



Arab Academy for Science Technology and Maritime Transport

**College Of Computing and Information Technology
Department of Computer Science**

Al-Rayah (Hyper-Market)

Presented by: Mark Mechail, Mostafa Tarek, Ahmed Mohamed, Mohamed Abdallah

Presented to: Eng. Tamer Abdellatif

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Table 1. Table of Abbreviations

| | |
|-----|------------------------|
| ID | Identification number |
| BD | Birth date |
| SSN | Social security number |

Chapter 1

Introduction

Brief Explanation:

Our project is aimed to imitate the Rayah Hyper-Market database including all its aspects, entities and attributes. During the first phase of our project, we gathered data from Rayah's employees and management team in-order to better our understanding of their systems and databases, during which the following information was acquired.



Figure 1. Al-Rayah 1

Why the need for a Database?

A hyper-market is one of the most essential services ever since the dawn of man, markets have always been a factor in daily life. Therefore, to facilitate how markets (or in our case, a hyper-market), databases are needed for multiple reasons, to name a few, they help ease the employees work and allow them to gather data about products and customers more easily which in return adds to customer satisfaction. It also helps by providing more easy-to-access data to the management about their employees which ensures a safer and more reliable environment in the workplace. Overall databases help improve the following aspects: Safety & Security, Data collection, Data accessing and Customer Satisfaction. That's why databases are essential and that's the main purpose of our project.

The data we collected:

During our research we figured out that the way they manage their database is by connecting all branches to a single server, that way all promotions and discounts are connected between all branches across the country, we've also found out that their database consists of four main entities (tables), and they are:

- Employees
- Departments
- Customers
- Products
- Delivery

Chapter 2

Analyses:

Each of which carry the data following the topic that titles them. Each of them carry multiple attributes as follows:

Employees:

- EID
- EName
- EEmail
- EAddress
- ESSN
- EDepartment
- EMarital_Status
- EDegree
- EBD
- EMilitary_Status
- EWorkPermit
- ESalary
- EGender
- EPhoneNumber
- EPosition

Departments:

- DNumber
- DName

Customers:

- CID
- CPhoneNumber
- CName
- CAddress
- CEmail

Products:

- PCode
- PName
- PExpiryDate
- PDepartment
- PPrice
- PStock



Figure 2. Al-Rayah 2

- POrigin

Invoices:

- INo
- ITotal
- Icustomer
- IDate
- ITime

Delivery:

- DeNo
- DeTime
- DeDate
- DeInvoice
- DeEmployee_Id
- DeAddress
- DeContact
- DeCustomer_Name

Chapter 3

Design:

1. manually ERD:

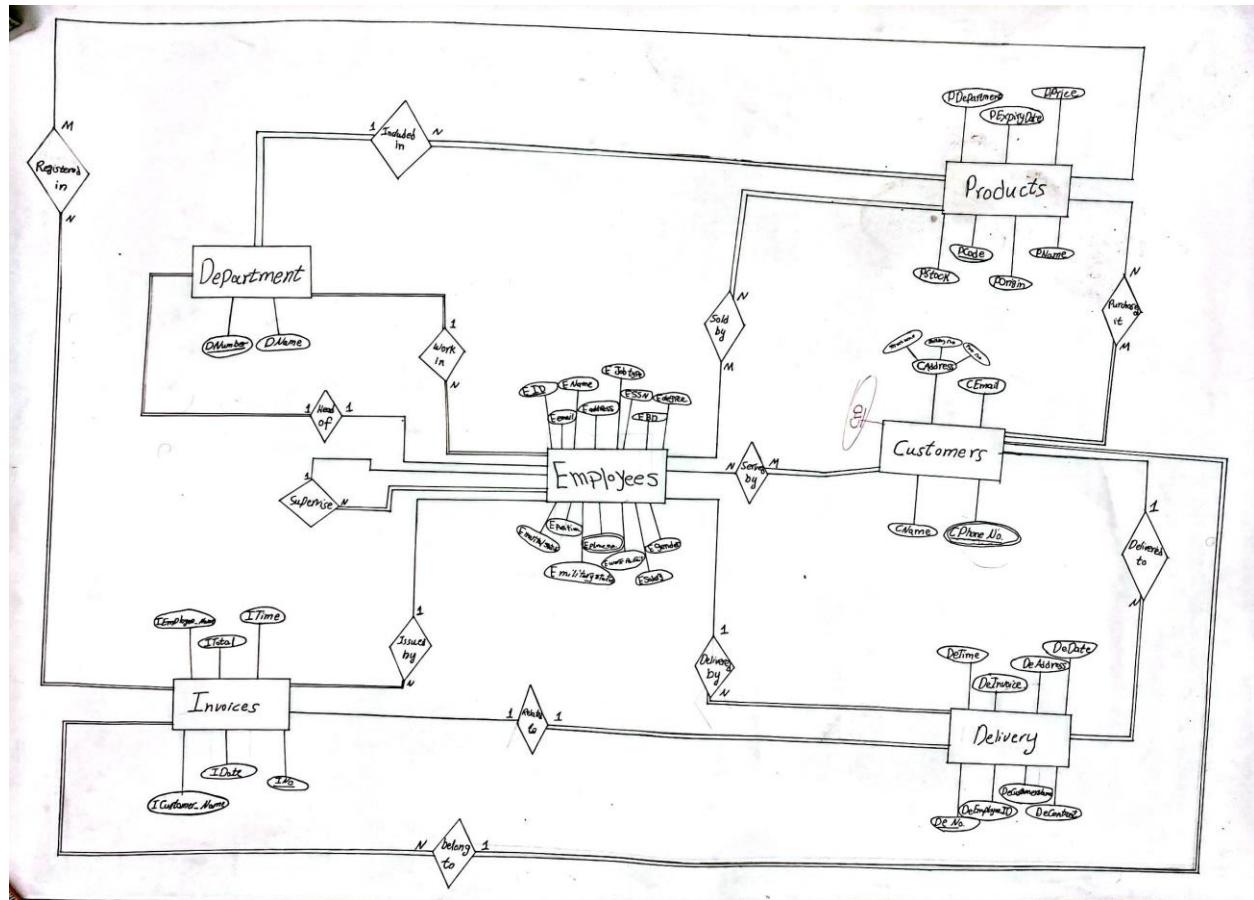


Figure 3 Al-Rayah 3 ERD

2. Computerized ERD

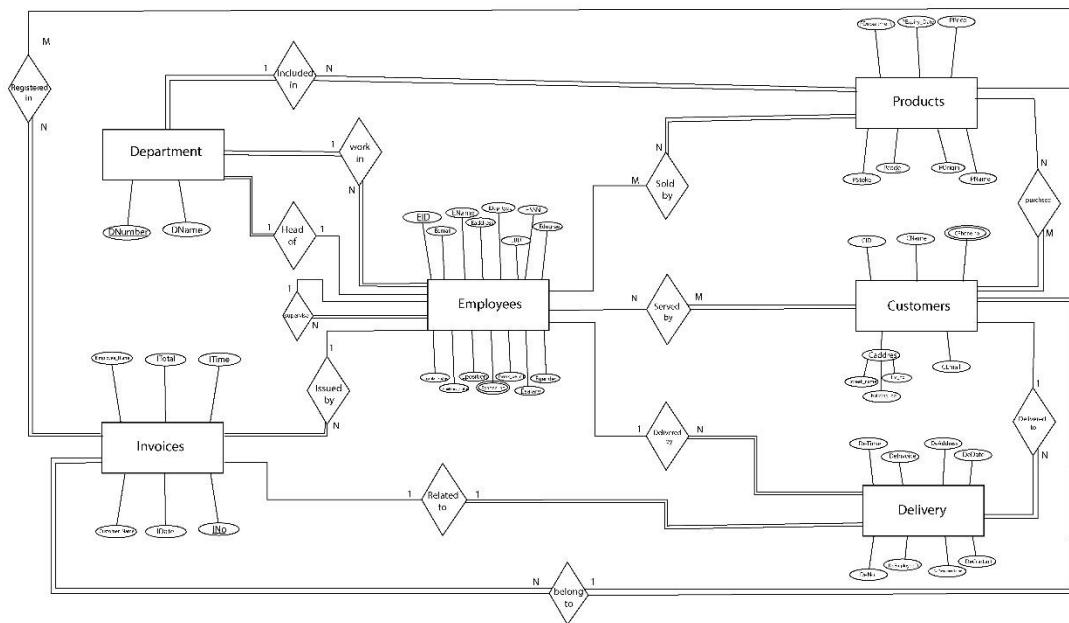


Figure 4 Al-Rayah 4 ERD2

3. manually Mapping

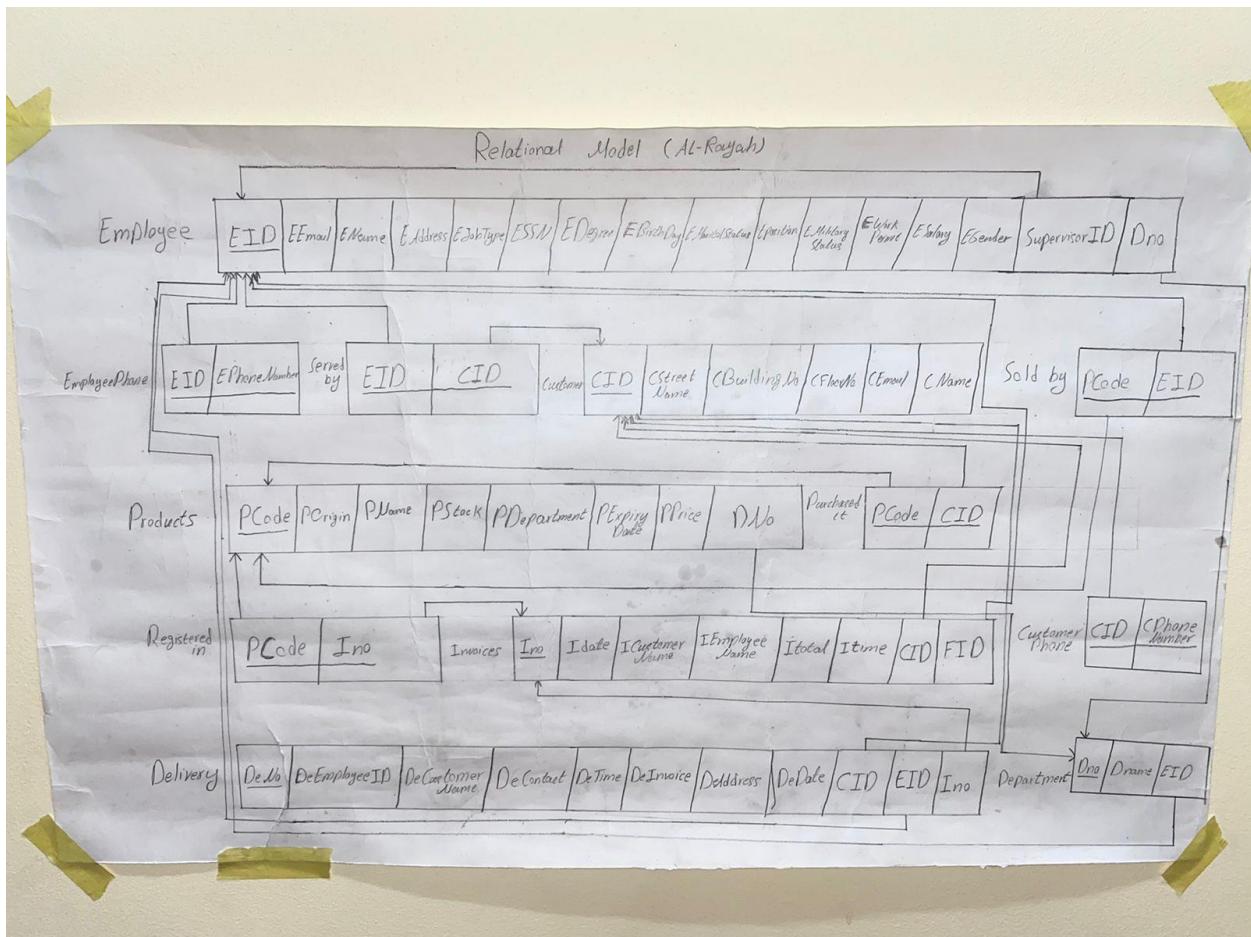


Figure 5 Al-Rayah 5 Mapping 1

4. Computerized mapping

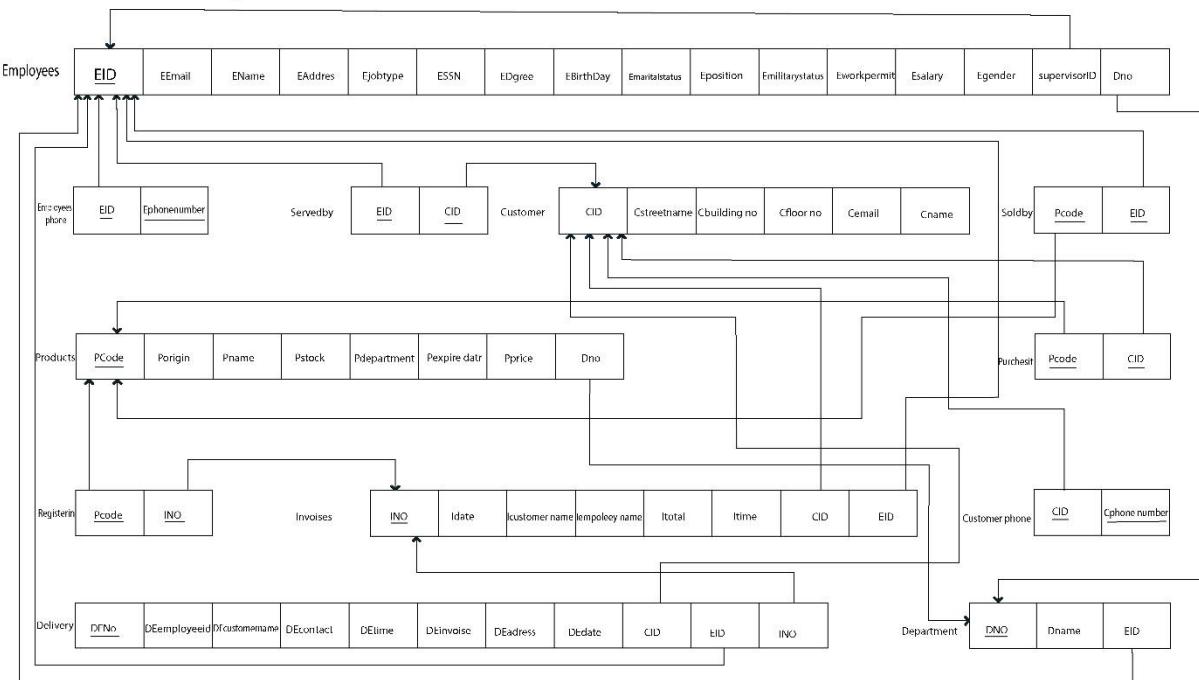


Figure 6 Al-Rayah 6 Mapping 2

Chapter 4

Implementation:

1-Insertion , selection and Gui for data

The screenshot shows a browser window for SQL Commands at 127.0.0.1:8080/apex/?p=4500:1003:3262603281327476:NO::. The URL bar shows the address. The page title is ORACLE Database Express Edition. The navigation bar includes Home, Logout, and Help. The main content area shows a SQL command window with the following code:

```
SELECT * FROM EMPLOYEES
```

Below the command window is a results grid showing 10 rows of data from the EMPLOYEES table. The columns are: EID, EMAIL, EADDRESS, EJOBTYPE, ESSN, EDEGREE, EBIRTHDAY, EMARITALSTATUS, EPOSITION, EWORKPERMIT, ESALARY, EGENDER, SUPERVISORID, and ENAME. The data includes various employee details like name, email, job type, and salary. At the bottom of the results grid, it says "10 rows returned in 0.00 seconds".

