INVENTORYMANAGEMENTSYSTEMFORRETAILERS

Domain: CloudApplicationDevelopment

Teamid: PNT2022TMID53370

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CREATEFLASKPROJECT

PHYTHON

☐ **APPLICATION.PY**

FromflaskimportFlask,render_template,jsonify,request,redirect,flash,Markup,url_for,session

From models import
*Fromdatetimeimportdate

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'hkahs3720/'
Db.init_app(app)

@app.route("/")Def
index():
  Returnrender_template("index.html")

@app.route("/logout")Def
logout():
  Returnrender_template("index.html")

```python
@app.route("/dashboard",    methods=*"POST"+)
Defdashboard():
    Unam =
    request.form.get("username")Pwd=re
    quest.form.get("password")

    Ulist=user_tbl.query.filter_by(userName=unam).first()
    Session*'username'+=
    unamSession*'userid'+=ulist.us
    erIDSession*'utype'+=ulist.user
    Type                      If
    ulist.pwd==pwd:
        #uid=ulist.userid
        Returnrender_template("dashboard.html")
    Else:
        Returnrender_template("index.html")



@app.route("/saveItemCategory",    methods=*"POST"+)
DefsaveItemCategory():
    Idesc =
    request.form.get("ItemCategoryDesc")ItemCate
    gor =
    ItemCategory(ItemCatDesc=idesc)Db.session.ad
    d(ItemCategor)Db.session.commit()
    Text=idesc+'recordSavedSuccessfully'
    Returnrender_template("dashboard.html",text=text)

@app.route("/ItemsCategory")Def
ItemsCategory():
    catList=ItemCategory.query.all()
    tabl='''<divclass="form-group">
        <tableclass="tabletable-borderedborder-success"><TH>
        <TD>ItemCategoryID</TD>
        <TD>ItemCategoryName</TD></TH>'''
      ForitmincatList:
       Tabl=tabl+"<TR
><td></td><TD>"+str(itm.ItemCatID)+"</TD><TD>"+itm.ItemCatDesc+"</TD></TR>"Tabl=tabl+"</TAB
    LE></div>"
    Strg='''<formaction="/saveItemCategory"method="post">
    <divclass="text-center"><h5>AddItemCategory</h5></div><hr>
<divclass="mb-3">
 <labelfor="ItemCategoryDesc"class="form-label">ItemCategoryDescription</label>
 <input type="text" class="form-control" name="ItemCategoryDesc"
placeholder="EnterItemCategory Name">
```

```
</div>
<divclass="col-12">
    <buttontype="submit"class="btnbtn-successmb-3">SaveItemCategory</button></div>


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

@app.route("/saveItem",    methods=*"POST"+)
DefsaveItem():
    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(Item
    Mas)
    Db.session.commit()
    Text=itmNam+'recordSavedSuccessfully'
    Returnrender_template("dashboard.html",text=text)

@app.route("/Items")Def
Items():
    itmList=ItemMaster.query.all()tabl='''<divc
    lass="form-group">
        <tableclass="tabletable-borderedborder-success"><TH>
        <TD>ItemID</TD>
        <TD>ItemCategory</TD>
        <TD>ItemName</TD></TH>'''
     ForitminitmList:
     Tabl=tabl+"<TR
><td></td><TD>"+str(itm.ItemID)+"</TD><TD>"+itm.ItemDesc+"</TD><TD>"+itm.itemCat.It
emCatDesc+"</TD></TR>"Tabl=tabl+"</TABLE></div>"catList=ItemCategory.query.all()dd=''
'<divclass="form-group">
        <selectclass="form-control"name="ItemCatID">'''For
    catincatList:
        Dd=dd+"<optionvalue=\""+str(cat.ItemCatID)+"\">"+cat.ItemCatDesc+"</option>"Dd=d
    d+'''</select>
</div>'''


    Strg='''<formaction="/saveItem"method="post">
