

INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

Domain: Cloud Application Development

Team id: PNT2022TMID28952

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CREATE FLASK PROJECT

PYTHON

- APPLICATION.PY

```
From flask import Flask, render_template, jsonify, request, redirect, flash, Markup, url_for, session
```

```
From models import *  
From datetime import date
```

```
Folder_name="static"
```

```
App = Flask(__name__)  
App.config["SQLALCHEMY_DATABASE_URI"] =  
"postgresql://postgres:password@localhost:5432/inventoryDB"  
App.config["SQLALCHEMY_TRACK_MODIFICATIONS"] = False  
App.secret_key = b'hkhs3720/'  
Db.init_app(app)
```

```
@app.route("/") Def  
index():  
    Return render_template("index.html")
```

```
@app.route("/logout") Def  
logout():  
    Return render_template("index.html")
```

```
@app.route("/dashboard", methods=["POST"]) Def  
dashboard():
```

```

Unam = request.form.get("username")
Pwd = request.form.get("password")

Ulist=user_tbl.query.filter_by(userName=unam).first()
Session['username']= unam
Session['userid']=  ulist.userID
Session['utype']=  ulist.userType
If ulist.pwd==pwd:
    # uid=ulist.userid
    Return render_template("dashboard.html")
Else:
    Return render_template("index.html")

```

```

@app.route("/saveItemCategory", methods=["POST"]) Def
saveItemCategory():
    Idesc = request.form.get("ItemCategoryDesc")
    ItemCategor = ItemCategory(ItemCatDesc=idesc)
    Db.session.add(ItemCategor)
    Db.session.commit()
    Text=idesc+'record Saved Successfully'
    Return render_template("dashboard.html", text=text)

```

```

@app.route("/ItemsCategory")  Def
ItemsCategory():
    catList=ItemCategory.query.all()
    tabl=""<div class="form-group">
        <table class="table table-bordered border-success" ><TH>
            <TD>Item Category ID</TD>
            <TD>Item Category Name</TD></TH>""
    For itm in catList:
        Tabl=tabl+"<TR>
><td></td><TD>"+str(itm.ItemCatID)+"</TD><TD>"+itm.ItemCatDesc+"</TD></TR>"
        Tabl=tabl+"</TABLE></div>"
        Strg=""<form action="/saveItemCategory" method="post">
            <div class="text-center"><h5>Add Item Category</h5></div><hr>
<div class="mb-3">
            <label for="ItemCategoryDesc" class="form-label">Item Category Description</label>
            <input type="text" class="form-control" name="ItemCategoryDesc" placeholder="Enter
Item Category Name">
        </div>
<div class="col-12">
            <button type="submit" class="btn btn-success mb-3">Save Item Category</button> </div>

```

```

</FORM>
<BR> ""+tabl
    Text= Markup(strg)
    Return render_template("dashboard.html", text=text)

```

```

@app.route("/saveItem", methods=["POST"]) Def
saveItem():
    icatID = int(request.form.get("ItemCatID"))
    itmNam = request.form.get("ItemName")    AvAmt
    = int(request.form.get("AvailAmt"))
    ItemMas = ItemMaster(ItemCatID=icatID, ItemDesc=itmNam,AvailAmt=AvAmt )
    Db.session.add(ItemMas)
    Db.session.commit()
    Text=itmNam+' record Saved Successfully'
    Return render_template("dashboard.html", text=text)

```

```

@app.route("/Items")    Def
Items():
    itmList= ItemMaster.query.all()
    tabl=""<div class="form-group">
        <table class="table table-bordered border-success" ><TH>
            <TD>Item ID</TD>
            <TD>Item Category</TD>
        <TD>Item Name</TD></TH>""    For itm
    in itmList:
        Tabl=tabl+"<TR
        ><td></td><TD>"+str(itm.ItemID)+"</TD><TD>"+itm.ItemDesc+"</TD><TD>"+itm.itemCat.Ite
        mCatDesc+"</TD></TR>"
        Tabl=tabl+"</TABLE></div>"
    catList= ItemCategory.query.all()
    dd=""<div class="form-group">
        <select class="form-control" name="ItemCatID">""
    For cat in catList:
        Dd=dd+"<option value=\""+str(cat.ItemCatID)+"\">"+cat.ItemCatDesc + "</option>"
    Dd=dd+ ""</select>
    </div>""

```

```

    Strg=""<form action="/saveItem" method="post">
    <div class="text-center"><h5>Add Items</h5></div><hr>
    <div class="mb-3">
        <label for="ItemCatID" class="form-label">Item Category </label>""<div>""
        </div>
    <div class="mb-3">

