

Project Development Phase Works Done on Each Sprints

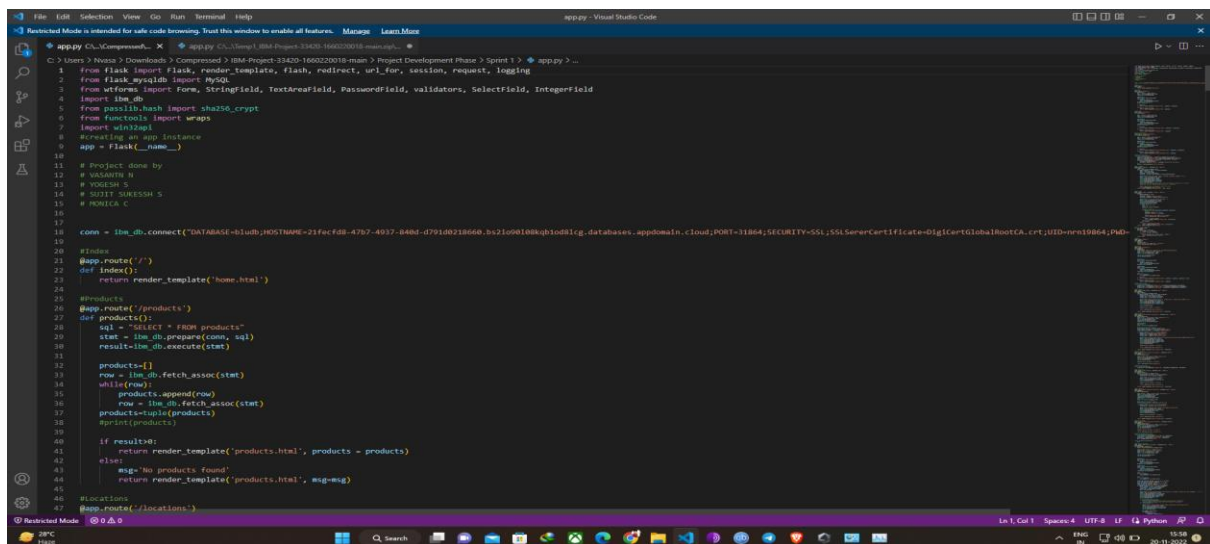
Date	20-11-2022
Team ID	PNT2022TMID33160
Project Name	Inventory Management System for Retailers

Sprint split-ups

1. Sprint 1 – Backend
2. Sprint 2 – Frontend
3. Sprint 3 – IBM Cloud Integration + Integration of SendGrid
4. Sprint 4 – Deploying the application using Docker and Kubernetes

Sprint 1 – Backend:

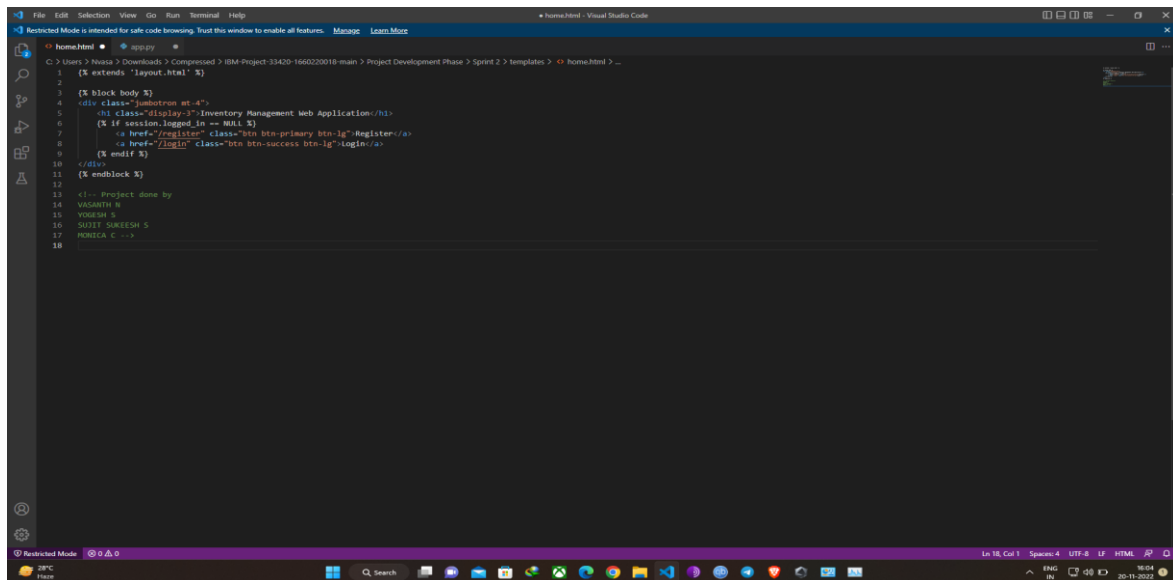
All the routes to each page and APIs are created. Example, (For Products page)



```
1 from flask import Flask, render_template, flash, redirect, url_for, session, request, logging
2 from flask_sqlalchemy import SQLAlchemy
3 from wtforms import Form, StringField, TextareaField, PasswordField, validators, SelectField, IntegerField
4 import time
5 from passlib.hash import sha256_crypt
6 from functools import wraps
7 import sys
8 #creating an app instance
9 app = Flask(__name__)
10
11 # Project done by
12 # VIKASH M
13 # VIKASH S
14 # SUDIT SARESHA S
15 # MONICA C
16
17
18 conn = db.connect("DATABASE=ibm;HOSTNAME=21facf28-4757-4937-848d-d79100218668-b2210e108kphodlbg.databases.appdomain.cloud;PORT=31864;SECURITY=SSL;SSLServerCertificate=DIGICertGlobalRootCA.crt;UID=rrn19864;Pwd=
19
20
21 #index
22 @app.route('/')
23 def index():
24     return render_template('home.html')
25
26 #Products
27 @app.route('/products')
28 def products():
29     sql = "SELECT * FROM products"
30     stmt = db.execute(sql)
31     result=db.execute(stmt)
32
33     products=[]
34     row = db.fetch_assoc(stmt)
35     while(row):
36         products.append(row)
37         row = db.fetch_assoc(stmt)
38     products=tuple(products)
39     #print(products)
40
41     if result:
42         return render_template('products.html', products = products)
43     else:
44         msg="No products found"
45         return render_template('products.html', msg=msg)
46
47 #Locations
48 @app.route('/locations')
```

