



RMK ENGINEERING COLLEGE

(An Autonomous Institution)

R.S.M. Nagar, Kivaraipettai-601 206, Gummidipoondi Taluk, Thiruvallur District.

PROJECT

INVENTORY MANAGEMENT FOR RETAILERS

DONE BY

TEAM ID: PNT2022TMID15764

Mukkara Mukesh(111719104099)

Pothamsetty Rajesh(111719104120)

Pothamsetty Karthik(111719104119)

Penumadhu Mahesh(111719104116)

INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

Introduction

Abstract-

The Purpose of this project is to highlight the versatility and functionality of flask along with MySQL by developing an inventory management system which efficiently handles the addition, updating and deletion of products and an interface for product sales. The in-depth explanation of all the technologies and its integration has been described below.

1.1) Overview

Inventory, A structured, categorised and complete collection of items or objects that give clear insights about the qualitative and quantitative attributes of these objects. In this modern age where e-commerce websites are breaking the internet and consumption for most products have exponentially increased, it is of utmost importance to maintain a robust inventory system which is capable of maintaining record like products, quantities and various other transitive data needed to run a business smoothly. Hence, we have developed a robust Inventory management system which runs on flask and is connected to a MySQL database. The front end has been developed using bootstrap and connected to the back-end using flask. The system will be login enabled. The managers will be able to add, update, delete, retrieve it and display it on the front-end.

1.2) Purpose

The Aim of this project is to showcase the versatility & pragmatics of utilising Flask along with Remote MySQL to deliver a robust inventory management system. The Scope of the project is to deliver a system that will successfully accept the data from the user to insert, update, delete data from the Database.

2. Literature Survey

2.1) Existing Problem

Businesses are quickly realising that inventory control is absolutely necessary to run an efficient business and make money in the process. Especially in today's competitive marketplace, business owners simply can't afford to have money go down the drain.

- *High cost of inventory*
- *Consistent stock outs*
- *Low rate of inventory turnover*
- *High amount of obsolete inventory*
- *High amount of working capital*
- *High cost of storage*
- *Spreadsheet data-entry errors*
- *Lost customers*

inventory turnover

2.2) Proposed Solution

For this system we shall be using the following technologies:

1.Flask

Flask is a light weight micro framework that is used to build web applications. 'Micro' does not mean that our whole web application must fit into a single Python file, nor does it mean that Flask is lacking in functionality. The 'micro' in micro framework means Flask aims to keep the core simple but extensible .[Flask, 2019] .This means that there are no libraries or functionalities that are pre-bound or embedded with the flask core initially. We can choose the functionalities we want to integrate with our flask, that is it won't make many decisions for you, such as what database, security features, etc to use. Although, decisions that it does make are, what templating engine to be used, are easy to change. Everything else is up to you, so that Flask can be everything you need and nothing you don't. Flask, by default does not include a database abstraction layer, form validation or anything else where different libraries already exist that can handle that. Instead, it supports extensions to add such functionalities to our application as if it were a core part of flask itself. There are various extensions that are provided for database integration, form validation, upload handling, various open authentication technologies, and more. Flask may be "micro", but it's ready for production use on a variety of needs.

2.Remote MYSQL

Overview. This feature allows remote hosts (servers) to access MySQL® databases on your account. This is useful, for example, if you wish to allow shopping cart or guestbook applications on other servers to access your databases.

2.3 problem statement :

Problem Statement (PS) 1 :

I am a rice shop owner who keeps his stocks updated Update the current stock in my inventory according to the customer's purchases I 'm unable to upload and update the data The server is very bad due to the network in remote areas Frustrated and unable to update the products which users needed.

3. IDEATION & PROPOSED SOLUTION

3.1 : Empathy map canvas

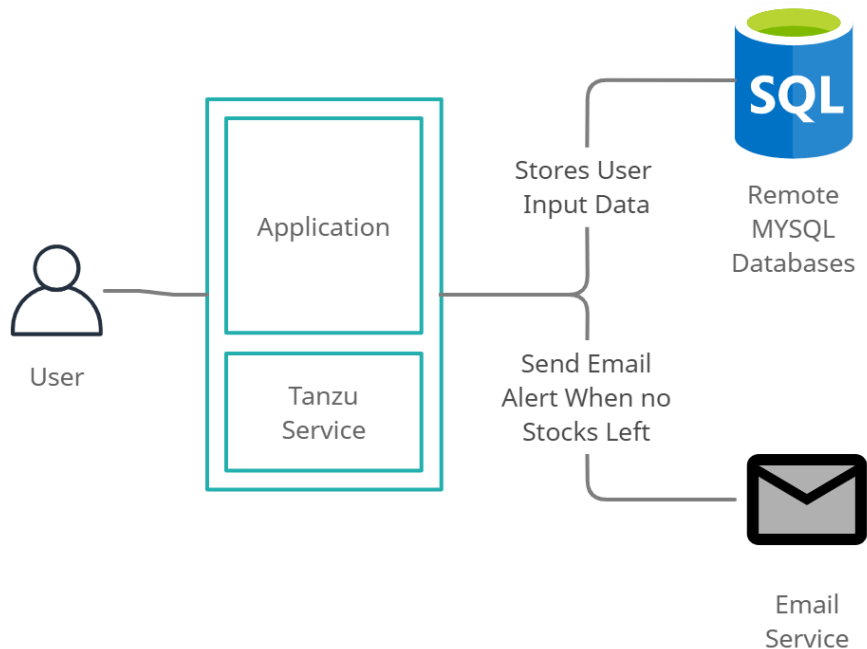
3.3 .problem solution :

