**PROGRAM :**

**HTML CODE**

* **404.html**

{% extends "header.html" %}

{% block body %}

<center><p style="font-size: 1cm; color: black;"><b>Sorry this page doesn't exists !!!!!!!!!!<b></p></center>

{%endblock%}

* 500.html

{% extends "header.html" %}

{% block body %}

<center><p style="font-size: 1cm; color:black;"><b>Sorry this page doesn't exists !!!!!!!!!!<b></p></center>

{%endblock%}

* Dashboard.html

{% extends "header.html" %}

{% block body %}

<div class="container">

<center><p style="color:white; font-size: 30px">Welcome<text style="color:red;"> {{name}}</text></p></center>

</div>

<div class="container" >

<div class="row">

<div class="col-xs-12 col-sm-8 col-md-6 col-sm-offset-2 col-md-offset-3">

<form role="form" method=post action="/dashboard/result/">

<h2 style="color:white;">Enter Show name</h2>

<hr class="colorgraph">

<div class="form-group">

<input type="text" name="show" id="show" class="form-control input-lg" placeholder="Type a Show name" value="{{request.form.show}}" tabindex="1">

</div>

<hr class="colorgraph">

<div class="row">

<center><div style="color:black;">

<p style="color:white;">You have added {{x}} show for recommendation</p>

<br><input type="submit" value="Submit" class="btn btn-primary btn-lg" tabindex="3"></div></center>

</div>

</form>

<form role="form" method=post action="/dashboard/final/">

<div class="row" style="margin-top: 1cm;">

<center><div><input style="background-color: green;" type="submit" value="Recommend" class="btn btn-primary btn-lg" tabindex="3"></div></center>

</div>

</form>

</div>

</div>

</div>

{%endblock%}

* Final.html

{% extends "header.html" %}

{% block body %}

<div style="opacity:0.7; margin-top: 1cm;">

<ul class="list-group">

<li class="list-group-item"><b>Recommended Show name (Personalized Recommendation)</b></li>

{%if d|length == 0%}

<li class="list-group-item">Sorry No data available</li>

{%else%}

{% for i in d %}

<li class="list-group-item">{{i}}</li>

{% endfor %}

{%endif%}

</ul>

</div>

<form action="/dashboard"><input type="Submit" class="btn btn-primary btn-lg" value="Go to Dashboard"/></form>

{%endblock%}

* Formhelp.html

{% macro render\_field(field, label\_visible=true) %}

<div class="form-group {% if field.errors %}has-error{% endif %} {{ kwargs.pop('class\_', '') }}">

{% if field.type != 'HiddenField' and label\_visible %}

<label for="{{ field.id }}" class="control-label">{{ field.label }}</label>

{% endif %}

{{ field(class\_='form-control', \*\*kwargs) }}

{% if field.errors %}

{% for e in field.errors %}

<p class="help-block">{{ e }}</p>

{% endfor %}

{% endif %}

</div>

{% endmacro %}

{% macro render\_checkbox\_field(field) %}

<div class="checkbox">

<label>

{{ field(type='checkbox', \*\*kwargs) }} {{ field.label }}

</label>

</div>

{% endmacro %}

* Header.html

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>Watch Anime - A anime recommender</title>

<meta name="viewport" content="width=device-width,initial-space=1">

<link href="{{ url\_for('static',filename='css/bootstrap.min.css')}}" rel="stylesheet">

<link rel="shortcut icon" href="{{ url\_for('static',filename='icon.jpg')}}">

</head>

<header style="background-color:#ced3c6;">

<div class="navbar-header">

</div>

<div class="container-fluid">

<ul class="nav navbar-nav navbar-left">

<img style="max-height: 50px; " src="{{url\_for('static', filename='re.png')}}">

</ul>

<ul class="nav navbar-nav navbar-right">

<div style="margin-right:10px; margin-left:15px; margin-top:5px; margin-bottom:5px;" class="container-fluid">

<h5>

{% if session.logged\_in %}

<a href="/"><span class="glyphicon glyphicon-off" aria-hidden="true"></span>Home</a>&nbsp;&nbsp;

<a href="/dashboard"><span class="glyphicon glyphicon-off" aria-hidden="true"></span> Dashboard </a>&nbsp;&nbsp;

<a href="/logout/"><span class="glyphicon glyphicon-log-out"></span>&nbsp;Logout</button></a>