```

```

<label for="ItemName" class="form-label">Item Description</label>
<input type="text" class="form-control" name="ItemName" placeholder="Enter Item
Name"> </div>
<div class="mb-3">
  <label for="AvailAmt" class="form-label">Available Amount</label>
  <input type="text" class="form-control" name="AvailAmt" placeholder="How many Items
available?">
</div>
<div class="col-12">
  <button type="submit" class="btn btn-success mb-3">Save Item</button>
</div>
</FORM>
<BR> ""+tabl

```

```

Text=Markup(strg)
Return render_template("dashboard.html", text=text)

```

```

@app.route("/UpdateItems", methods=["POST"]) Def
UpdateItems():
  iID = int(request.form.get("ItemID"))
  aDate = request.form.get("AddDate")  aQty
= int(request.form.get("AddQty"))  vName
= request.form.get("VendorName")
  altems = AddItem(AddDate=aDate, AddQty=aQty, VendorName=vName, ItemID=iID)
  upVal = ItemMaster.query.filter_by(ItemID=iID).first()
  newUnits= upVal.AvailAmt  upVal.AvailAmt =
  newUnits+aQty  db.session.add(altems)
  db.session.commit()
  text=str(aQty)+' '+upVal.ItemDesc+' Added Successfully'
  return render_template("dashboard.html", text=text)

```

```

@app.route("/AddItems")  Def
AddItems():
  itmList= ItemMaster.query.all()
  tabl=""<div class="form-group">
    <table class="table table-bordered border-success" ><TH>
    <TD>Item ID</TD>
    <TD>Item Category</TD>
    <TD>Item Name</TD>
    <TD>Items Available</TD></TH>""
  For itm in itmList:
    Tabl=tabl+"<TR>
    ><td></td><TD>"+str(itm.ItemID)+"</TD><TD>"+itm.ItemDesc+"</TD><TD>"+itm.itemCat.Ite
mCatDesc+"</TD><TD>"+str(itm.AvailAmt)+"</TD></TR>"

```

```

    Tabl=tabl+"</TABLE></div>"
    Dd=""<div class="form-group">
        <select class="form-control" name="ItemID">""
For itm in itmList:
    Dd=dd+"<option value='"+str(itm.ItemID)+"'>"+itm.ItemDesc + "</option>"
Dd=dd+ ""</select>
</div>""
    Strg=""<form action="/UpdateItems" method="post">
<div class="text-center"><h5>Items Available</h5></div><hr>
<div class="mb-3">
    <label for="ItemID" class="form-label">Select Item </label>""+dd+""
</div>
<div class="mb-3">
    <label for="AddDate" class="form-label">Select Date</label>
    <input type="date" class="form-control" Name="AddDate" placeholder="Enter Date of
Adding Items in Inventory">
</div>
<div class="mb-3">
    <label for="AddQty" class="form-label">Items Count</label>
    <input type="text" class="form-control" name="AddQty" placeholder="Items Count">
</div>
<div class="mb-3">
    <label for="VendorName" class="form-label">Vendor Name</label>
    <input type="text" class="form-control" name="VendorName" placeholder="Vendor
Name"> </div>
<div class="col-12">
    <button type="submit" class="btn btn-success mb-3">Save Item</button>
</div>
</FORM><BR>
""+tabl
    Text=Markup(strg)
    Return render_template("dashboard.html", text=text)

```

```

@app.route("/issUpdt/<int:tid>") Def
issUpdt(tid):

```

```

    llist=request_tbl.query.filter_by(reqID=tid).first()
upVal="I"  ilist.Status=upVal  ilist.issueDate=
date.today()
    imlist=ItemMaster.query.filter_by(ItemID=ilist.ItemID).first()
currCnt=imlist.AvailAmt  imlist.AvailAmt=currCnt-
ilist.RegQty  db.session.commit()  text="Item Issued"
    return render_template("dashboard.html", text=text)