PROBLEM -SOLUTION FIT

Team ID	PNT2022TMID15450
Project Name	Inventory management system for retailers.
Date	13 October 2022

Define CS, fit into	1. CUSTOMER SEGMENT(S) CS <p>Customer segmentation is an important marketing tool.</p> <p>Effective customer segmentation helps the enterprises increase profits and improve customer service level.</p> <p>On the other hand, due to possible detrimental consequences, supply disruptions have been receiving more and more attention.</p>	6. CUSTOMER CONSTRAINTS CC <p>limits on raw materials, machine capacity, workforce capacity, inventory investment, storage space, or the total number of orders placed.</p>	5. AVAILABLE SOLUTIONS AS <ul style="list-style-type: none"> Lift per store sales by 5% 70% time saved in store audits >97% accurate retail insights in real-time Improved adherence to store compliance Brand & SKU level competitive 	Focus on J&P, tap into BE, understand
	2. JOBS-TO-BE-DONE / PROBLEMS J&P <ul style="list-style-type: none"> Inconsistent Tracking Warehouse Efficiency Inaccurate Data Changing Demand Limited Visibility Manual Documentation Problem Stock Supply Chain Complexity 	9. PROBLEM ROOT CAUSE RC <ul style="list-style-type: none"> Network issue Server down Data loss 	7. BEHAVIOUR BE <ul style="list-style-type: none"> The data will be secure. Check the stock regularly. The process will be on time. 	
Identify	3. TRIGGERS TR <p>Retail inventory management techniques help stores and ecommerce sellers satisfy customers, reduce costs and increase profits.</p>	10. YOUR SOLUTION SL <ul style="list-style-type: none"> Create a System to Get Accurate and Accessible Information 	8. CHANNELS of BEHAVIOUR CH <p>Online:</p> <ul style="list-style-type: none"> Stock update 	Extract online

Inventory Management System



3.2) Hardware / Software Designing Hardware

Requirements:

- **Minimum 1GB Ram**
- **Minimum Intel i3 Core Processor**
- **Minimum 10GB Hard disk space**
- **Software Requirements:**
- **Operating System : Windows 7 or later**
- **Browser : Chrome latest version**
- **Internet Connection: 1Mbps**

4.Experimental Investigation

Investigation made while working on the solution:

Modules included in webapp:

Registration: The user can register with their details in order to login in the webapp.

Login: The users can Login in the webapp using their details.

Add Product: User/Retailer can Add their products by entering Product name, Description and QTY.

Report: User can Export the list of products and QTY by clicking Export report button.

Stock: User can view their available products in the stock.

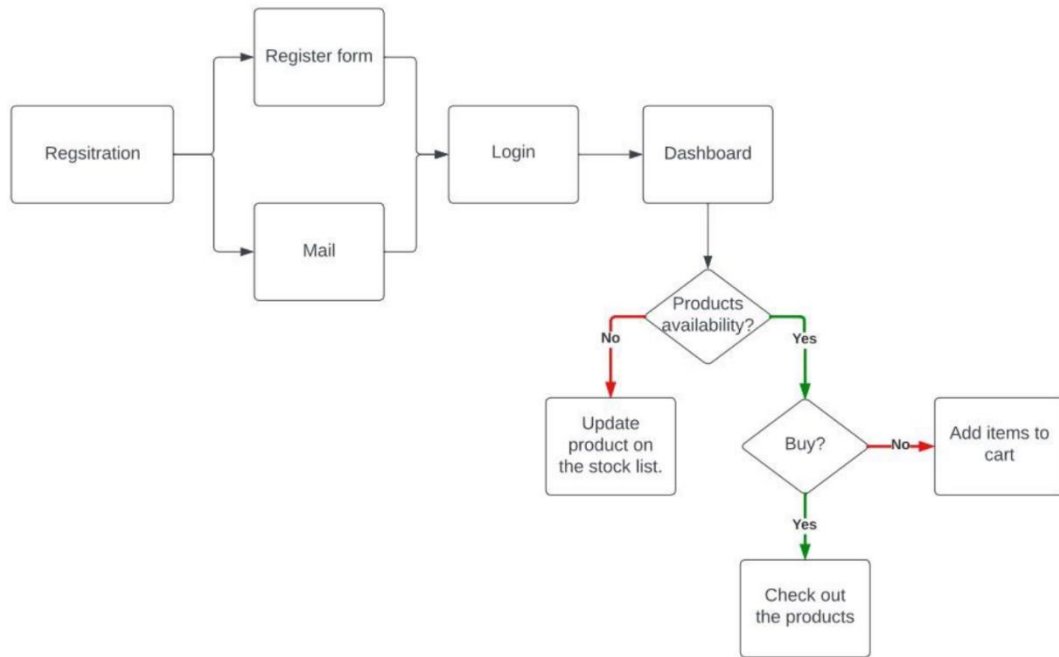
Location: User can add their location.