{% else %}

<a href="/"><span class="glyphicon glyphicon-off"></span>&nbsp;Home</a>&nbsp;&nbsp;

<a href="/login/"><span class="glyphicon glyphicon-log-in"></span>&nbsp;Login</button></a>&nbsp;&nbsp;

<a href="/register/"><span class="glyphicon glyphicon-edit"></span>&nbsp;Register</button></a>

{% endif %}

</h5>

</div>

</ul>

</div>

</header>

<body style="background-image:url('{{ url\_for('static',filename='41.jpg')}}'); background-size: 100% ;">

<div class="container-fluid" style="min-height:100%;">

{% block body %}{% endblock %}

</div>

<footer class="footer">

<br>

<br>

<br>

<br>

<br>

<br>

<br>

<br>

<br>

<br>

<br>

<center><p style="color:white;">&copy; copyright 2017</p></center>

</footer>

<script type="text/javascript" src ="{{url\_for('static',filename='js/jquery-3.2.1.min.js')}}"></script>

<script type="text/javascript" src ="{{url\_for('static',filename='js/bootstrap.min.js')}}"></script>

</body>

</html>

* Index.html

{% extends "header.html" %}

{% block body %}

<div style="margin-top:1cm; opacity:0.7;">

<ul class="list-group" >

<li class="list-group-item"><span class="badge">Rank</span><b>Popular Show name</b></li>

{% for i in l %}

<li class="list-group-item"><span class="badge">{{i[1]}}</span>{{i[0]}}</li>

{% endfor %}

</ul>

</div>

{%endblock%}

* Login.html

{% extends "header.html" %}

{% block body %}

<div class="container" >

<div class="row">

<div class="col-xs-12 col-sm-8 col-md-6 col-sm-offset-2 col-md-offset-3">

<form role="form" method=post action="">

<p style="color:white; font-size: 40px">Log<text style="color:red;">in</text></p>

<hr class="colorgraph">

<div class="form-group">

<input type="text" name="username" id="username" class="form-control input-lg" placeholder="User Name" value="{{request.form.username}}" tabindex="1">

</div>

<div class="form-group">

<input type="password" name="password" id="email" class="form-control input-lg" placeholder="Password" value="{{request.form.password}}" tabindex="2">

</div>

<hr class="colorgraph">

<div class="row">

<center><div><input type="submit" value="Log In" class="btn btn-primary btn-lg" tabindex="3"></div></center>

</div>

<div class="row">

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

<br>

<center><small style="color:white;">Sign in with</small></center>

<br>

<br>

</div>

<div class="col-xs-12 col-md-6"><a href="#" class="btn btn-primary btn-block btn-lg">Facebook</a></div>

<div class="col-xs-12 col-md-6"><a href="#" class="btn btn-success btn-block btn-lg">Google</a></div>

</div>

</form>

<p>{{error}}</p>

</div>

</div>

</div>

{%endblock%}

* Register.html

{% extends "header.html" %}

{% block body %}

<div class="container" >

<div class="row">

<div class="col-xs-12 col-sm-8 col-md-6 col-sm-offset-2 col-md-offset-3">

<form role="form" method="post" action="/register/">

{% from "formhelp.html" import render\_field %}

{% from "formhelp.html" import render\_checkbox\_field %}

<p style="color:white; font-size: 40px">Registra<text style="color:red;">tion Form</text></p>

<hr class="colorgraph">

<div class="row">

<div class="col-xs-12 col-sm-6 col-md-6">

{{render\_field(form.fname)}}

</div>

<div class="col-xs-12 col-sm-6 col-md-6">

{{render\_field(form.lname)}}

</div>

</div>

{{render\_field(form.username)}}

{{render\_field(form.email)}}

<div class="row">

<div class="col-xs-12 col-sm-6 col-md-6">

{{render\_field(form.password)}}

</div>

<div class="col-xs-12 col-sm-6 col-md-6">

{{render\_field(form.confirm)}}

</div>

</div>

{{render\_checkbox\_field(form.accept\_tos)}}

<hr class="colorgraph">

<div class="row">

<div class="col-xs-12 col-md-6"><input type="submit" value="Register" class="btn btn-primary btn-block btn-lg" tabindex="7"></div>