At the very bottom of the screen, there is a taskbar with several icons and system status information.

Al-Rayah 7- insertion

The screenshot shows the Oracle Database Express Edition interface. A SQL command is entered in the SQL Commands window:

```
SELECT * FROM EMPLOYEEPHONE
```

The results are displayed in a table:

| EID | EPHONENUMBER1 |
|-------|---------------|
| 20100 | 01200000000 |
| 20101 | 01200000001 |
| 20102 | 01200000002 |
| 20103 | 01200000003 |
| 20104 | 01200000004 |
| 20105 | 01200000005 |
| 20106 | 01200000006 |
| 20107 | 01200000007 |
| 20108 | 01200000008 |
| 20109 | 01200000009 |

10 rows returned in 0.00 seconds

CSV Export

Application Express 2.1.0.0.39
Copyright © 1999, 2006, Oracle. All rights reserved.

Al-Rayah 8-selection

The screenshot shows the Oracle Database Express Edition interface. A SQL command is entered in the SQL Commands window:

```
SELECT * FROM CUSTOMER
```

The results are displayed in a table:

| CID | CSTREETNAME | CBUILDINGNO | CFLOORNO | CEMAIL | CNAME |
|-------|--------------|-------------|----------|--------------------|---------|
| 10000 | nasr | 2 | 1 | myemail@yahoo.com | Kareem |
| 10009 | abd elmenaen | 4 | 4 | myemail9@yahoo.com | yousef |
| 10008 | ahmed kamal | 8 | 3 | myemail8@yahoo.com | osman |