Product Movement: User can manage their product movements

Logout: The user can logout from the webapp

5 . project design

5.1 Data Flow Diagrams :



5.2 : User stories :

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Web user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I can register for the application through E-mail	I can access my account / dashboard	Medium	Sprint-1
	Confirmation	USN-3	As a user, I will receive confirmation email once I have registered for the application	I can get confirmation for my email and password and create authenticated account.	Medium	Sprint-1
	Login	USN-4	As a user, I can log into the application by entering email & password	I can log onto the application with verified email and password	High	Sprint-1
	Dashboard	USN-5	As a user, I can view the products which are available	Once I log on to the application, I can view products to buy.	High	Sprint-2

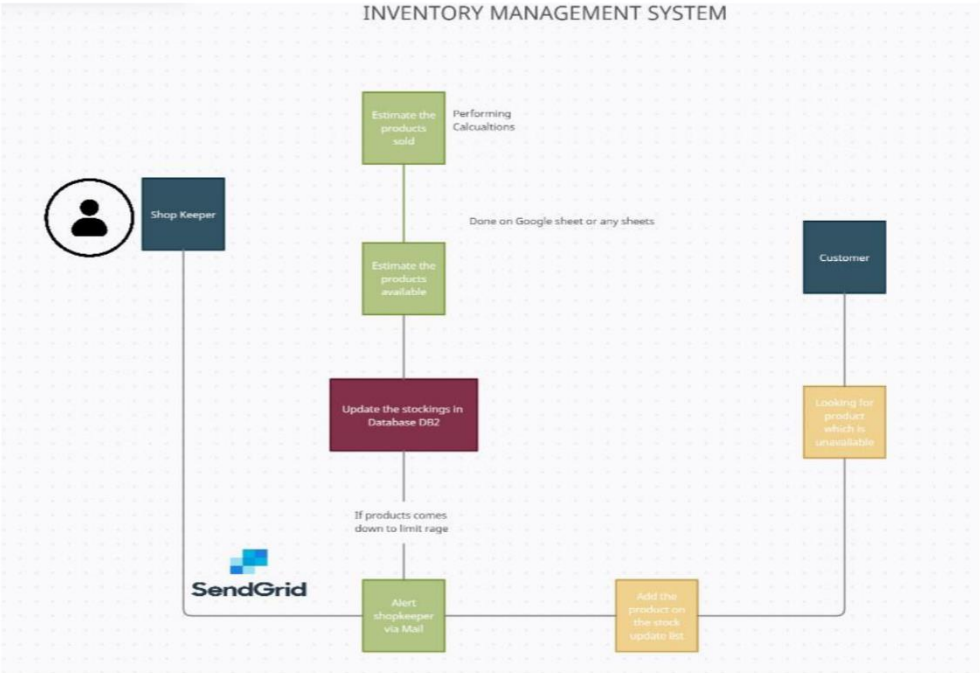
User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
	Add items to cart	USN-6	As a user, I can add the products I wish to buy to the carts.	As a user, I can buy any products or add it to my cart for buying it later.	Medium	Sprint-2
	Stock Update	USN-7	As a user, I can add products which are not available in the dashboard to the stock list.	If any of the products which are not available, as a user I can update the inventory and send mail to the owner.	Medium	Sprint-3
Customer Care Executive	Request to Customer Care	USN-8	As a user, I can contact the Customer Care Executive and request any services I want from the customer care.	As a user, I can contact Customer Care and get support from them.	Low	Sprint-4
Administrator	Contact Administrator	USN-9	I can be able to report any difficulties I experience as a report	As user, I can give my support in my possible ways to administrator and the administration.	Medium	Sprint-4

5.3 Solution & Technical Architecture :

Project Design Phase-I Solution Architecture

Date	13 October 2022
Team ID	PNT2022TMID14550
Project Name	Inventory Management System for Retailers
Maximum Marks	4 Marks

Solution Architecture Diagram:



7.CODING & SOLUTIONING

7.1 :

```
<!DOCTYPE html>
<html>
<head>
{% if title%}
    <title>Inventory {{ title }}</title>
{% else %}
    <title>Inventory</title>
{% endif %}
<link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css">
<link rel='stylesheet' href='https://cdnjs.cloudflare.com/ajax/libs/twitter-bootstrap/4.1.1/css/bootstrap.css'>
<link rel='stylesheet' href='https://use.fontawesome.com/releases/v5.0.13/css/all.css'><link rel="stylesheet"
href="/style.css">
    <script src="https://code.jquery.com/jquery-3.3.1.slim.min.js"></script>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.min.js"></script>
    <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js"></script>
    <!--copy from here to and put it in head style--->
<style>
    @keyframes swing {
    0% {
        transform: rotate(0deg);
    }
    10% {
        transform: rotate(10deg);
    }
    30% {
        transform: rotate(0deg);
    }
    40% {
        transform: rotate(-10deg);
    }
    50% {
        transform: rotate(0deg);
    }
    60% {
        transform: rotate(5deg);
    }
    70% {
        transform: rotate(0deg);
    }
    80% {
        transform: rotate(-5deg);
    }
    100% {
```

```
    transform: rotate(0deg);
  }
}
```

```
@keyframes sonar {
```

```
  0% {
    transform: scale(0.9);
    opacity: 1;
  }
```

```
  100% {
    transform: scale(2);
    opacity: 0;
  }
```

```
}
body {
  font-size: 0.9rem;
}
.page-wrapper .sidebar-wrapper,
.sidebar-wrapper .sidebar-brand > a,
.sidebar-wrapper .sidebar-dropdown > a:after,
.sidebar-wrapper .sidebar-menu .sidebar-dropdown .sidebar-submenu li a:before,
.sidebar-wrapper ul li a i,
.page-wrapper .page-content,
.sidebar-wrapper .sidebar-search input.search-menu,
.sidebar-wrapper .sidebar-search .input-group-text,
.sidebar-wrapper .sidebar-menu ul li a,
#show-sidebar,
#close-sidebar {
  -webkit-transition: all 0.3s ease;
  -moz-transition: all 0.3s ease;
  -ms-transition: all 0.3s ease;
  -o-transition: all 0.3s ease;
  transition: all 0.3s ease;
}
```

```
/*-----page-wrapper-----*/
```

```
.page-wrapper {
  height: 100vh;
}
```

```
.page-wrapper .theme {
  width: 40px;
  height: 40px;
  display: inline-block;
  border-radius: 4px;
```

```
margin: 2px;
}
```

```
.page-wrapper .theme.chiller-theme {
background: #1e2229;
}
```

```
/*-----toggeled sidebar-----*/
```

```
.page-wrapper.toggled .sidebar-wrapper {
left: 0px;
}
```

```
@media screen and (min-width: 768px) {
.page-wrapper.toggled .page-content {
padding-left: 300px;
}
}
```

```
/*-----show sidebar button-----*/
```

```
#show-sidebar {
position: fixed;
left: 0;
top: 10px;
border-radius: 0 4px 4px 0px;
width: 35px;
transition-delay: 0.3s;
}
```

```
.page-wrapper.toggled #show-sidebar {
left: -40px;
}
```

```
/*-----sidebar-wrapper-----*/
```

```
.sidebar-wrapper {
width: 260px;
height: 100%;
max-height: 100%;
position: fixed;
top: 0;
left: -300px;
z-index: 999;
}
```

```
.sidebar-wrapper ul {
list-style-type: none;
padding: 0;
margin: 0;
```

```
}
```

```
.sidebar-wrapper a {  
  text-decoration: none;  
}
```

```
/*-----sidebar-content-----*/
```

```
.sidebar-content {  
  max-height: calc(100% - 30px);  
  height: calc(100% - 30px);  
  overflow-y: auto;  
  position: relative;  
}
```

```
.sidebar-content.desktop {  
  overflow-y: hidden;  
}
```

```
/*-----sidebar-brand-----*/
```

```
.sidebar-wrapper .sidebar-brand {  
  padding: 10px 20px;  
  display: flex;  
  align-items: center;  
}
```

```
.sidebar-wrapper .sidebar-brand > a {  
  text-transform: uppercase;  
  font-weight: bold;  
  flex-grow: 1;  
}
```

```
.sidebar-wrapper .sidebar-brand #close-sidebar {  
  cursor: pointer;  
  font-size: 20px;  
}
```

```
/*-----sidebar-header-----*/
```

```
.sidebar-wrapper .sidebar-header {  
  padding: 20px;  
  overflow: hidden;  
}
```

```
.sidebar-wrapper .sidebar-header .user-pic {  
  float: left;
```



```
width: 60px;
padding: 2px;
border-radius: 12px;
margin-right: 15px;
overflow: hidden;
}

.sidebar-wrapper .sidebar-header .user-pic img {
  object-fit: cover;
  height: 100%;
  width: 100%;
}

.sidebar-wrapper .sidebar-header .user-info {
  float: left;
}

.sidebar-wrapper .sidebar-header .user-info > span {
  display: block;
}

.sidebar-wrapper .sidebar-header .user-info .user-role {
  font-size: 12px;
}

.sidebar-wrapper .sidebar-header .user-info .user-status {
  font-size: 11px;
  margin-top: 4px;
}

.sidebar-wrapper .sidebar-header .user-info .user-status i {
  font-size: 8px;
  margin-right: 4px;
  color: #5cb85c;
}

/*-----sidebar-search-----*/

.sidebar-wrapper .sidebar-search > div {
  padding: 10px 20px;
}

/*-----sidebar-menu-----*/

.sidebar-wrapper .sidebar-menu {
  padding-bottom: 10px;
}
```

```
}
```

```
.sidebar-wrapper .sidebar-menu .header-menu span {  
  font-weight: bold;  
  font-size: 14px;  
  padding: 15px 20px 5px 20px;  
  display: inline-block;  
}
```

```
.sidebar-wrapper .sidebar-menu ul li a {  
  display: inline-block;  
  width: 100%;  
  text-decoration: none;  
  position: relative;  
  padding: 8px 30px 8px 20px;  
}
```

```
.sidebar-wrapper .sidebar-menu ul li a i {  
  margin-right: 10px;  
  font-size: 12px;  
  width: 30px;  
  height: 30px;  
  line-height: 30px;  
  text-align: center;  
  border-radius: 4px;  
}
```

```
.sidebar-wrapper .sidebar-menu ul li a: hover > i::before {  
  display: inline-block;  
  animation: swing ease-in-out 0.5s 1 alternate;  
}
```

```
.sidebar-wrapper .sidebar-menu .sidebar-dropdown > a:after {  
  font-family: "Font Awesome 5 Free";  
  font-weight: 900;  
  content: "\f105";  
  font-style: normal;  
  display: inline-block;  
  font-style: normal;  
  font-variant: normal;  
  text-rendering: auto;  
  -webkit-font-smoothing: antialiased;  
  -moz-osx-font-smoothing: grayscale;  
  text-align: center;  
  background: 0 0;  
  position: absolute;
```

```
right: 15px;
top: 14px;
}
```

```
.sidebar-wrapper .sidebar-menu .sidebar-dropdown .sidebar-submenu ul {
padding: 5px 0;
}
```

```
.sidebar-wrapper .sidebar-menu .sidebar-dropdown .sidebar-submenu li {
padding-left: 25px;
font-size: 13px;
}
```

```
.sidebar-wrapper .sidebar-menu .sidebar-dropdown .sidebar-submenu li a:before {
content: "\f111";
font-family: "Font Awesome 5 Free";
font-weight: 400;
font-style: normal;
display: inline-block;
text-align: center;
text-decoration: none;
-webkit-font-smoothing: antialiased;
-moz-osx-font-smoothing: grayscale;
margin-right: 10px;
font-size: 8px;
}
```

```
.sidebar-wrapper .sidebar-menu ul li a span.label,
.sidebar-wrapper .sidebar-menu ul li a span.badge {
float: right;
margin-top: 8px;
margin-left: 5px;
}
```

```
.sidebar-wrapper .sidebar-menu .sidebar-dropdown .sidebar-submenu li a .badge,
.sidebar-wrapper .sidebar-menu .sidebar-dropdown .sidebar-submenu li a .label {
float: right;
margin-top: 0px;
}
```

```
.sidebar-wrapper .sidebar-menu .sidebar-submenu {
display: none;
}
```

```
.sidebar-wrapper .sidebar-menu .sidebar-dropdown.active > a:after {
transform: rotate(90deg);
}
```

```
right: 17px;  
}
```

```
/*-----side-footer-----*/
```

```
.sidebar-footer {  
  position: absolute;  
  width: 100%;  
  bottom: 0;  
  display: flex;  
}
```

```
.sidebar-footer > a {  
  flex-grow: 1;  
  text-align: center;  
  height: 30px;  
  line-height: 30px;  
  position: relative;  
}
```

```
.sidebar-footer > a .notification {  
  position: absolute;  
  top: 0;  
}
```

```
.badge-sonar {  
  display: inline-block;  
  background: #980303;  
  border-radius: 50%;  
  height: 8px;  
  width: 8px;  
  position: absolute;  
  top: 0;  
}
```

```
.badge-sonar:after {  
  content: "";  
  position: absolute;  
  top: 0;  
  left: 0;  
  border: 2px solid #980303;  
  opacity: 0;  
  border-radius: 50%;  
  width: 100%;  
  height: 100%;  
  animation: sonar 1.5s infinite;
```

```
}
```

```
/*-----page-content-----*/
```

```
.page-wrapper .page-content {  
  display: inline-block;  
  width: 100%;  
  padding-left: 0px;  
  padding-top: 20px;  
}
```

```
.page-wrapper .page-content > div {  
  padding: 20px 40px;  
}
```

```
.page-wrapper .page-content {  
  overflow-x: hidden;  
}
```

```
/*-----scroll bar-----*/
```

```
::-webkit-scrollbar {  
  width: 5px;  
  height: 7px;  
}
```

```
::-webkit-scrollbar-button {  
  width: 0px;  
  height: 0px;  
}
```

```
::-webkit-scrollbar-thumb {  
  background: #525965;  
  border: 0px none #ffffff;  
  border-radius: 0px;  
}
```

```
::-webkit-scrollbar-thumb:hover {  
  background: #525965;  
}
```

```
::-webkit-scrollbar-thumb:active {  
  background: #525965;  
}
```

```
::-webkit-scrollbar-track {  
  background: transparent;  
  border: 0px none #ffffff;  
  border-radius: 50px;  
}
```

```
::-webkit-scrollbar-track:hover {
```

```

    background: transparent;
}
::-webkit-scrollbar-track:active {
    background: transparent;
}
::-webkit-scrollbar-corner {
    background: transparent;
}

/*-----chiller-theme-----*/

.chiller-theme .sidebar-wrapper {
    background: #31353D;
}

.chiller-theme .sidebar-wrapper .sidebar-header,
.chiller-theme .sidebar-wrapper .sidebar-search,
.chiller-theme .sidebar-wrapper .sidebar-menu {
    border-top: 1px solid #3a3f48;
}

.chiller-theme .sidebar-wrapper .sidebar-search input.search-menu,
.chiller-theme .sidebar-wrapper .sidebar-search .input-group-text {
    border-color: transparent;
    box-shadow: none;
}

.chiller-theme .sidebar-wrapper .sidebar-header .user-info .user-role,
.chiller-theme .sidebar-wrapper .sidebar-header .user-info .user-status,
.chiller-theme .sidebar-wrapper .sidebar-search input.search-menu,
.chiller-theme .sidebar-wrapper .sidebar-search .input-group-text,
.chiller-theme .sidebar-wrapper .sidebar-brand>a,
.chiller-theme .sidebar-wrapper .sidebar-menu ul li a,
.chiller-theme .sidebar-footer>a {
    color: #818896;
}

.chiller-theme .sidebar-wrapper .sidebar-menu ul li: hover>a,
.chiller-theme .sidebar-wrapper .sidebar-menu .sidebar-dropdown.active>a,
.chiller-theme .sidebar-wrapper .sidebar-header .user-info,
.chiller-theme .sidebar-wrapper .sidebar-brand>a: hover,
.chiller-theme .sidebar-footer>a: hover i {
    color: #b8bfce;
}