<div class="col-xs-12 col-md-6"><a href="/login/" class="btn btn-success btn-block btn-lg">Sign In</a></div>

</div>

</form>

{% if error %}

<p class="error"><strong>Error : </strong>{{error}}</p>

{% endif %}

</div>

</div>

<!-- Modal -->

<div class="modal fade" id="t\_and\_c\_m" tabindex="-1" role="dialog" aria-labelledby="myModalLabel" aria-hidden="true">

<div class="modal-dialog modal-lg">

<div class="modal-content">

<div class="modal-header">

<button type="button" class="close" data-dismiss="modal" aria-hidden="true">×</button>

<h4 class="modal-title" id="myModalLabel">Terms & Conditions</h4>

</div>

<div class="modal-body">

<p>No Terms and Conditions Apply</p>

</div>

<div class="modal-footer">

<button type="button" class="btn btn-primary" data-dismiss="modal">I Agree</button>

</div>

</div>

</div>

</div>

</div>

{%endblock%}

* Result.html

{% extends "header.html" %}

{% block body %}

<div style="opacity:0.7; margin-top: 1cm;">

<ul class="list-group" >

<li class="list-group-item"><span class="badge">Show ID</span><b>Show name</b></li>

{%if d|length == 0%}

<li class="list-group-item">Sorry No data available</li>

{%else%}

{% for i in d %}

<li class="list-group-item"><span class="badge">{{i[1]}}</span><form action='/dashboard/receiver/' method="POST"><button name="btn" class="btn btn primary btn-small" style="background-color: blue;" type="submit" value={{i[1]}}>Add</button>&nbsp;&nbsp;{{i[0]}}</form></li>

{% endfor %}

{%endif%}

</ul>

</div>

<form action="/dashboard"><input type="Submit" class="btn btn-primary btn-lg" value="Go Back to Add More"/></form>

{%endblock%}

PYTHON CODE

* App.py

from wtforms import Form,BooleanField,TextField,PasswordField,validators

from passlib.hash import sha256\_crypt

from new import create\_model,popular

import gc

import sqlite3 as sql

from functools import wraps

from flask import Flask,render\_template,redirect,request,url\_for,session,g

app=Flask(\_\_name\_\_)

app.secret\_key="recommendation"

@app.before\_request

def before\_request():

g.db = sql.connect("recommender.db")

@app.teardown\_request

def teardown\_request(exception):

if hasattr(g, 'db'):

g.db.close()

conn=sql.connect('data.db')

conn.text\_factory=str

cur=conn.cursor()

@app.route("/")

def main():

l=popular(cur)

return render\_template('index.html',l=l)

def login\_required(f):

@wraps(f)

def wrap(\*args,\*\*kwargs):

if 'logged\_in' in session:

return f(\*args,\*\*kwargs)

else:

return redirect(url\_for('login'))

return wrap

@app.route("/logout/")

@login\_required

def logout():

session.clear()

gc.collect()

return redirect(url\_for('main'))

anime=[]

rating=[]

@app.route("/dashboard/")

def dashboard():

if session['logged\_in']==True:

name=session['username']

x=len(anime)

return render\_template('dashboard.html', name=name,x=x)

@app.route("/dashboard/result/",methods=['GET','POST'])

def result():

if session['logged\_in']==True:

if request.method=="POST":

query = "%" + request.form['show'] + "%"

if cur.execute("select name,anime\_id from anime where name like ?",[query]):

data=cur.fetchall()

else:

data=[]

return render\_template('result.html',d=data)

@app.route("/dashboard/receiver/",methods=['POST','GET'])

def receiver():

if request.method=="POST":

data=request.form['btn']

anime.append(int(data))

cur.execute("select rating from anime where anime\_id =(?)",[data])

r=cur.fetchone()

rating.append(r[0])

return redirect(url\_for("dashboard"))

@app.route("/dashboard/final/",methods=['POST','GET'])

def final():

if session['logged\_in']==True:

data=create\_model(anime,rating,cur)

anime[:]=[]

rating[:]=[]

return render\_template('final.html',d=data)

@app.errorhandler(404)

def err404(e):

return render\_template('404.html')

@app.errorhandler(500)

def err500(e):

return render\_template('500.html')