<divclass="text-center"><h5>AddItems</h5></div><hr>
```

```
<divclass="mb-3">
  <labelfor="ItemCatID"class="form-label">ItemCategory</label>'''+dd+'''


</div>
<divclass="mb-3">
  <labelfor="ItemName"class="form-label">ItemDescription</label>
  <input type="text" class="form-control" name="ItemName" placeholder="Enter
ItemName">
</div>
<divclass="mb-3">
  <labelfor="AvailAmt"class="form-label">AvailableAmount</label>
  <inputtype="text"class="form-control"name="AvailAmt"placeholder="HowmanyItemsavailable?">
</div>
<divclass="col-12">
    <buttontype="submit"class="btnbtn-successmb-3">SaveItem</button>
</div>
</FORM>
<BR>
'''+tabl

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

@app.route("/UpdateItems",   methods=*"POST"+)
DefUpdateItems():
  iID=int(request.form.get("ItemID"))aDate
  =request.form.get("AddDate")aQty=int(re
  quest.form.get("AddQty"))vName=request
  .form.get("VendorName")
  aItems = AddItem(AddDate=aDate, AddQty=aQty,VendorName=vName,
  ItemID=iID)upVal= ItemMaster.query.filter_by(ItemID=iID).first()
  newUnits=
                    upVal.AvailAmt
  upVal.AvailAmt
                    =newUnits+aQ
  tydb.session.add(aItems)db.sessi
  on.commit()
  text=str(aQty)+''+upVal.ItemDesc+'AddedSuccessfully'returnrender_template("dashboard
  .html",text=text)

@app.route("/AddItems")Def
AddItems():
```

```
itmList= ItemMaster.query.all()
tabl='''<divclass="form-group">
    <tableclass="tabletable-borderedborder-success"><TH>
    <TD>ItemID</TD>
    <TD>ItemCategory</TD>
    <TD>ItemName</TD>
    <TD>ItemsAvailable</TD></TH>'''For
itm initmList:
    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='''<divclass="form-group">
    <selectclass="form-control"name="ItemID">'''For
itm initmList:
    Dd=dd+"<option
value=\""+str(itm.ItemID)+"\">"+itm.ItemDesc+"</option>"Dd=dd+'''</select>
</div>'''
Strg='''<formaction="/UpdateItems"method="post">
<divclass="text-center"><h5>ItemsAvailable</h5></div><hr>
<divclass="mb-3">
  <labelfor="ItemID"class="form-label">SelectItem</label>'''+dd+'''
</div>
<divclass="mb-3">
  <labelfor="AddDate"class="form-label">SelectDate</label>
  <inputtype="date"class="form-
control"Name="AddDate"placeholder="EnterDateofAddingItems in Inventory">
</div>
<divclass="mb-3">
  <labelfor="AddQty"class="form-label">ItemsCount</label>
  <inputtype="text"class="form-control"name="AddQty"placeholder="ItemsCount">
</div>
<divclass="mb-3">
  <labelfor="VendorName"class="form-label">VendorName</label>
  <input type="text" class="form-control" name="VendorName"
placeholder="VendorName">
</div>
<divclass="col-12">
    <buttontype="submit"class="btnbtn-successmb-3">SaveItem</button>
</div>
</FORM><BR>
'''+tabl
    Text=Markup(strg)
```

```
        Returnrender_template("dashboard.html",text=text)


@app.route("/issUpdt/<int:tid>")Def
issUpdt(tid):Ilist=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.AvailAmtimlist.AvailAmt=currCnt-
    ilist.ReqQtydb.session.commit()text="ItemIssued"
    returnrender_template("dashboard.html",text=text)

@app.route("/itemIssue")Def
itemIssue():
    itmList=request_tbl.query.filter_by(Status=None,)strg='''<Form><divcl
    ass="form-group">
        <tableclass="tabletable-borderedborder-success"><TH>
        <TD>ItemName</TD>
        <TD>DateofRequest</TD>
        <TD>QuantityRequested</TD>