```

```

.page-wrapper.chiller-theme.toggled #close-sidebar {
  color: #bdbdbd;
}

.page-wrapper.chiller-theme.toggled #close-sidebar:hover {
  color: #ffffff;
}

.chiller-theme .sidebar-wrapper ul li:hover a i,
.chiller-theme .sidebar-wrapper .sidebar-dropdown .sidebar-submenu li a:hover:before,
.chiller-theme .sidebar-wrapper .sidebar-search input.search-menu:focus+span,
.chiller-theme .sidebar-wrapper .sidebar-menu .sidebar-dropdown.active a i {
  color: #16c7ff;
  text-shadow:0px 0px 10px rgba(22, 199, 255, 0.5);
}

.chiller-theme .sidebar-wrapper .sidebar-menu ul li a i,
.chiller-theme .sidebar-wrapper .sidebar-menu .sidebar-dropdown div,
.chiller-theme .sidebar-wrapper .sidebar-search input.search-menu,
.chiller-theme .sidebar-wrapper .sidebar-search .input-group-text {
  background: #3a3f48;
}

.chiller-theme .sidebar-wrapper .sidebar-menu .header-menu span {
  color: #6c7b88;
}

.chiller-theme .sidebar-footer {
  background: #3a3f48;
  box-shadow: 0px -1px 5px #282c33;
  border-top: 1px solid #464a52;
}

.chiller-theme .sidebar-footer>a:first-child {
  border-left: none;
}

.chiller-theme .sidebar-footer>a:last-child {
  border-right: none;
}
</style>
<!-- up to here put it in the style section in the head -->
</head>
<body style="background-color: #e0deda">
  <!-- copy from here for side-bar nav -->
  </br>