@app.route("/login/", methods=['GET','POST'])

def login():

error=""

try:

if request.method=="POST":

data=g.db.execute("SELECT \* FROM user1 WHERE username = (?)",

[request.form['username']]).fetchone()

if len(data)==0:

error="Invalid Credentials.Try Again!!"

data=data[2]

if sha256\_crypt.verify(request.form['password'],data):

session['logged\_in']=True

session['username']=request.form['username']

session['password']=data

return redirect(url\_for("dashboard"))

else:

error="Invalid credentials. Try Again!!"

gc.collect()

return render\_template('login.html',error=error)

except Exception as error:

return render\_template('login.html',error=error)

class Registrationform(Form):

fname=TextField('<strong style="color:white;">FIRST NAME</strong>',[validators.Length(min=4,max=20)])

lname=TextField('<strong style="color:white;">LAST NAME</strong>',[validators.Length(min=4,max=20)])

username=TextField('<strong style="color:white;">USERNAME</strong>',[validators.Length(min=4,max=20)])

email=TextField('<strong style="color:white;">EMAIL ADDRESS</strong>',[validators.Length(min=6,max=40)])

password=PasswordField('<strong style="color:white;">PASSWORD</strong>',[validators.DataRequired(),validators.EqualTo('confirm',message="Password must match")])

confirm=PasswordField('<strong style="color:white;">REPEAT PASSWORD</strong>')

accept\_tos=BooleanField('<small style="color:white;">By clicking Register, you agree to the <a href="#" data-toggle="modal" data-target="#t\_and\_c\_m">Terms and Conditions</a></small> ',[validators.DataRequired()])

@app.route("/register/", methods=["GET","POST"])

def register():

try:

form = Registrationform(request.form)

if request.method=="POST" and form.validate():

username = form.username.data

email = form.email.data

password = sha256\_crypt.hash((str(form.password.data)))

x = g.db.execute("SELECT \* FROM user1 WHERE username = (?)",

[username]).fetchall()

print(x)

if len(x)>0:

return render\_template('register.html',form=form)

else:

g.db.execute("INSERT INTO user1 (username,password,email) VALUES (?,?,?)",

(username,password,email))

g.db.commit()

gc.collect()

session['logged\_in']=True

session['username']=username

return redirect(url\_for('login'))

return render\_template('register.html',form=form)

except Exception as e:

return(str(e))

if \_\_name\_\_ == "\_\_main\_\_":

app.run()

* Dbcreate.py

import sqlite3

conn = sqlite3.connect('recommender.db')

print ("Opened database successfully");

conn.execute('''CREATE TABLE user1

(uid INTEGER PRIMARY KEY AUTOINCREMENT,

username TEXT(50) NOT NULL,

password VARCHAR(100) NOT NULL,

email TEXT(50) NOT NULL);''')

print ("Table created successfully");

conn.close()

* New.py

def create\_model(a,b,cur):

import graphlab as gl

actions = gl.SFrame.read\_csv('Datasets/rating.csv')

new\_user\_number = len(set((actions['user\_id'])))+1

anime = a

ratings = b

film\_count = len(anime)

new\_user\_info = gl.SFrame({'user\_id':[new\_user\_number]\*film\_count,'anime\_id':anime,

'rating':ratings})

model = gl.load\_model("mymodel")

results = model.recommend\_from\_interactions(new\_user\_info,k=10)

l = []

for i in results['anime\_id']:

rows=cur.execute("select name from anime where anime\_id = (?)",[i]).fetchone()

l.append(rows[0])

return l

def popular(cur):

import graphlab as gl

model = gl.load\_model("mymodel1")

l=[]

nn=model.recommend\_from\_interactions([500],k=10)

for i in nn:

rows=cur.execute("select name from anime where anime\_id = (?)",[i['anime\_id']]).fetchone()

l.append((rows[0],i['rank']))

return l

* Recommender.py

import graphlab as gl

actions = gl.SFrame.read\_csv('Datasets/rating.csv')

training\_data, validation\_data = gl.recommender.util.random\_split\_by\_user(actions, 'user\_id', 'anime\_id')

model = gl.item\_similarity\_recommender.create(training\_data, user\_id='user\_id', item\_id='anime\_id', target='rating')

model.save('mymodel')

model1=gl.popularity\_recommender.create(training\_data, user\_id='user\_id', item\_id='anime\_id', target='rating')

model1.save('mymodel1')

actions.show()