CSE 682 Software Engineering - ReadMe file

This document describes how to set up and run the online retail store application in your environment

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Pre-requisites:

For the application to run in your system you must have below softwares installed

1. **PostgreSQL** database version 16 or higher, along with **pgAdmin4** database client
2. **streamlit** version 1.37.1 or higher
3. **python** version 3.11.10 or higher
4. **psycopg2** version 2.9.9 or higher
5. **Anaconda** library (optional)

Detailed installation instruction for these packages is given in the **Prerequisites_Install.pdf** file for reference.

Setup Steps :

File setup:

Create a project folder in your local system and place the below files in it.
1. Data files in the **data folder** that contains 20 jpg images of products that show up as a part of the shopping experience
2. **scripts folder** which has the below files:
    1. **682_database_scripts.txt** —> This has the database set up related scripts which will be explained later
    2. **Product_Insert_script.py** —> This has the database insert script that reads the images from the data folder and populates the images in the product_info table of the database
    3. Files **app.py**, **login.py**, **customer_screen.py**, **retailer_screen.py**, **manager_screen.py** and **administrator_screen.py** together constitute the complete application and they are the individual packages of the application.

Database setup:

Once you have installed the database server and client and also created the CSE682 database using the steps given in Prerequisites_Install.pdf file, follow below steps:

1. Open the pgAdmin4 client and connect to the database. Open the query editor window.
2. Open the **682_database_scripts.txt** file and execute all the SQL commands given *__until line 140__*. These commands create the database objects, including users and role based access controls

3. Open the **Product_Insert_script.py** file and update the data image paths for the 20 data files. This path needs to be updated between lines 29 and 48.
4. After updating the paths in Product_Insert_script.py, open the command line and run this python file using "**python Product_Insert_script.py**".
5. To verify this loaded the data fine, go to the pgAdmin4 client query editor and type "Select * from online_retail.product_info;" . This should show you the 20 items are loaded into the product_info table. The images will not be visible in the editor as they are in binary format.
6. Now copy the final SQL query from the **682_database_scripts.txt** file which is between line 152 to 154 and execute the SQL in the pgAdmin4 client query editor.

With this, the application setup is complete. To run the application, just go to the command line editor and navigate to the path where you have placed the application files specified in point 3 under File setup above and type ***streamlit run app.py***

This should launch a browser tab with the login screen and you can enter by using any of the below 4 user ids. The default passwords for each of these is ***postgres***

customer_1
retailer_1
manager_1
administrator_1

The demo of this tool has been presented and video recorded and can be referred if needed.