| 10007 | elakkad | 7 | 3 | myemail7@yahoo.com | osama |
| 10006 | mohamed ali | 3 | 1 | myemail6@yahoo.com | khalid |
| 10005 | abd elaziz | 6 | 2 | myemail5@yahoo.com | marwan |
| 10004 | essam roushy | 4 | 6 | myemail4@yahoo.com | mostafa |
| 10003 | elmtar | 7 | 2 | myemail3@yahoo.com | mohamed |
| 10002 | elbarka | 5 | 4 | myemail2@yahoo.com | mark |
| 10001 | elmqaber | 4 | 8 | myemail1@yahoo.com | Ahmed |

10 rows returned in 0.00 seconds

CSV Export

Application Express 2.1.0.0.39
Copyright © 1999, 2006, Oracle. All rights reserved.

Al-Rayah 9-selection

The screenshot shows a Windows desktop environment with a browser window open to the Oracle Database Express Edition SQL Commands page. The URL is 127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476::NO::.

The SQL command entered is:

```
SELECT * FROM SERVEDBY
```

The results table has columns EID2 and CID1, displaying 10 rows of data:

| EID2 | CID1 |
|-------|-------|
| 20101 | 10000 |
| 20101 | 10005 |
| 20102 | 10002 |
| 20103 | 10003 |
| 20104 | 10004 |
| 20105 | 10001 |
| 20106 | 10006 |
| 20107 | 10007 |
| 20108 | 10008 |
| 20109 | 10009 |

10 rows returned in 0.02 seconds. CSV Export button available.

