BBM473: Database Laboratory Final Project
Phase-4: Final

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1- Details of Desktop Database Application

✅ **Operating System:** Windows
✅ **Database System:** PostgreSQL Server (Version: 14)
✅ **Programming Language:** Java
✅ **Developed With:** Netbeans Java IDE (Version: 13)

✅ **Database Password:** admin123.

2- Conditions That Need To Satisfied

1- User Login Screen: When you execute application, first of all you should connect to database. In order to provide ease to use, i have already added default values to textboxes. After that, if database connects successfully or fails you'll see different message boxes. If connection is successful, than login screen shows up.

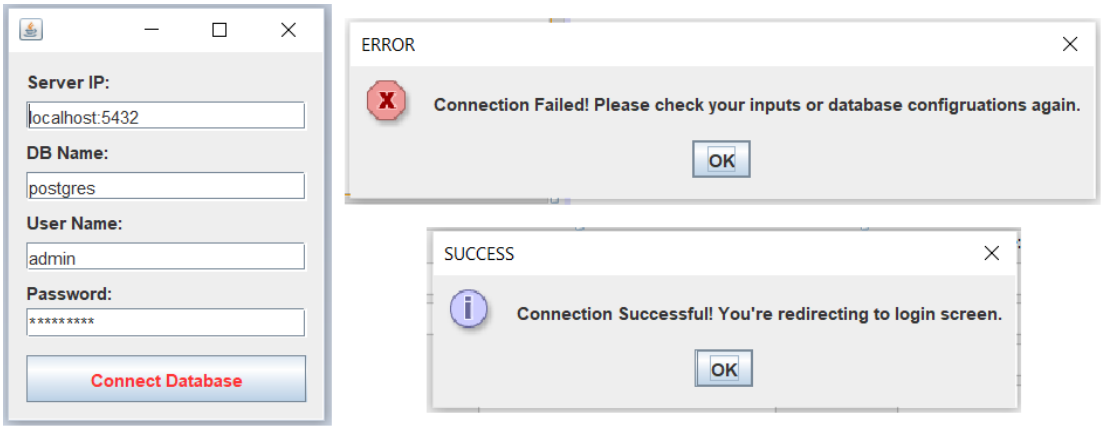


Image-1: Database Connection Screen

A- At the login screen, users should fill textboxes about user name, user_id and passwords.
B- If users forgot their user_id's, then they can learn their user_id's with using tool at the most bottom of screen.
C- Also user can be register with filling a form. User can be registered as standart customer, premium customer or platin customer.
D- Moreover, informative message boxes shows when you click login button. (they are similar to message boxes, which are at image at top)