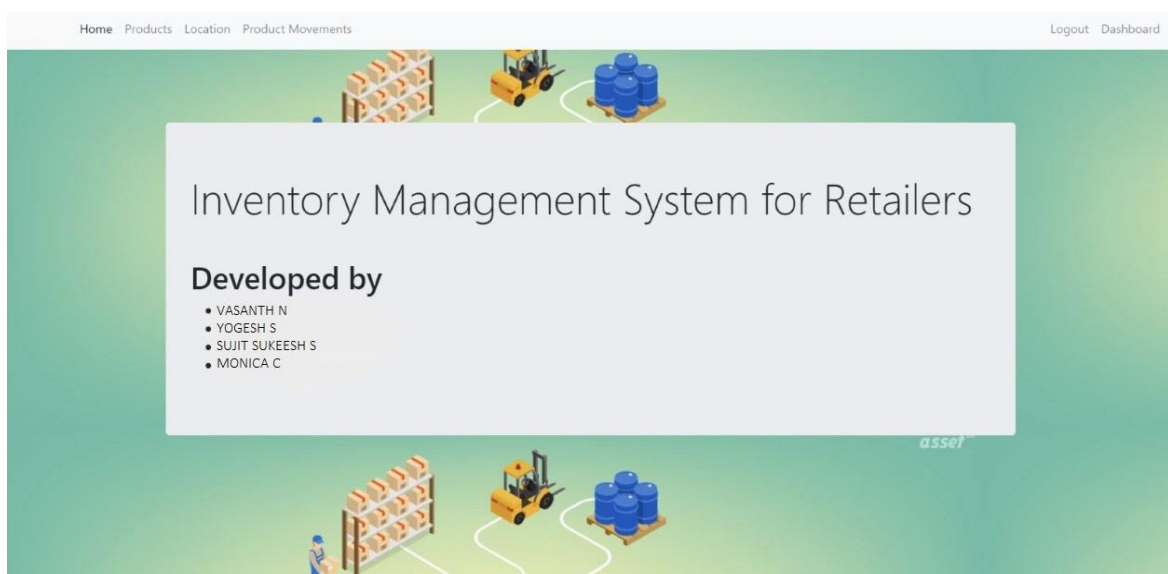
Sprint 2 – Frontend:

The frontend is written using HTML, CSS (using Bootstrap) and JavaScript for all the pages to which the routes created in Sprint 1. For Example, (The Hierarchy of different pages and the code for login page)



```
1 <!-- extends "layout.html" -->
2
3 <!-- Block Body -->
4 <div class="jumbotron mt-4">
5   <h1 class="display-3">Inventory Management Web Application</h1>
6   <!-- If session.logged_in == null -->
7   <a href="/register" class="btn btn-primary btn-lg">Register</a>
8   <a href="/login" class="btn btn-success btn-lg">Login</a>
9 </div>
10
11 <!-- Endblock -->
12
13 <!-- Project done by -->
14 VASANTH N
15 YOGESH S
16 SUJIT SUKEESH S
17 MONICA C ...
18
```