```

```

<body>
<div class="page-wrapper chiller-theme toggled">
  <a id="show-sidebar" class="btn btn-sm btn-dark" href="#">
    <i class="fas fa-bars"></i>
  </a>
  <nav id="sidebar" class="sidebar-wrapper">
    <div class="sidebar-content">
      <div class="sidebar-brand">
        <a href="#">Inventory</a>
        <div id="close-sidebar">
          <i class="fas fa-times"></i>
        </div>
      </div>
    </div>
    <div class="sidebar-header">
      <div class="user-pic">
        
      </div>
      <div class="user-info">
        <span class="user-name">
          {{ msg }}
        </span>
        <span class="user-role">Administrator</span>
        <span class="user-status">
          <i class="fa fa-circle"></i>
          <span>Online</span>
        </span>
      </div>
    </div>
    <div class="sidebar-menu">
      <ul>
        <li class="header-menu">
          <span>General</span>
        </li>
        <li class="sidebar">
          <a href="/home">
            <i class="fa fa-tachometer-alt"></i>
            <span>Home</span>
          </a>

          <li class="sidebar">
            <a href="/product">
              <i class="fa fa-shopping-cart"></i>
              <span>Products</span>
            </a>

```



```

<li class="sidebar">
  <a href="/stockbalance">
    <i class="far fa-gem"></i>
    <span>Stock</span>
  </a>

</li>
<li class="sidebar">
  <a href="/location">
    <i class="fa fa-chart-line"></i>
    <span>Location</span>
  </a>

</li>
<li class="sidebar">
  <a href="/productmovement">
    <i class="fa fa-globe"></i>
    <span>Product Movement</span>
  </a>
<li class="Logout">
  <a href="/logout">
    <i class="fa fa-bars"></i>
    <span>Logout</span>
  </a>
</li>
</nav>
<main class="page-content">
  <!-- up to here and underneath the main page content -->
  <!--flash message code start -->
  { % block content % }
  <div class="container">
    { % for message in get_flashed_messages() % }
    <div class="alert alert-warning">
      <button type="button" class="close" data-dismiss="alert">&times;</button>
      { { message } }
    </div>
    { % endfor % }

    { % block page_content % } { % endblock % }
  </div>
  { % endblock % }
  <!--flash message code end -->
  <div class="container">
    <h2>Product Information</h2>
    <h6 align="padding-left" fontstyle="bold"> NOTE: If PRODUCT QTY IS EDITED AS ZERO STOCK ALERT
    MAIL WILL BE SEND AUTOMATICALLY</h6>