System status bar at the bottom shows Application Express 2.1.0.0.39, Copyright © 1999, 2006, Oracle. All rights reserved. Language: en-us. Date: 5/31/2022. Time: 10:33 AM.

Al-Rayah 10-selection

The screenshot shows a Windows desktop environment with a browser window open to the Oracle Database Express Edition SQL Commands page. The URL is 127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476::NO::.

The SQL command entered is:

```
SELECT * FROM DEPARTMENT
```

The results table has columns DNO, DNAME, and EID6, displaying 9 rows of data:

| DNO | DNAME | EID6 |
|-----|----------------------|-------|
| 0 | management | 20100 |
| 1 | Meat Supply | 20101 |
| 2 | Cashier | 20102 |
| 3 | Delivery | 20103 |
| 4 | Dairy Supply | 20104 |
| 5 | Grocery Supply | 20105 |
| 6 | Customer Relation | 20106 |
| 7 | Cleaning-Tool Supply | 20107 |
| 8 | Cleaning Crew | 20108 |
| 9 | Marketing | 20109 |

10 rows returned in 0.00 seconds. CSV Export button available.

System status bar at the bottom shows Application Express 2.1.0.0.39, Copyright © 1999, 2006, Oracle. All rights reserved. Language: en-us. Date: 5/31/2022. Time: 10:34 AM.

Al-Rayah 11-selection

The screenshot shows a Windows desktop environment with a browser window open to the Oracle Database Express Edition SQL Commands page. The URL in the address bar is 127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476::NO::.

The browser toolbar includes links to Suggested Sites, Home, Logout, Help, and various social media and search engines.

The Oracle Database Express Edition interface shows the following details:

- User: AAST
- Home > SQL > SQL Commands
- Autocommit: checked
- Display: 100000
- SQL Command: SELECT * FROM DEPARTMENT
- Results tab is selected, showing the following data:

| DNO | DNAME | EDS |
|-----|----------------------|-------|
| 0 | management | 20100 |
| 1 | Meat Supply | 20101 |
| 2 | Cashier | 20102 |
| 3 | Delivery | 20103 |
| 4 | Dairy Supply | 20104 |
| 5 | Grocery Supply | 20105 |
| 6 | Customer Relation | 20106 |
| 7 | Cleaning Tool Supply | 20107 |
| 8 | Cleaning Crew | 20108 |
| 9 | Marketing | 20109 |

- 10 rows returned in 0.00 seconds
- CSV Export link
- Language: en-us
- Application Express 2.1.0.0.39
Copyright © 1999, 2006, Oracle. All rights reserved.
- System status: ENG, 10:34 AM, 5/31/2022

Al-Rayah 12-selection

The screenshot shows a web-based Oracle Database Express Edition interface. The URL in the address bar is 127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476::NO::.

The page title is "SQL Commands". The top navigation bar includes links for Home, Logout, and Help. Below the title, it says "User AAST".

The main content area shows a SQL command: "SELECT * FROM SOLDBY". There are checkboxes for "Autocommit" and "Display" set to "100000". Buttons for "Save" and "Run" are visible.

Below the command, there is a results table:

| PCODE1 | EIDS |
|--------|-------|
| 1 | 20104 |
| 2 | 20104 |
| 3 | 20104 |
| 4 | 20104 |
| 5 | 20105 |
| 6 | 20105 |
| 7 | 20105 |
| 8 | 20105 |
| 9 | 20105 |
| 10 | 20105 |

Text at the bottom of the results area: "10 rows returned in 0.00 seconds" and "CSV Export".

At the bottom right, it says "Application Express 2.1.0.0.39 Copyright © 1999, 2006, Oracle. All rights reserved." and shows the date "5/31/2022".

Al-Rayah 13-selection

The screenshot shows a browser window for Oracle Database Express Edition. The URL is 127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476::NO::.

The SQL command entered is:

```
SELECT * FROM PURCHASES
```

The results table has columns CODE2 and CID2. The data is:

| CODE2 | CID2 |
|-------|-------|
| 1 | 10002 |
| 2 | 10003 |
| 3 | 10004 |
| 4 | 10001 |
| 5 | 10005 |
| 6 | 10006 |
| 7 | 10007 |
| 8 | 10008 |
| 9 | 10009 |
| 10 | 10000 |

10 rows returned in 0.00 seconds. CSV Export button is available.

Application Express 2.1.0.0.39
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Al-Rayah 14-selection

The screenshot shows a browser window for Oracle Database Express Edition. The URL is 127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476::NO::.