```

```

@app.route("/itemIssue")  Def
itemIssue():
    itmList= request_tbl.query.filter_by(Status=None,)
    strg="""<Form><div class="form-group">
        <table class="table table-bordered border-success" ><TH>
        <TD>Item Name</TD>
        <TD>Date of Request</TD>
        <TD>Quantity Requested</TD>
        <TD>User Name</TD>
    <TD>Issue</TD></TH>"""    For itm
    in itmList:
        Strg=strg+"<TR>
    ><td></td><TD>"+str(itm.item.ItemDesc)+"</TD><TD>"+str(itm ReqDate)+"</TD><TD>"+str(i
    tm ReqQty)+"</TD>"
        Strg=strg+"<TD>"+str(itm.user.userName)+"</TD><TD>"
    Strg=strg+"<div class='col-12'><a href="+
    url_for('issUpdt',tid=itm.reqID)+">Issue</a></div></TD></TR>"
        Strg=strg+"</TABLE></div></FORM>"

    Text=Markup(strg)
    Return render_template("dashboard.html", text=text)

```

```

@app.route("/retUpdt/<int:tid>") Def
retUpdt(tid):
    llist=request_tbl.query.filter_by(reqID=tid).first()
    upVal="R"  ilist.Status=upVal  ilist.returnDate=
    date.today()
    imlist=ItemMaster.query.filter_by(ItemID=ilist.ItemID).first()
    currCnt=imlist.AvailAmt
    imlist.AvailAmt=currCnt+ilist.ReqQty  db.session.commit()
    text="Item Returned"
    return render_template("dashboard.html", text=text)

```

```

@app.route("/itemReturn")  Def itemReturn():  itmList=
    request_tbl.query.filter_by(Status="I",userID=session['userid'])
    strg="""<Form><div class="form-group">
        <table class="table table-bordered border-success" ><TH>
        <TD>Item Name</TD>
        <TD>Date of Issue</TD>
        <TD>Quantity Issued</TD>
    <TD>Return</TD></TH>"""    For itm
    in itmList:
        Strg=strg+"<TR>

```

```
><td></td><td>"+str(itm.item.ItemDesc)+"</td><td>"+str(itm.issueDate)+"</td><td>"+str
(itm.ReqQty)+"</td>"
```

```
    Strg=strg+"<td><div class=\"col-12\"><a href="+
url_for('retUpdt',tid=itm.reqID)+">Return</a></div></td></tr>"
    Strg=strg+"</table></div></form>"
```

```
Text=Markup(strg)
Return render_template("dashboard.html", text=text)
```

```
@app.route("/saveRequest", methods=["POST"]) Def
saveRequest():
    iID = int(request.form.get("ItemID"))
    rDate = request.form.get("reqDate")    rQty
    = request.form.get("reqQuantity")
    uid = session["userid"]
    dept = request.form.get("depttName")
    rltems = request_tbl(ReqDeptt=dept, ReqDate=rDate,ItemID=iID, ReqQty=rQty, userID=uid)
    db.session.add(rltems)    db.session.commit()
    text=str(iID)+' '+str(rQty)+' Requested Successfully'
    return render_template("dashboard.html", text=text)
```

```
@app.route("/itemRequest")    Def
itemRequest():
    itmList= ItemMaster.query.all()
    dd=""<div class="form-group">
        <select class="form-control" name="ItemID">""
    For itm in itmList:
        Dd=dd+"<option value=\""+str(itm.ItemID)+"\">"+itm.ItemDesc +"</option>"
        Dd=dd+ ""</select>
    </div>""
```

```
    itmList= request_tbl.query.filter_by(userID=session['userid'])
tbl=""<div><table class="table table-bordered border-success" ><th>
    <td>Item Name</td>
    <td>Date of Request</td>
    <td>Date of Issue</td>
    <td>Quantity Issued</td></th>""
```

```
    For itm in itmList:
        Tbl=tbl+"<tr>
><td></td><td>"+str(itm.item.ItemDesc)+"</td><td>"+str(itm.ReqDate)+"</td><td>"+str(i
tm.issueDate)+"</td>"
        Tbl=tbl+"<td>"+str(itm.ReqQty)+"</td></tr>"
        Tbl=tbl+"</table></div>"
```

```

    Strg=""<form action="/saveRequest" method="post">
<div class="text-center"><h5>Request Item</h5></div><hr>
<div class="mb-3">
    <label for="ItemID" class="form-label">Select Item </label>""+dd+""
</div>
<div class="mb-3">
    <label for="reqDate" class="form-label">Request Date</label>
    <input type="date" class="form-control" name="reqDate" placeholder="Select Request
Date">
</div>
<div class="mb-3">
    <label for="reqQty" class="form-label">Request Quantity</label>
    <input type="number" class="form-control" name="reqQuantity" placeholder="Items
Count">
</div>
<div class="mb-3">
    <label for="depttName" class="form-label">Department</label>
    <input type="text" class="form-control" name="depttName" placeholder="Department ">
</div>
<div class="col-12">
    <button type="submit" class="btn btn-success mb-3">Request Item</button>
</div>
</FORM><BR>
""+tbl
    Text=Markup(strg)
    Return render_template("dashboard.html", text=text)