        <TD>UserName</TD>
        <TD>Issue</TD></TH>'''For
    itm initmList:
        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+"
        <divclass=\"col-12\"><ahref="+
url_for('issUpdt',tid=itm.reqID)+">Issue</a></div></TD></TR>"Strg=strg+"</TABLE></div></
FORM>"

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

@app.route("/retUpdt/<int:tid>")Def
retUpdt(tid):
    Ilist=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).firs
    t(
    )
    currCnt=imlist.AvailAmtimlist.AvailAmt=currCnt+ilist.ReqQty
    db.session.commit()text="Item Returned"
    returnrender_template("dashboard.html",text=text)
```

```python
@app.route("/itemReturn")          Def        itemReturn():
                                   itmList=request_tbl.query.filter_by(St
atus="I",userID=session*'userid'+)
    strg='''<Form><divclass="form-group">
        <tableclass="tabletable-borderedborder-success"><TH>
        <TD>ItemName</TD>
        <TD>DateofIssue</TD>
        <TD>QuantityIssued</TD>
        <TD>Return</TD></TH>'''For
    itm initmList:
        Strg=strg+"<TR
><td></td><TD>"+str(itm.item.ItemDesc)+"</TD><TD>"+str(itm.issueDate)+"</TD><TD>"+str(itm.Req
Qty)+"</TD>"
        Strg=strg+"<TD><divclass=\"col-12\"><ahref="+
url_for('retUpdt',tid=itm.reqID)+">Return</a></div></TD></TR>"Strg=strg+"</TABLE></div></FORM
>"

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

@app.route("/saveRequest",    methods=*"POST"+)
DefsaveRequest():
    iID=int(request.form.get("ItemID"))rDa
    te=request.form.get("reqDate")rQty  =
    request.form.get("reqQuantity")     uid
    =session*"userid"+
    dept=request.form.get("depttName")
    rItems = request_tbl(ReqDeptt=dept, ReqDate=rDate,ItemID=iID, ReqQty=rQty,
    userID=uid)db.session.add(rItems)db.session.commit()
    text=str(iID)+''+str(rQty)+'RequestedSuccessfully'returnrender_template("dashboard.htm
    l",text=text)


@app.route("/itemRequest")Def
itemRequest():
    itmList= ItemMaster.query.all()
    dd='''<divclass="form-group">
        <selectclass="form-control"name="ItemID">'''For
    itm initmList:
        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><tableclass="tabletable-borderedborder-success"><TH>
    <TD>ItemName</TD>
    <TD>DateofRequest</TD>
    <TD>DateofIssue</TD>
    <TD>QuantityIssued</TD></TH>'''For
itm initmList:
    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='''<formaction="/saveRequest"method="post">
<divclass="text-center"><h5>RequestItem</h5></div><hr>
<divclass="mb-3">
  <labelfor="ItemID"class="form-label">SelectItem</label>'''+dd+'''
</div>
<divclass="mb-3">
  <labelfor="reqDate"class="form-label">RequestDate</label>
  <inputtype="date"class="form-
control"name="reqDate"placeholder="SelectRequestDate">
</div>
<divclass="mb-3">
  <labelfor="reqQty"class="form-label">RequestQuantity</label>
  <input type="number" class="form-control" name="reqQuantity"
placeholder="ItemsCount">
</div>
<divclass="mb-3">
  <labelfor="depttName"class="form-label">Department</label>
  <inputtype="text"class="form-control"name="depttName"placeholder="Department">
</div>
<divclass="col-12">
    <buttontype="submit"class="btnbtn-successmb-3">RequestItem</button>
</div>
</FORM><BR>
'''+tbl
    Text=Markup(strg)
    Returnrender_template("dashboard.html",text=text)
```