The SQL command entered is:

```
SELECT * FROM INVOICES
```

The results table has columns INO, IDATE, ICUSTOMERNAME, IEMPLOYEENAME, ITOTAL, ITIME, CID3, and EID4. The data is:

| INO | IDATE | ICUSTOMERNAME | IEMPLOYEENAME | ITOTAL | ITIME | CID3 | EID4 |
|-----|-----------|---------------|---------------|--------|-------|-------|-------|
| 0 | 01-JAN-22 | Kareem | Mostafa | 300 | 20:30 | 10000 | 20104 |
| 1 | 02-JAN-22 | yousef | Mostafa | 300 | 20:30 | 10009 | 20104 |
| 3 | 04-JAN-22 | osama | Mostafa | 300 | 20:30 | 10007 | 20104 |
| 2 | 03-JAN-22 | osman | Mostafa | 300 | 20:30 | 10008 | 20104 |
| 4 | 05-JAN-22 | ahmed | Mostafa | 300 | 20:30 | 10001 | 20104 |
| 5 | 01-JAN-22 | mohamed | jaklen | 300 | 20:30 | 10003 | 20104 |
| 6 | 02-JAN-22 | mark | jaklen | 300 | 20:30 | 10002 | 20105 |
| 7 | 03-JAN-22 | mostafa | jaklen | 300 | 20:30 | 10004 | 20105 |
| 8 | 04-JAN-22 | marwan | jaklen | 300 | 20:30 | 10005 | 20105 |
| 9 | 05-JAN-22 | khalid | jaklen | 300 | 20:30 | 10006 | 20105 |

10 rows returned in 0.02 seconds. CSV Export button is available.

Application Express 2.1.0.0.39
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Al-Rayah 15-selection

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476:NO::

Suggested Sites AASTMT Student P... RePut - Python Onl... T Shirt Vector Vecto... YouTube to Mp3 C... Wallpaperflare - Be... Software Categorie... Gmail YouTube Maps Translate News

ORACLE Database Express Edition

User AAST

Home > SQL > SQL Commands

Autocommit Save Run

SELECT * FROM REGISTEREDIN

Results Explain Describe Saved SQL History

| PCODE3 | INO1 |
|--------|------|
| 1 | 0 |
| 2 | 1 |
| 3 | 2 |
| 4 | 3 |
| 5 | 4 |
| 6 | 5 |
| 7 | 6 |
| 8 | 7 |
| 9 | 8 |
| 10 | 9 |

10 rows returned in 0.00 seconds CSV Export

Language en-us Application Express 2.1.0.0.39 Copyright © 1999, 2006, Oracle. All rights reserved.

ENG 10:35 AM 5/31/2022

Al-Rayah 16-selection

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476:NO::

Suggested Sites AASTMT Student P... RePut - Python Onl... T Shirt Vector Vecto... YouTube to Mp3 C... Wallpaperflare - Be... Software Categorie... Gmail YouTube Maps Translate News

ORACLE Database Express Edition

User AAST

Home > SQL > SQL Commands

Autocommit Save Run

SELECT * FROM CUSTOMERPHONE

Results Explain Describe Saved SQL History

| CID4 | CPHONENUMBER |
|-------|--------------|
| 10000 | 1100000000 |
| 10001 | 1100000001 |
| 10002 | 1100000002 |
| 10003 | 1100000003 |
| 10004 | 1100000004 |
| 10005 | 1100000005 |
| 10006 | 1100000006 |
| 10007 | 1100000007 |
| 10008 | 1100000008 |
| 10009 | 1100000009 |

10 rows returned in 0.00 seconds CSV Export

Language en-us Application Express 2.1.0.0.39 Copyright © 1999, 2006, Oracle. All rights reserved.

ENG 10:35 AM 5/31/2022

The screenshot shows the Oracle Database Express Edition SQL Commands interface. The URL is 127.0.0.1:8080/apex/?p=4500:1003:3262603281327476:NO... The page title is SQL Commands. The SQL command entered is:

```
SELECT ENAME ,  ESALARY FROM EMPLOYEES
```

The results are displayed in a table:

| ENAME | ESALARY |
|---------|---------|
| Mark | 5000 |
| Ahmed | 3000 |
| Mohamed | 3000 |
| Mona | 4000 |
| Mostafa | 3000 |
| jakken | 4000 |
| Marwan | 5000 |
| Shahab | 4000 |
| Yossif | 3500 |
| Ahmed | 5000 |

10 rows returned in 0.00 seconds [CSV Export](#)

Language: en-us Application Express 2.1.0.0.39 Copyright © 1999, 2006, Oracle. All rights reserved. 10:37 AM 5/31/2022

Al-Rayah 17-selection

The screenshot shows a web-based Oracle Database Express Edition interface. The URL in the address bar is 127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476::NO::.

The page title is "SQL Commands". The main content area contains a SQL query:

```
SELECT ENAME ,  ESALARY FROM EMPLOYEES
```

Below the query, the results are displayed in a table:

| ENAME | ESALARY |
|----------|---------|
| Mark | 5000 |
| Ahmed | 3000 |
| Mohammed | 3000 |
| Mona | 4000 |
| Mostafa | 3000 |
| jaklen | 4000 |
| Marwan | 5000 |
| Shahab | 4000 |
| Yosif | 3500 |
| Ahmed | 5000 |

Text at the bottom left: "10 rows returned in 0.00 seconds" and "CSV Export". Text at the bottom right: "Application Express 2.1.0.0.39", "Copyright © 1999, 2006, Oracle. All rights reserved.", "10:37 AM", "5/31/2022".