SAMPLE FRONTEND HOME PAGE :



LOGIN PAGE:

[Home](#)[Register](#)[Login](#)

You are now logged out

Login

Username

Password

SIGNUP PAGE:

[Home](#)[Register](#)[Login](#)

Register

Name

Email

Username

Password

Confirm Password

Products page:

[Home](#) [Products](#) [Location](#) [Product Movements](#) [Logout](#) [Dashboard](#)

Products

Add Product

Product ID	Product Cost	Product Quantity		
Lays RED flavour	50	-55	Edit	Delete
Milk Bikis	10	99	Edit	Delete
good day	15	40	Edit	Delete
MUNCH	10	76	Edit	Delete

Location page:

[Home](#) [Products](#) [Location](#) [Product Movements](#) [Logout](#) [Dashboard](#)

Locations

Add Location

Location ID		
Chennai	Edit	Delete
banglore	Edit	Delete
HYDRABED	Edit	Delete

Product movements:

HomeProductsLocationProduct MovementsLogoutDashboard

Product Movements

Add Product Movements

Movement ID	Time	From Location	To Location	Product ID	Quantity	
		Main Inventory	Chennai	Lays RED flavour	100	Delete
		Main Inventory	Chennai	good day	10	Delete
		Chennai	banglore	good day	100	Delete
		Main Inventory	HYDRABED	MUNCH	4	Delete
		HYDRABED	banglore	MUNCH	2	Delete
		HYDRABED	Chennai	MUNCH	20	Delete

Dashboard page:

HomeProductsLocationProduct MovementsLogoutDashboard

Dashboard Welcome

Chennai

Product	Warehouse	Qty
Lays RED flavour	Chennai	100
good day	Chennai	-90
MUNCH	Chennai	20

banglore

Product	Warehouse	Qty
good day	banglore	100
MUNCH	banglore	2

HYDRABED

Sprint 3:

- IBM Cloud Integration + Integration of SendGrid: IBM Cloud Integration: 5 tables created for our project,

The screenshot shows the IBM Db2 on Cloud SQL editor interface. On the left, a sidebar lists data objects under the schema NRN19864, including Tables (BALANCE_PRODUCT, LOCATIONS, PERSONS, PRODUCTMOVEMENTS, PRODUCTS, PRODUCT_BALANCE, USERS), Views, MQTs, Aliases, and Nicknames. The main editor area displays a script with three lines: `drop table productmovements;`, `create table productmovements(from_location varchar(255),to_location varchar(255),qty int,product_id varchar(255));`, and a blank line. Below the script, the 'History' tab is active, showing a table of execution results.

Script	Date	Status	Runtime
Untitled - 1	Nov 18, 2022 11:52:21 AM	2	0.095 s
drop table productmovements		✓	0.043 s
create table productmovements(from_location varchar(255),to_location varchar(255),qty int,product_id varchar(255));		✓	0.052 s
Untitled - 1	Nov 18, 2022 11:49:59 AM	1	0.013 s
insert into product_balance(qty,product_id,location_id) values (5,'good day..')		✓	0.013 s
Untitled - 1	Nov 18, 2022 11:49:32 AM	2	0.060 s
create table product_balance(qty int,product_id varchar(255),location_id varchar(255));		✓	0.049 s
insert into product_balance(qty,product_id,location_id) values (2,'Milk Bisk..')		✓	0.011 s
Untitled - 1	Nov 18, 2022 11:47:39 AM	1	0.034 s
drop table product_balance		✓	0.034 s
Untitled - 1	Nov 18, 2022 11:40:11 AM	1	0.021 s
insert into product_balance (qty,product_id,location_id) values (2,'Milk Bisk..')		✗	0.021 s