Models.py

 Importos

FromflaskimportFlask

```python
From flask_sqlalchemy import

SQLAlchemyDb= 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)


classAddItem(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=d

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

Classrequest_tbl(db.Model):

```python
    tablename                        ="request_tbl"
    reqID=db.Column(db.Integer,primary_key=Tru
    e)ReqDeptt=db.Column(db.String,nullable=Fals
    e)ReqDate=db.Column(db.Date,nullable=False)
    ItemID =
    db.Column(db.Integer,db.ForeignKey("ItemMaster.ItemID"),nullable=Fal
    se) 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.Da
    te,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)


classuser_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
<HTML>
<head>
<linkhref=https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/css/bootstrap.min.css
rel="stylesheet"integrity="sha384-
BmbxuPwQa2lc/FVzBcNJ7UAyJxM6wuqIj61tLrc4wSX0szH/Ev+nYRRuWlolflfl"crossorigin="anonymous"
>

<scriptsrc=https://cdn.jsdelivr.net/npm/@popperjs/core@2.6.0/dist/umd/popper.min.js
integrity="sha384-
KsvD1yqQ1/1+IA7gi3P0tyJcT3vR+NdBTt13hSJ2lnve8agRGXTTyNaBYmCR/Nwi"crossorigin="anonymou
s"></script>
```

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

</head>

<body>

<divclass="row"style="height:50%;margin-top:5%;">


        <divclass="col-4">


        </div>
        <div class="col-4" style="border-style:solid; border-color:grey; border-width:1px;box-
shadow:10px10px10pxgrey;padding-top:10px">

        <formaction=",,url_for('dashboard')--"method="post">

   <divclass="form-groupmx-sm-3mb-2">

   <labelfor="username"class="sr-only">UserName</label>

   <inputtype="text"class="form-control"name="username"placeholder="UserName">

        </div>

        <divclass="form-groupmx-sm-3mb-2">

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

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

        </div>

        <buttontype="submit"class="btnbtn-primarymb-2">Confirmidentity</button>

        </form>

        </div>


<body>
```

Dashboard.html

```
<HTML>

<head>
```

```html
<linkhref=https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/css/bootstrap.min.cssrel="stylesheet" integrity="sha384-BmbxuPwQa2lc/FVzBcNJ7UAyJxM6wuqIj61tLrc4wSX0szH/Ev+nYRRuWlolflfl" crossorigin="anonymous">

<scriptsrc=https://cdn.jsdelivr.net/npm/@popperjs/core@2.6.0/dist/umd/popper.min.js integrity="sha384-KsvD1yqQ1/1+IA7gi3P0tyJcT3vR+NdBTt13hSJ2lnve8agRGXTTyNaBYmCR/Nwi"crossorigin="anonymous"></script>

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

</head>

<body>

<div>

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

<divclass="col-12">


</div>

</div>

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

<divclass="col-12">


</div>

</div>

<divclass="containeroverflow-hidden">


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

<divclass="col-12">

</div>

</div>
```

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

<h3>Inventory-IssuesandReturns</h3>

</div>

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


</div>

<divclass="row"style="height:100%">

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

<divclass="col-12">

{%ifsession*'utype'+=='Admin'%}

<divstyle="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%">AddItemCategory</a>

</div>

<divstyle="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%">AddanItem</a>
</div>

<divstyle="width:100%;">

<ahref=",,url_for('AddItems')--"style="background-color:#ADFF2F;;
```

```
  Color: black;border-bottom-
  style:solid;Padding:14px25px;
  Text-align:center;
  Text-decoration:none;
  Display:inline-block;width:100%">AddItems</a>
</div>
<divstyle="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%">ItemIssue</a>
</div>
{% endif%}
{%ifsession*'utype'+!='Admin'%}
<divstyle="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%">ItemReturn</a>
</div>
<divstyle="width:100%;">
<ahref=",,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%">ItemRequest</a>

</div>

{% endif%}

</div>

</div>

<divclass="col-8"style="border-style:solid;border-color:grey;border-width:1px;padding-top:10px">

{%block body%}

{{text}}

{%endblock%}

</div>

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

<b><ahref=,,url_for('logout')-->logout,,session*'username'+--!</a></b>

</div>

</div>


</div>

</div>

</div>


</body>

</HTML>
```