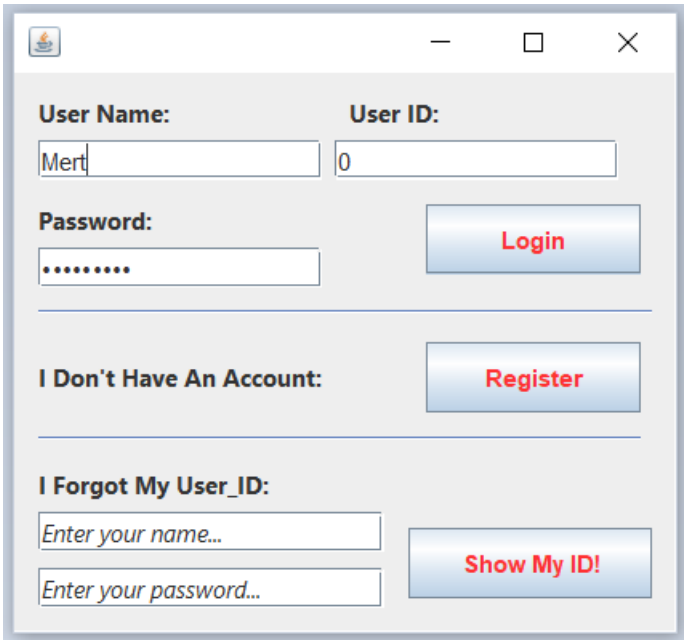


Image-2: User Login Screen

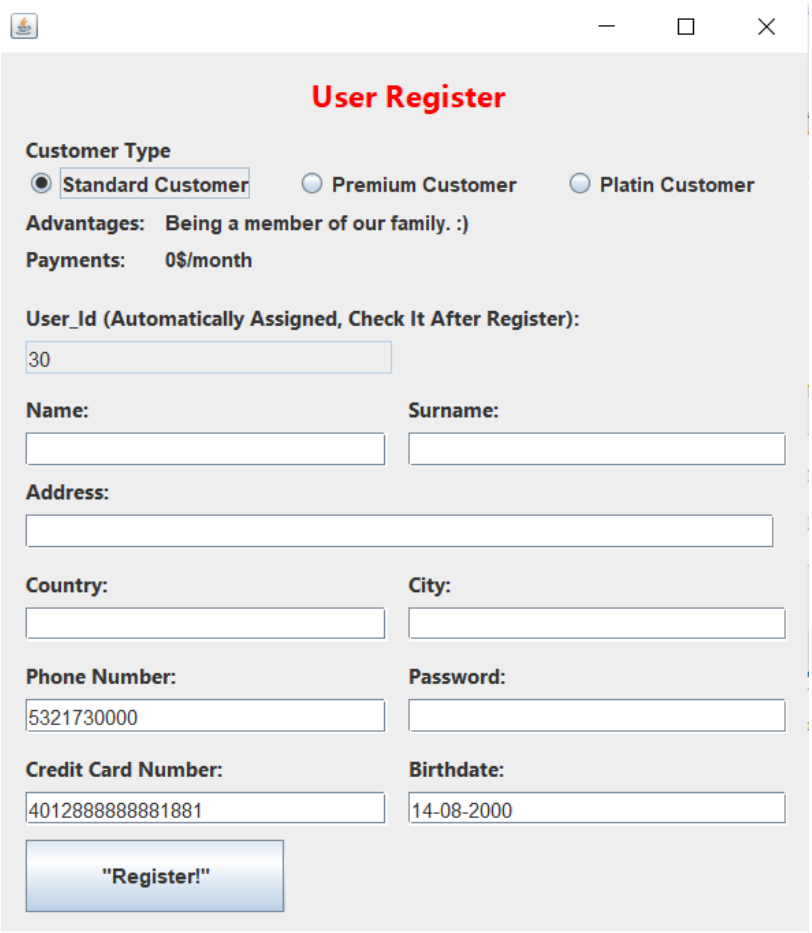


Image-3: User (Only Customer) Register Screen

-> User_ID’s are automatically assigned
-> After registering, not only user table but also tables of subclasses will be added automatically.

2- Saving Password As Encrpyted: System never stores or uses decrpypted passwords. If system will use input passwords, first of all system converts them to encrypted ones and compare it with values at databases.

Data Output | Explain | Messages | Notifications

	user_id [PK] inte	user_name character varying	surname character varyi	address character varying	country character varying (20)	city character varying (	phone character varyir	user_password character (50)
1	0	Mert	Tazeoğlu	Metropark Plus	Turkey	Ankara	5320000000	kp1J/7HDxXmwrjDhv2Eacw==
2	1	Arzu	Tazeoğlu	Metropark Plus	Turkey	Ankara	[...]	hoBhRVPjbpcukYhsgvElag==
3	3	Hüseyin	Tazeoğlu			Ankara		4AvFBijwV1iyWdhVPBralw==
4	4	Engin	Demir		Turkey	Ankara		1y9T3JhMeseXskjyMoQZaw==
5	5	Fuat	Akal		Turkey	Ankara		oHugqmX0DWAPjgAnuiuXkw==
6	7	Ahmet	Alkılınç		Turkey	Ankara		bQ0hfnakvTsFLyd9KoPd/g==
7	6	Ali Baran	Taşdemir		Turkey	Ankara		wFhUndQZUBQDFMOhLyn0ZA==
8	8	Usain	Bolt		Jamaika	Kingston		ZQbykwqmB4IHrlUc8twyrA==
9	9	Michael	Jackson		USA	Los Angeles		FdilypzL9JhGX6RP2HA9zQ==
10	10	Vladimir	Putin	Kremlin	Russia	Moscow		SWVvBqWYiw5JKZamBAs4SQ==
11	11	Donald	Trump	White House	USA	Washington D.C.		p8ZtpyHOJxYAxYkAsS2i7Q==
12	12	Jack	Persistent	X. Avenue	USA	Washington D.C.		fwe6emgEjKOc2NxvLBAwjw==