```

```

<!--{{ msg }}-->
<div class="float-md-right">
  <button type="button" class="btn btn-primary" data-toggle="modal" data-target="#exampleModal">ADD
PRODUCT</button></div>
<div class="float-md-left">
  <button type="button" data-toggle="modal"><a href="{{ url_for('.download_report') }}">Export
Report</a></button>
</div>
<div class="modal fade" id="exampleModal" tabindex="-1" role="dialog" aria-labelledby="exampleModalLabel"
aria-hidden="true">
  <div class="modal-dialog" role="document">
    <div class="modal-content">
      <div class="modal-header">
        <h5 class="modal-title" id="exampleModalLabel">ADD PRODUCT</h5>
        <button type="button" class="close" data-dismiss="modal" aria-label="Close">
          <span aria-hidden="true">&times;</span>
        </button>
      </div>
      <div class="modal-body">
        <div class="col-md-4"/>
        <form class="form-group" action = "{{ url_for('addProduct') }}" method = "post">
          <div class="form-group">
            Name
            <input class="form-group" id="p_name" name="pn" type="text" placeholder="Product Name" required/>
          </div>
          <div class="form-group">
            Description
            <input class="form-group" id="P_description" name="pd" type="text" placeholder="Product Description"
required>
          </div>
          <div class="form-group">
            QTY
            <input class="form-group" id="P_QTY" name="pq" type="number" placeholder="Product QTY"required>
          </div>
        </div>
        <div class="modal-footer">
          <input class="btn btn-success" class="form-control" type="Submit" value="Submit" />
          <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
        </div>
      </div>
    </form></div>
  </form>
</div>
</div>
</br>

```

</br>

```
<table class="table table-striped">
  <thead>
    <tr>
      <th class="text-info">Product id</th>
      <th class="text-info">Product name</th>
      <th class="text-info">Product Description</th>
      <th class="text-info">Qty</th>
      <th class="text-success">Edit</th>
      <th class="text-danger">Delete</th>
    </tr>
  </thead>
  <tbody>
    { % for row in rows % }
    <tr>
      <td>{{ row["ProductID"] }}</td>
      <td>{{ row["ProductName"] }}</td>
      <td>{{ row["ProductDescription"] }}</td>
      <td>{{ row['QTY'] }}</td>
      <td>
        {{ count }}
        <a><button class="btn btn-primary"
OnClick='showModal({{ row["ProductID"] }}, "{{ row["ProductName"] }}" , "{{ row["ProductDescription"] }}" , "{{ row[
"QTY"] }}" );'>Edit</button></a></td>
        <td> <a href='deleteProduct/{{ row["ProductID"] }}'><button class="btn btn-
danger">Delete</button></a>
        </td>

      </tr>
    { % endfor % }
  </tbody>
</table>
</div>
<div class="modal fade" id="myModal">
  <div class="modal-dialog">
    <div class="modal-content">

      <!-- Modal Header -->
      <div class="modal-header">
        <h4 class="modal-title">Edit Product</h4>
        <button type="button" class="close" data-dismiss="modal">&times;</button>
      </div>

      <!-- Modal body -->
      <div class="modal-body">
```

```

<form class="form-group" action = "{{ url_for('editProduct') }}" method = "POST">
  <div class="form-group">
    <input type="text" readonly class="form-control-plaintext form-control-lg" name="ProductID"
id="ProductID" style="display: none;" value="00">
  </div>
  <div class="form-group">
    <label for="NEWProductName" class="sr-only"></label>
    <input class="form-control form-control-lg" type="text" name="NEWProductName" placeholder="New
Product Name" id="NEWProductName" required>
  </div>
  <div class="form-group">
    <label for="NEWProductDescription" class="sr-only"></label>
    <input class="form-control form-control-lg" type="text" name="NEWProductDescription"
placeholder="NEW Product Description" id="NEWProductDescription" required>
  </div>
  <div class="form-group">
    <label for="NEWProductQty" class="sr-only"></label>
    <input class="form-control form-control-lg" type="text" name="NEWProductQty" placeholder="NEW
Product QTY" id="NEWProductQty" required>
  </div>
  <button type="submit" class="btn btn-success mb-2 font-weight-bold">EDIT PRODUCT</button>
</form>
</div>
</div>
</div>
</div>
</div>
</main>
</body>
</html>
<script type="text/javascript">

function showModal(id,oldname,oldDescription,oldqty){
  $('#ProductID').val(id);
  $('#NEWProductName').val(oldname);
  $('#NEWProductDescription').val(oldDescription);
  $('#NEWProductQty').val(oldqty);
  $('#myModal').modal('toggle');
}
</script>
</script>
<script src='https://cdnjs.cloudflare.com/ajax/libs/jquery/3.3.1/jquery.js'></script>
<script src='https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/esm/popper.js'></script>
<script src='https://cdnjs.cloudflare.com/ajax/libs/twitter-bootstrap/4.1.1/js/bootstrap.js'></script><script>
$(".sidebar-dropdown > a").click(function() {
$(".sidebar-submenu").slideUp(200);

```

```

if (
  $(this)
    .parent()
    .hasClass("active")
) {
  $(".sidebar-dropdown").removeClass("active");
  $(this)
    .parent()
    .removeClass("active");
} else {
  $(".sidebar-dropdown").removeClass("active");
  $(this)
    .next(".sidebar-submenu")
    .slideDown(200);
  $(this)
    .parent()
    .addClass("active");
}
});

$("#close-sidebar").click(function() {
  $(".page-wrapper").removeClass("toggled");
});
$("#show-sidebar").click(function() {
  $(".page-wrapper").addClass("toggled");
});
</script>

```

8.Result

Sign-Up Page

Inventory management system

Welcome Back!