```

Models.py

Import os

From flask import Flask

From flask_sqlalchemy import SQLAlchemy

Db = SQLAlchemy()

Class ItemCategory(db.Model):

__tablename__="ItemsCategory"

ItemCatID = db.Column(db.Integer, primary_key=True)

ItemCatDesc =db.Column(db.String,nullable=False)


```
Class ItemMaster(db.Model):
```

```
    __tablename__="ItemMaster"
```

```
    ItemID = db.Column(db.Integer, primary_key=True)
```

```
    ItemCatID = db.Column(db.Integer,db.ForeignKey("ItemsCategory.ItemCatID"),  
nullable=False)
```

```
    ItemDesc = db.Column(db.String,nullable=False)    AvailAmt =  
db.Column(db.Integer,nullable=False)    itemCat =  
db.relationship("ItemCategory", backref="itemCat", lazy=True)
```

```
class AddItem(db.Model):
```

```
    __tablename__="AddItems"
```

```
    transID=db.Column(db.Integer, primary_key=True)
```

```
    ItemID = db.Column(db.Integer,db.ForeignKey("ItemMaster.ItemID"), nullable=False)
```

```
    AddQty = db.Column(db.Integer, nullable=False)
```

```
    AddDate = db.Column(db.Date,nullable=False)
```

```
    VendorName = db.Column(db.String,nullable=False)
```

```
Class request_tbl(db.Model):
```

```
    __tablename__="request_tbl"
```

```
    reqID=db.Column(db.Integer, primary_key=True)
```

```
    ReqDeptt=db.Column(db.String,nullable=False)
```

```
    ReqDate =db.Column(db.Date,nullable=False)
```

```
    ItemID = db.Column(db.Integer,db.ForeignKey("ItemMaster.ItemID"), nullable=False)
```

```
    ReqQty = db.Column(db.Integer, nullable=False)    userID =
```

```
db.Column(db.Integer,db.ForeignKey("user_tbl.userID"), nullable=False)
```

```
    Status=db.Column(db.String,nullable=False)
```

```
    issueDate=db.Column(db.Date,nullable=False)
```

```

returnDate=db.Column(db.Date,nullable=False)    item =
db.relationship("ItemMaster", backref="item", lazy=True)    user =
db.relationship("user_tbl", backref="user", lazy=True)

```

```

class user_tbl(db.Model):
    __tablename__="user_tbl"
    userID=db.Column(db.Integer, primary_key=True)
    userName=db.Column(db.String,nullable=False)
    pwd=db.Column(db.String,nullable=False)
    userType=db.Column(db.String,nullable=False)

```

index.html

```
<HTML>
```

```
<head>
```

```

<link href=https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/css/bootstrap.min.css
rel="stylesheet" integrity="sha384-
BmbxuPwQa2lc/FVzBcNJ7UAyJxM6wucj61tLrc4wSX0szH/Ev+nYRRuWlolfffl"
crossorigin="anonymous">

```

```

<script src=https://cdn.jsdelivr.net/npm/@popperjs/core@2.6.0/dist/umd/popper.min.js
integrity="sha384-
KsvD1yqQ1/1+IA7gi3P0tyJcT3vR+NdbTt13hSJ2Inve8agRGXTTyNaBYmCR/Nwi"
crossorigin="anonymous"></script>

```

```

<script src=https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/js/bootstrap.min.js
integrity="sha384-
nsg8ua9Haw1y0W1btsyWgBklPnCUAFLuTMS2G72MMONqmOymq585AcH49TLBQObG"
crossorigin="anonymous"></script>

```

```
</head>
```

```
<body>
```

```
<div class="row" style="height:50%; margin-top:5%; ">
```

```
<div class="col-4" >
```

```

    </div>

    <div class="col-4" style="border-style:solid; border-color:grey; border-
width:1px;boxshadow: 10px 10px 10px grey;padding-top:10px">

        <form action="{{ url_for('dashboard')}}" method="post">

<div class="form-group mx-sm-3 mb-2">

<label for="username" class="sr-only">User Name</label>

<input type="text" class="form-control" name="username" placeholder="User Name">

        </div>

        <div class="form-group mx-sm-3 mb-2">

<label for="inputPassword2" class="sr-only">Password</label>

<input type="password" class="form-control" name="password" placeholder="Password">

        </div>

        <button type="submit" class="btn btn-primary mb-2">Confirm identity</button>

    </form>

</div>

<body>

