 2 | MANAGE APPROVALS | CLICK COMPLETED STATUS | COMPLETED ORDER | COMPLETED ORDER | SUCCESS |

## 4.FOR SUPPORT USER:

| SL. NO | ACTION | INPUT | EXPECTED OUTPUT | ACTUAL OUTPUT | RESULT |
|---|---|---|---|---|---|
| 1 | CREATE AND ASSIGN | CLICK NEW USER | FILL USER DETAILS | FILL USER DETAILS | SUCCESS |
| 2 | MANAGE DATA | CREATE, UPDATE, DELETE | CREATE,UPDATE, DELETE DATA | CREATE, UPDATE, DELETE DATA | SUCCESS |

# 5.EMAIL ALERT:

| SL. NO | ACTION | INPUT | EXPECTED OUTPUT | ACTUAL OUTPUT | RESULT |
|---|---|---|---|---|---|
| 1 | EMAIL ALERT | ORDER SUBMIT | MAIL WILL GO TO ADMIN | MAIL WILL GO TO ADMIN WITH ORDER DETAILS | SUCCESS |

# 8) Future Scope of Project:

1. **Sell and fulfill on any channel**:
   Give agents a single view across channels to easily manage and modify orders.
2. **Deliver faster, more efficient fulfillmen**t:
   Optimize orders for cost, speed, and sustainability with real-time inventory.
3. **Simplify complex order routing**:
   Use automation and AI to help determine the best cost-saving workflow.
4. **Scale on a trusted, agile platform**:
   Meet demand your way with easy-to-use tools and industry-leading tech and resources.

## 9) Conclusion:

Our project is only a humble venture to satisfy the needs of an online Order Management System using Salesforce. This project shall prove to be powerful in satisfying all the requirements of an Order Management System.

- A description of the background and context of the project and its relation to work already done in the area.
- Made a statement of the aims and objectives of the project.
- The description of Purpose, Scope, and applicability.
- We define the problem on which we are working in the project.
- We describe the requirement Specifications of the system and the actions that can be done on these things.
- We are able to reach the goal of our project and overcome the complications we have gone through with a continuous mentoring of our guide.
- We are able to identify exception cases and test cases as we as we are also determined with a future scope of this project.

# 10)References:


- **https://stackoverflow.com/**
- **https://github.com/**
- **https://www.wikipedia.org/**
- **https://trailhead.salesforce.com/**