

# INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

**Domain:** Cloud Application Development

**Team id:** PNT2022TMID53401

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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'hkabs3720/'
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.It
            e 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>""+dd+""

</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>
""+tbl

```

```

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.It
e
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):
```

```
lilst=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.ReqQty 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 itm.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):
```

```
lilst=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/FVzBcNJ7UAyJxM6wuuqIJ61tLrc4wSX0szH/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;box-
shadow: 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/FVzBcNJ7UAyJxM6wquqIj61tLrc4wSX0szH/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; padding-top: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>