```

Dashboard.html

```

<HTML>

<head>

<link href=https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/css/bootstrap.min.css
rel="stylesheet" integrity="sha384-
BmbxuPwQa2lc/FVzBcNJ7UAyJxM6wuuqIJ61tLrc4wSX0szH/Ev+nYRRuWlolflfl"
crossorigin="anonymous">

<script src=https://cdn.jsdelivr.net/npm/@popperjs/core@2.6.0/dist/umd/popper.min.js
integrity="sha384-
KsvD1yqQ1/1+IA7gi3P0tyJcT3vR+NdbTt13hSJ2Inve8agRGXTTyNaBYmCR/Nwi"
crossorigin="anonymous"></script>

```

```
<script src=https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/js/bootstrap.min.js
integrity="sha384-
nsg8ua9Haw1y0W1btsyWgBklPnCUAFLuTMS2G72MMONqmOymq585AcH49TLBQObG"
crossorigin="anonymous"></script>
```

```
</head>
```

```
<body>
```

```
<div>
```

```
<div style="height: 10px; background-color: rgba(0,0,0,0.8);">
```

```
<div class="col-12">
```

```
</div>
```

```
</div>
```

```
<div style="height: 2px; background-color: rgba(0,0,0,0.8);">
```

```
<div class="col-12">
```

```
</div>
```

```
</div>
```

```
<div class="container overflow-hidden">
```

```
<div style="height: 2px; background-color: rgba(255,255,255,0.8);">
```

```
<div class="col-12">
```

```
</div>
```

```
</div>
```

```
<div style="height: 50px; background-color: #ADFF2F; padding-left:30%;padding-top:10px">
```

```
<h3>Inventory- Issues and Returns</h3>
```

```
</div>
```

```
<div style="height: 2px; background-color: rgba(5,6,0,0.8);"></div>
```

```
</div>
```

```
<div class="row" style="height:100%">

<div class="col-2" style="border-style:solid; border-color:grey; border-width:1px;
text-align:left">

<div class="col-12">

{% if session['utype'] == 'Admin' %}

<div style="width:100%;" >

<a href="{{url_for('ItemsCategory')}}" style="background-color: #ADFF2F;;
Color: black;border-bottom-style:solid;
Padding: 14px 25px;
Text-align: center;
Text-decoration: none;
Display: inline-block;width:100%">Add Item Category</a>

</div>

<div style="width:100%;">

<a href="{{url_for('Items')}}" style="background-color: #ADFF2F;;
Color: black;border-bottom-style:solid;
Padding: 14px 25px;
Text-align: center;
Text-decoration: none;
Display: inline-block;width:100%" >Add an Item</a>

</div>

<div style="width:100%;">

<a href="{{url_for('AddItems')}}" style="background-color: #ADFF2F;;
Color: black;border-bottom-style:solid;
Padding: 14px 25px;
Text-align: center;
Text-decoration: none;
Display: inline-block; width:100%">Add Items</a>

</div>
```

```

<div style="width:100%;">
<a href="{{url_for('itemIssue')}}" style="background-color: #ADFF2F;;
    Color: black;border-bottom-style:solid;
    Padding: 14px 25px;
    Text-align: center;
    Text-decoration: none;
    Display: inline-block;width:100%">Item Issue</a>
</div>
{% endif %}
{% if session['utype'] != 'Admin' %}
<div style="width:100%;">
<a href="{{url_for('itemReturn')}}" style="background-color: #ADFF2F;
    Color: black;border-bottom-style:solid;
    Padding: 14px 25px;
    Text-align: center;
    Text-decoration: none;
    Display: inline-block;width:100%">Item Return</a>
</div>
<div style="width:100%;">
<a href="{{url_for('itemRequest')}}" style="background-color: #ADFF2F; Color: black;border-
bottom-style:solid;
    Padding: 14px 25px;
    Text-align: center;
    Text-decoration: none;
    Display: inline-block;width:100%">Item Request</a>
</div>
{% endif %}
</div>
</div>

```

```
<div class="col-8" style="border-style:solid; border-color:grey;border-width:1px;
paddingtop:10px">
```

```
{% block body %}
```

```
{{text}}
```

```
{% endblock %}
```

```
</div>
```

```
<div class="col-2" style="border-style:solid; border-color:grey;border-width:1px">
```

```
<b><a href={{url_for('logout')}}>logout {{session['username']}}!</a></b>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
</div>
```

```
</body>
```

```
</HTML>
```