To keep connected with us please login with your personal info

[SIGN IN](#)

Create Account

Enter Your Username

Enter Your Email ID

Enter Your Password

[Sign Up](#)

Created with ❤ by [Pathan rehman ahmed khan](#)

Sign-In Page

Inventroy Management System

Sign in

Enter Your email

Enter Your username

Enter Your Password

[Sign In](#)

Hello, Friend!

Enter your personal details and start managing your stocks

[SIGN UP](#)

Created with ❤ by [Pathan rehman ahmed khan](#)

Homepage

INVENTORY

rehman

Administrator

Online

General

Home

Products


Stock

Location

Product Movement

Logout

Inventory Management System



Retail inventory management is the process of ensuring you carry merchandise that shoppers want, with neither too little nor too much on hand. By managing inventory, retailers meet customer demand without running out of stock or carrying excess supply.

In practice, effective retail inventory management results in lower costs and a better understanding of sales patterns. Retail inventory management tools and methods give retailers more information with which to run their businesses. Applications have been developed to help retailers to track and manage stocks related to their own products. The System will ask retailers to create their account by providing essential details. Retailers can access their accounts by logging to the application.

Once retailers successfully login to the application they can update their inventory details, also users will be able to add new stock by submitting essential details related to the stock. They can view details of the current inventory. The System will automatically send an email alert to the retailers if there is no stock found in their account. So that they can order new stock.

Products Page

INVENTORY

Rehman

Administrator

Online

General

Home

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Location

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Location Information

ADD Location

Location id	Location name	Edit	Delete
1	Hyderabad	Edit	Delete
2	Delhi	Edit	Delete
3	Mumbai	Edit	Delete
4	Kolkata	Edit	Delete
5	Banglore	Edit	Delete

Stocks Page

INVENTORY

Rehman

Administrator

Online

General

Home

Products

Stock

Location

Product Movement

Logout

Product Name	Product QTY
Washing Machine	10
Computer	10
Printer	10
LG Fridge	10
Air Conditioner	10
Television	10
Oven	10
Cooler	10
Fan	10
Sofa	10

Location Page

INVENTORY

Rehman

Administrator

Online

General

Home

Products

Stock

Location

Product Movement

Logout


Location Information

ADD Location

Location id	Location name	Edit	Delete
1	Hyderabad	Edit	Delete
2	Delhi	Edit	Delete
3	Mumbai	Edit	Delete
4	Kolkata	Edit	Delete
5	Banglore	Edit	Delete

Product Movement Page

INVENTORY



Rehman
Administrator
Online

General

Home

Products

Stock

Location

Product Movement

Logout

Product Movement

ADD PRODUCT MOVEMENT

Movement id	Product name	Date_Time	From Location	To Location	Qty	Edit	Delete
1	LG Fridge	25/04/2021 : 4:52	Hyderabad	Banglore	5	Edit	Delete
2	Printer	4/28/2021 : 3:23	Delhi	Hyderabad	5	Edit	Delete

7.Advantages and Disadvantages

Advantages:

1. Better Inventory Accuracy.
2. Reduced risk of overselling.
3. Cost Savings.
4. Avoiding stockouts and Excess stock.
5. More Productivity.

6. Increased Profits.
7. Better Customer Experience.

Disadvantages:

1. Expensive for small businesses.
2. Risk of system crashes.
3. Malicious Hacks.
4. Works for only single company.

8.Applications

1. Wholesale.
2. Distributors.
3. Ecommerce.
4. Retailers.
5. Manufacturing companies.
6. Warehouse

9.Conclusion

In Conclusion, the system developed categorically stores, deletes, updates and maintains a structured collection of product details and records. We were successfully able to add, delete, modify any product and its attributes. The system was extremely secure due to the hashing technology as well as the security key feature from the library which ensures that any data being sent from the front end will always be encrypted and forwarded to the back end. Hence, there will be no loss of data of any kind.

10.Future Scope

Future work can be done to add a sales page and payments page to manage stocks and product sells simultaneously. The customers can buy products from sales page with secured payment gateway in order to avoid fraudulents and scams.

11.Bibilography

1. [Flask, flask.] <https://flask.palletsprojects.com/en/1.1.x/foreword/>
2. [Flask install] <https://www.twilio.com/docs/usage/tutorials/how-to-set-up-your-python-and-flask-development-environment>
3. [My SQL database creation] <https://remotemysql.com/>
4. [Creating a Flask Project] <https://code.tutsplus.com/tutorials/creating-a-web-app-from-scratch-using-python-flask-and-mysql--cms-22972>
5. [Creating REST API] <https://blog.miguelgrinberg.com/post/designing-a-restful-api-with-python-and-flask>
6. [Designing the UI] <https://spring.io/guides/tutorials/react-and-spring-data-rest/>

7. [Flask and MYSQL Database Connection] <https://www.askpython.com/python-modules/flask/flask-mysql-database>
8. [Docker Image creation] <https://www.geeksforgeeks.org/dockerize-your-flask-app/>
9. [Depolying APP to TAS] <https://drive.google.com/file/d/1Y7V9XBm1iCsC37Ejv2UO6fnyGPZJcE6r/view?usp=sharing>
10. [installing cli foundary] <https://docs.cloudfoundry.org/cf-cli/install-go-cli.html>

APPENDIX:

Source code:

<https://github.com/smartinternz02/SPS-9714-Inventory-Managment-System-for-Retailers/tree/main/fINAL>
IMS PROJECT