Image-4: User Table With Encrypted Passwords

3- Authorization Module: When you execute application, system checks whether you are an admin or a customer or a supplier. Then system automatically redirects you to correct Java form.

At login screen in order to:
Login As Admin: (name: Mert) (user_id: 0) (password: admin123.)
Login As Supplier: (name: Alihan) (user_id: 2) (password: kargaburun)
Login As Customer: (name: Smith) (user_id: 13) (password: nopassson!)

Note: You can try another users & passwords too, they’ll work.

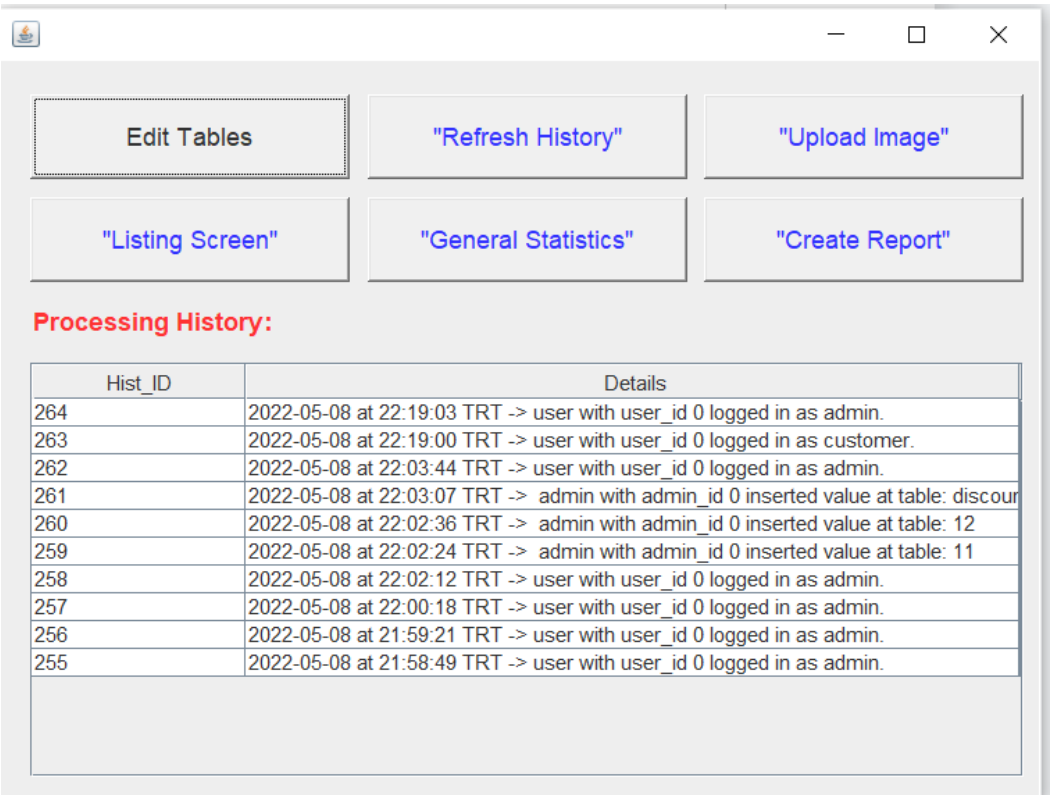


Image-5: Admin Interface

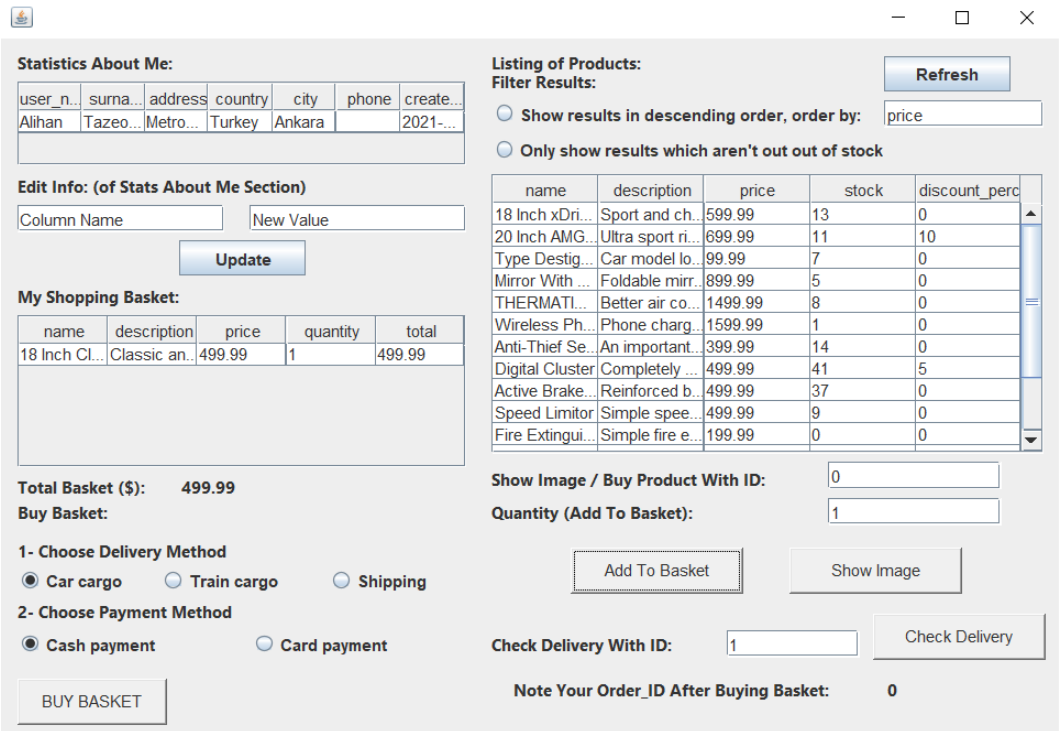


Image-6: User Interface

(Note: This form includes 891 lines of code also it has quite detailed exception handling. For example if you buy (order) items in your basket, then basket will be cleared, also adding to tables of payment, subclass of payment, delivery, delivery status, order will be done.)