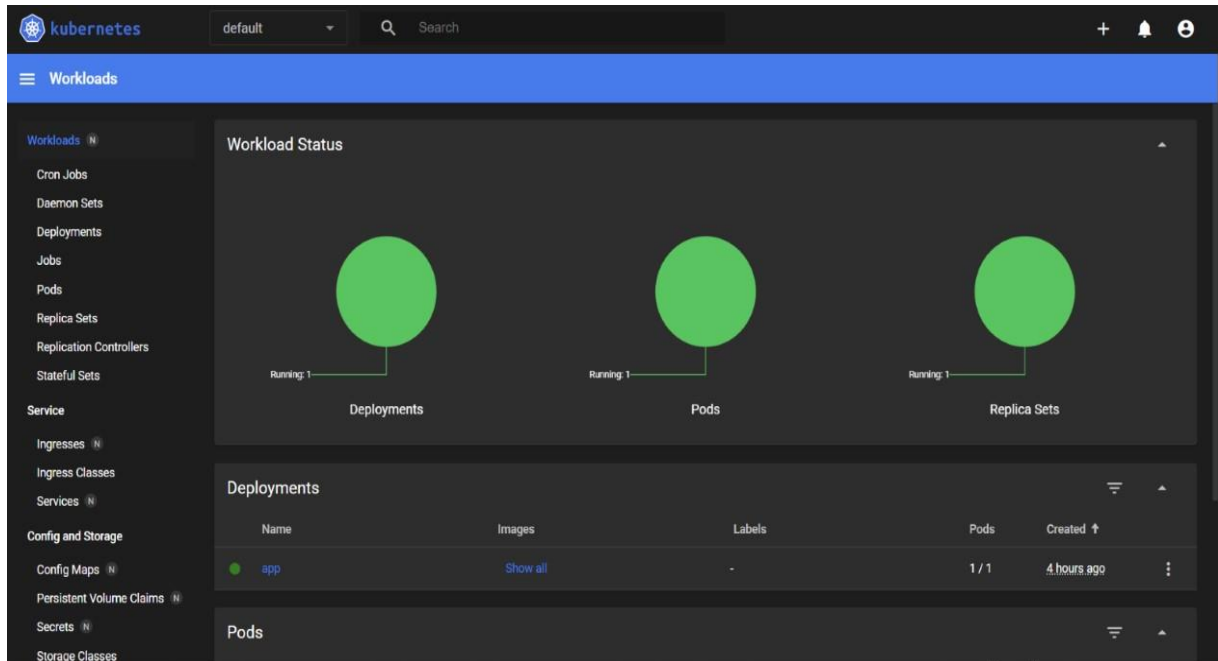
The screenshot shows the IBM Db2 on Cloud 'Tables' view. The top navigation bar includes 'Load Data', 'Load History', 'Tables', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'. The 'Tables' tab is selected, displaying a list of tables in the NRN19864 schema. A 'New table' button is visible. The 'Table definition' panel on the right shows the structure of the PRODUCTMOVEMENTS table.

Name	Schema	Properties
BALANCE_PRODUCT	NRN19864	...
LOCATIONS	NRN19864	...
PERSONS	NRN19864	...
PRODUCTMOVEMENTS	NRN19864	...
PRODUCTS	NRN19864	...
PRODUCT_BALANCE	NRN19864	...
USERS	NRN19864	...

Name	Data type	Nullable	Length	Scale
FROM_LOCATION	VARCHAR	Y	255	0
TO_LOCATION	VARCHAR	Y	255	0
QTY	INTEGER	Y		0
PRODUCT_ID	VARCHAR	Y	255	0

Sprint 4:

Deployment



Overview

Worker nodes

Worker pools

DevOps New

Pool: Filter... ▼

Add +

<input type="checkbox"/>	Name	Status	Worker pool	Zone	Private IP	Public IP	Version
▼ <input type="checkbox"/>	00000010	● Normal	default	Milan 01	10.144.183.53	169.51.200.58	1.24.7_1543

Items per page: 25 ▼

1-1 of 1 item

1 ▼

1 of 1 page

◀ ▶

Containers

Images

Volumes

Dev Environments BETA

Extensions BETA ⋮

⊕ Add Extensions

Containers Give feedback

☐ Only show running containers

⋮

<input type="checkbox"/>	NAME	IMAGE	STATUS	PORT(S)	STARTED	ACTIONS
<input type="checkbox"/>	quizzical_brahmagupta 7ecde2aed29a	app:latest	Running	5000:5000	3 hours ago	■ ⋮

Showing 1 items

RAM 1.80GB CPU 0.06%

v4.13.1

Overview

Worker nodes

Worker pools

DevOps New

Expires in 30 days:

Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a [standard cluster](#).

Node status

1 of 1

Normal

Details ↓

Add-on status

0 of 0

Normal

Details ↓

Master status

Normal

Docs ↗

Ingress status

Healthy ⓘ

Docs ↗

Details

Cluster ID

cds5ukcf0ari9gibn5g0

Version

1.24.8_1544

Infrastructure

Classic

Zones

Milan 01

Created

19/11/2022, 10:15 am

Resource group

Default

Image security enforcement

Enable

Node health

1 total nodes

Worker node details