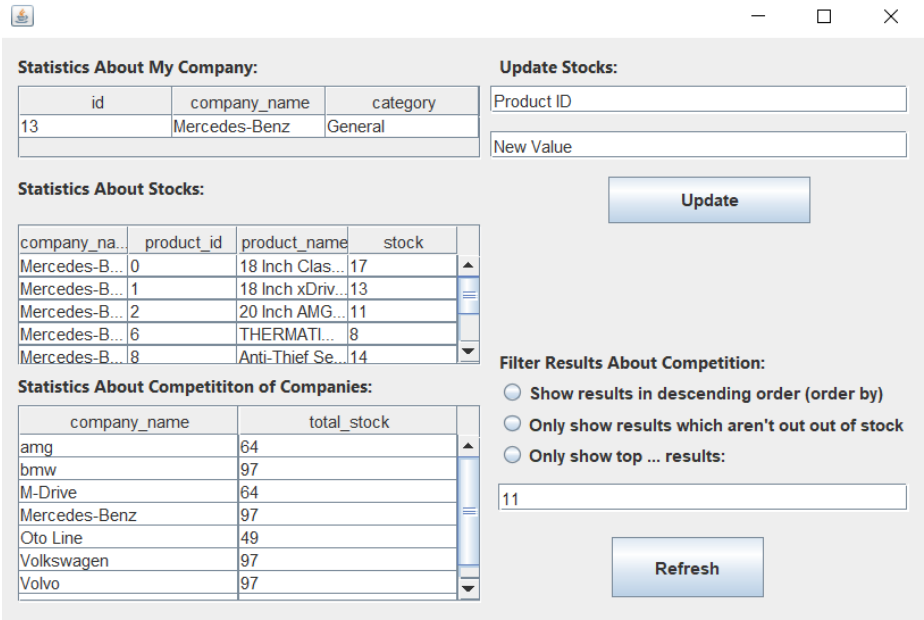


Image-7: Supplier Interface

4- Data Entry and Update Screens For Each Table In Database:

-> **Suppliers:** Can select, insert, update and delete 3-7 tables.
-> **Customers:** Can select, insert, update and delete 7-12 tables.
-> **Admins:** Can select, insert, update and delete ALL OF tables. Admins has got special interface for that (in order to access, click edit tables at admin interface

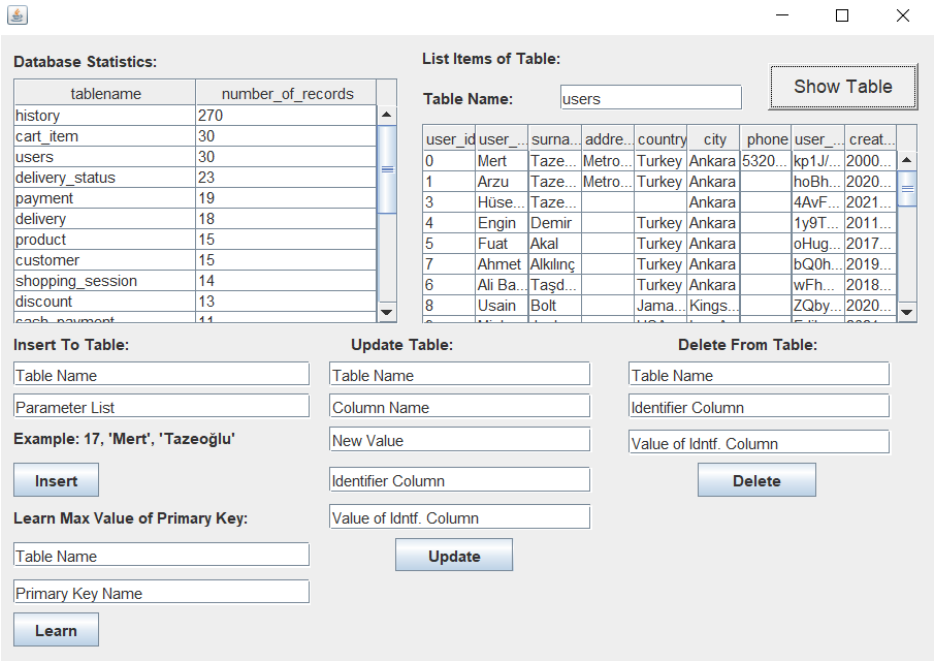


Image-8: Admins' Table Editing Interface
(Manipulating All Tables Only With One Interface)

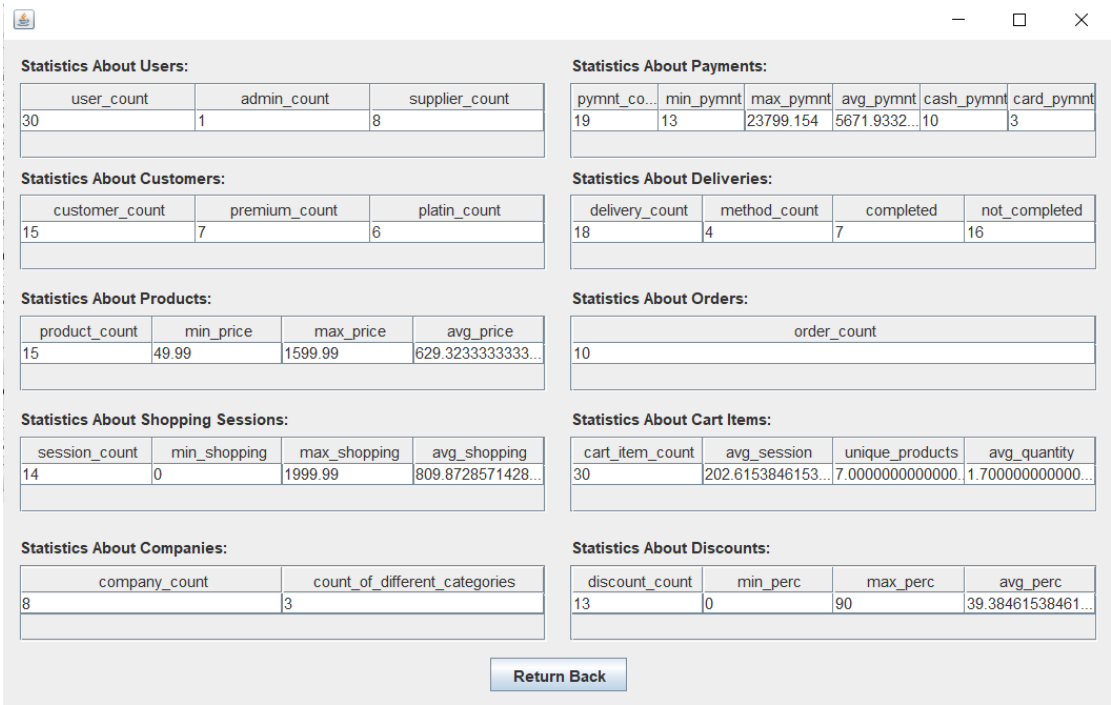
5- Photo Entry Screen: Unfortunately, this feature isn't supported. :(

6- At Least 3 Listing Pages:
1- At admin interface, processing history logs are listed. :) (image-5)
2- Users can list products and their shopping baskets at their interface. (image-6)
3- Admins can list all of tables with their "editing interface". (image-8)

7- At Least 3 Reporting Screens: Unfortunately, this feature isn't supported. :(

8- At Lease 3 Filtered Page: Unfortunately, two of them are included.
1- At user interface, users can filter products. (Order them in ascending & descending order, not showing products which are out of stock etc.) (image-6)
2- At supplier interface, there is a listing screen about comptetition between companies. At there, suppliers can filter results. (Order them in ascending & descending order, limiting result number etc.) (image-7)

9- Statistic Screens (At Least 10 Queries): When you execute application,
1- At admin interface you can see statistics about tables (see image 8)
2- At supplier interface, at the left side there are 3 statistical tables from (see image 7)
3- At user interface, at the left side there are 2 statistical tables from (see image 6)
4- At admin interface, if you click general statistics there is a special interface about benefical statistics (see image 9)



Statistics About Users:

user_count	admin_count	supplier_count
30	1	8

Statistics About Payments:

pymnt_co...	min_pymnt	max_pymnt	avg_pymnt	cash_pymnt	card_pymnt
19	13	23799.154	5671.9332...	10	3

Statistics About Customers:

customer_count	premium_count	platin_count
15	7	6

Statistics About Deliveries:

delivery_count	method_count	completed	not_completed
18	4	7	16

Statistics About Products:

product_count	min_price	max_price	avg_price
15	49.99	1599.99	629.3233333333...

Statistics About Orders:

order_count
10

Statistics About Shopping Sessions:

session_count	min_shopping	max_shopping	avg_shopping
14	0	1999.99	809.8728571428...

Statistics About Cart Items:

cart_item_count	avg_session	unique_products	avg_quantity
30	202.6153846153...	7.0000000000000.	1.700000000000...

Statistics About Companies:

company_count	count_of_different_categories
8	3

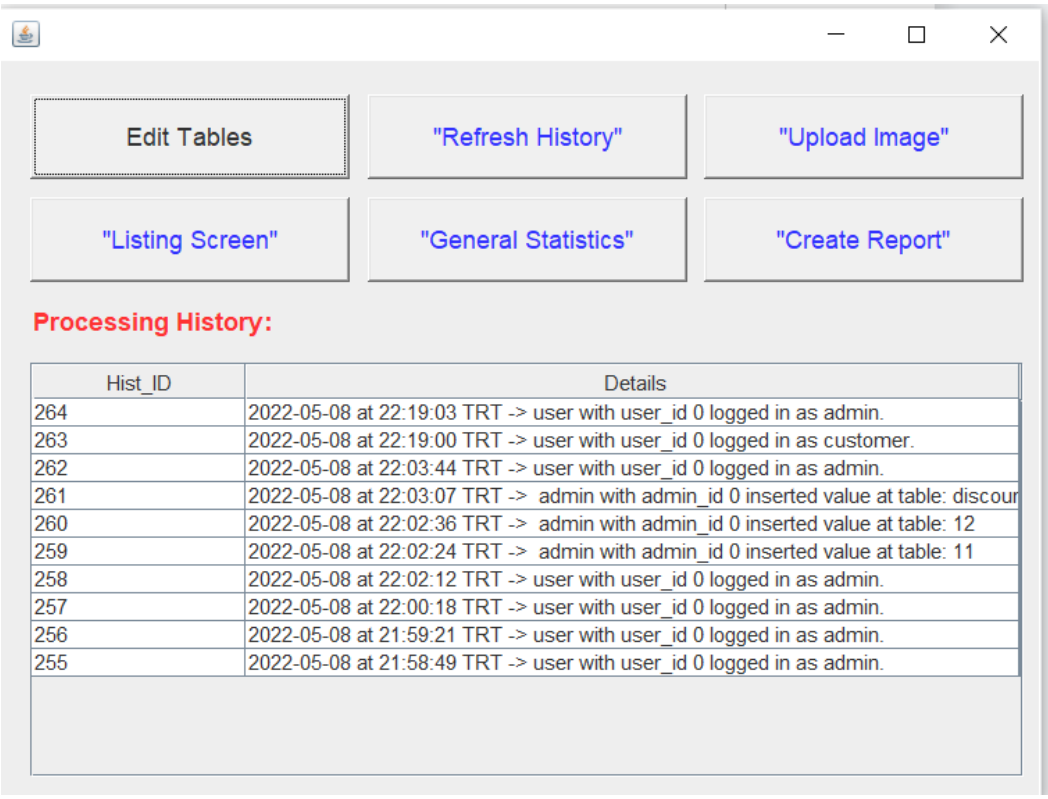
Statistics About Discounts:

discount_count	min_perc	max_perc	avg_perc
13	0	90	39.38461538461...

Return Back

Image-8: Admins' Special Statistics Interface

10- Processing History: At admin interface, there is a table about that.



Edit Tables | "Refresh History" | "Upload Image"

"Listing Screen" | "General Statistics" | "Create Report"

Processing History:

Hist_ID	Details
264	2022-05-08 at 22:19:03 TRT -> user with user_id 0 logged in as admin.
263	2022-05-08 at 22:19:00 TRT -> user with user_id 0 logged in as customer.
262	2022-05-08 at 22:03:44 TRT -> user with user_id 0 logged in as admin.
261	2022-05-08 at 22:03:07 TRT -> admin with admin_id 0 inserted value at table: discour
260	2022-05-08 at 22:02:36 TRT -> admin with admin_id 0 inserted value at table: 12
259	2022-05-08 at 22:02:24 TRT -> admin with admin_id 0 inserted value at table: 11
258	2022-05-08 at 22:02:12 TRT -> user with user_id 0 logged in as admin.
257	2022-05-08 at 22:00:18 TRT -> user with user_id 0 logged in as admin.
256	2022-05-08 at 21:59:21 TRT -> user with user_id 0 logged in as admin.
255	2022-05-08 at 21:58:49 TRT -> user with user_id 0 logged in as admin.

Image: Admin Interface

- As you can see, last 10 records show up as you wished.
- Times of actions are recorded.
- Different types of users, user_ids and different operation types (insert, login, delete etc.) are recorded.
- You can refresh it “refresh history” button.