Al-Rayah 18-selection

The screenshot shows a Windows desktop environment with a taskbar at the bottom. The taskbar includes icons for File Explorer, Task View, Start, Search, and several pinned applications like WhatsApp, Google Chrome, and Microsoft Edge. The system tray shows the date (5/31/2022), time (10:38 AM), battery level, and network status.

The main window is titled "SQL Commands" and displays the URL "127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476::NO::". It is an Oracle Database Express Edition interface. The SQL query entered is:

```
SELECT SUM(ESALARY) AS TOTAL_SALIERS FROM EMPLOYEES
```

The results section shows a single row:

| TOTAL_SALIERS |
|---------------|
| 39500 |

Below the table, it says "1 rows returned in 0.00 seconds". There are links for "CSV Export", "Results", "Explain", "Describe", "Saved SQL", and "History". The status bar at the bottom indicates "Language: en-us" and "Application Express 2.1.0.00.39 Copyright © 1999, 2005, Oracle. All rights reserved."

Al-Rayah 19-selection

The screenshot shows the Oracle Database Express Edition SQL Commands interface. The SQL command entered is:

```
SELECT MAX(ESALARY) AS MAX_SALARY FROM EMPLOYEES
```

The results section displays the output:

| MAX_SALARY |
|------------|
| 5000 |

1 rows returned in 0.02 seconds

CSV Export

Language: en-us Application Express 2.1.0.00.39 Copyright © 1999, 2005, Oracle. All rights reserved.

Al-Rayah 20-selection

Screenshot of Oracle Database Express Edition showing the results of a SQL query. The query selected the minimum salary from the EMPLOYEES table.

```
SELECT MIN(ESALARY) AS MIN_SALARY FROM EMPLOYEES
```

The results table shows:

| MIN_SALARY |
|------------|
| 3000 |

1 rows returned in 0.00 seconds

Language: en-us Application Express 2.1.0.00.39 Copyright © 1999, 2005, Oracle. All rights reserved.

Al-Rayah 21-selection

Screenshot of Oracle Database Express Edition showing the results of a SQL query. The query selected the average salary from the EMPLOYEES table.

```
SELECT AVG(ESALARY) AS AVG_SALARY FROM EMPLOYEES
```

The results table shows:

| AVG_SALARY |
|------------|
| 3950 |

1 rows returned in 0.00 seconds

Language: en-us Application Express 2.1.0.00.39 Copyright © 1999, 2005, Oracle. All rights reserved.

Al-Rayah 22-selection

The screenshot shows the Oracle Database Express Edition interface. A SQL command is entered in the query editor:

```
SELECT COUNT(*) AS EMPLOYEES_NUMBER FROM EMPLOYEES
```

The results show one row with the value 10.

| EMPLOYEES_NUMBER |
|------------------|
| 10 |

1 rows returned in 0.02 seconds

Language: en-us Application Express 2.1.0.00.39 Copyright © 1999, 2006, Oracle. All rights reserved.

Al-Rayah 23-selection

The screenshot shows the Oracle Database Express Edition interface. A SQL command is entered in the query editor:

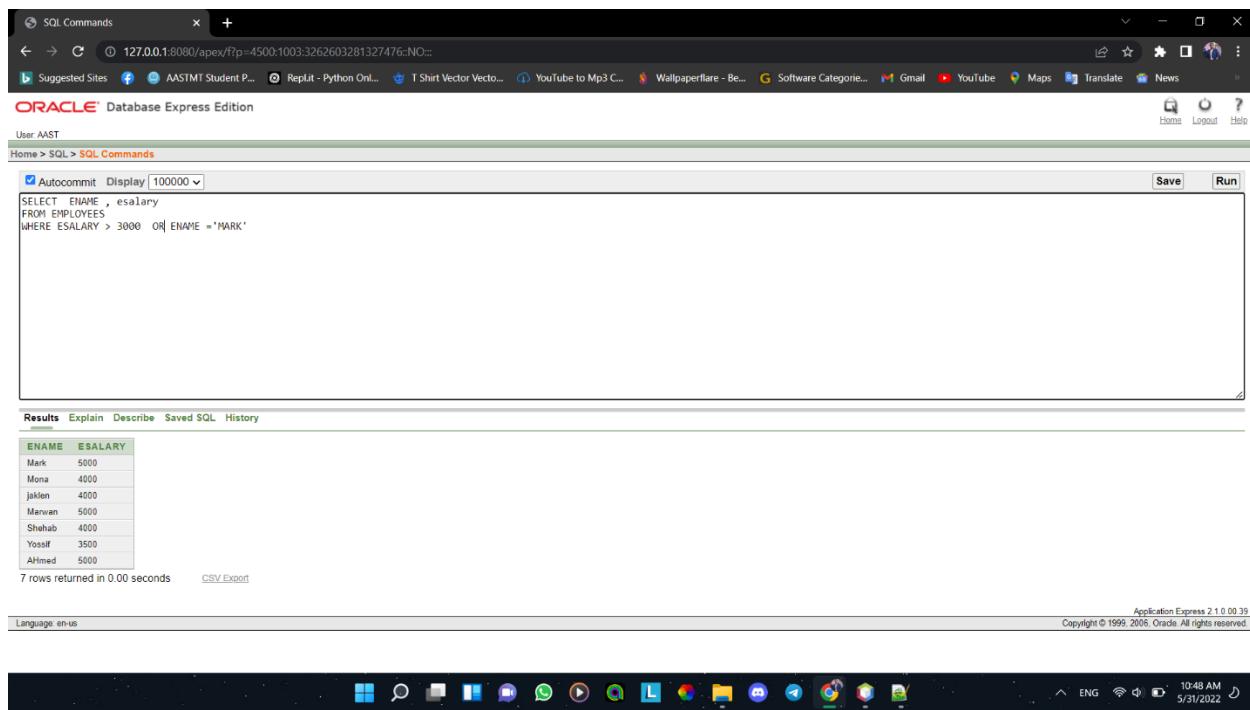
```
SELECT ENAME , esalary
FROM EMPLOYEES
WHERE ESALARY > 3000 AND ENAME = 'MARK'
```

No data is found.

no data found

Language: en-us Application Express 2.1.0.00.39 Copyright © 1999, 2006, Oracle. All rights reserved.

Al-Rayah 24-selection



The screenshot shows a Windows desktop environment with a taskbar at the bottom. The taskbar icons include Start, Search, Task View, File Explorer, Microsoft Edge, File Explorer, Mail, Calendar, Photos, OneDrive, Microsoft Store, and others. The system tray shows the date (5/31/2022), time (10:48 AM), battery status (ENG), and signal strength.

The main window is titled "SQL Commands" and displays the URL "127.0.0.1:8080/apex/f?p=4500:1003:3262603281327476::NO::". The browser toolbar includes Back, Forward, Stop, Refresh, Home, Favorites, Stop, Refresh, Home, Logout, Help, and a menu icon.

The page content is for "ORACLE Database Express Edition". It shows a SQL command input area with the following code:

```
SELECT ENAME , esalary
FROM EMPLOYEES
WHERE ESALARY > 3000 OR ENAME = 'MARK'
```

Below the input area are "Save" and "Run" buttons. The results section shows a table with the following data:

| ENAME | ESALARY |
|--------|---------|
| Mark | 5000 |
| Mona | 4000 |
| Jakken | 4000 |
| Marwan | 5000 |
| Shehab | 4000 |
| Yossif | 3500 |
| Ahmed | 5000 |

Text below the table indicates "7 rows returned in 0.00 seconds" and a "CSV Export" link. At the bottom, it says "Language: en-us" and "Application Express 2.1.0.00.39 Copyright © 1996, 2005, Oracle. All rights reserved."

Al-Rayah 25-selection

```

1 CREATE TABLE employees
2 (
3     eid int PRIMARY KEY not null,
4     eemail varchar(50) not null,
5     address varchar(100) not null,
6     jobtype varchar(50) not null,
7     essn varchar(40) not null,
8     edegree varchar(100) not null,
9     birthday date not null,
10    maritalstatus varchar(40),
11    position varchar(40),
12    workpermit varchar(50) not null,
13    salary int not null,
14    gender varchar(20) not null,
15    supervisorid int not null,
16    name varchar(50) not null,
17    dno int not null
18 )
19
20
21 insert into employees values (20100, '20101@rayah.com', 'aswan', 'supervisor', '123456789', 'High School', '6/april/2002', 'single', 'supervisor', '123456789', 5000, 'male', 20100, 'Mark')
22 insert into employees values (20101, '20101@rayah.com', 'aswan', 'worker', '1113456789', 'High School', '6/april/2002', 'single', 'worker', '1113456789', 3000, 'male', 20100, 'Ahmed')
23 insert into employees values (20102, '20102@rayah.com', 'cairo', 'worker', '222456789', 'High School', '6/suly/2000', 'Married', 'worker', '222456789', 3000, 'male', 20100, 'Mohamed')
24 insert into employees values (20103, '20103@rayah.com', 'Mansoura', 'worker', '333456789', 'High School', '7/may/1991', 'single', 'worker', '333456789', 4000, 'Female', 20100, 'Mona')
25 insert into employees values (20104, '20104@rayah.com', 'aswan', 'worker', '444456789', 'High School', '11/july/2001', 'Married', 'worker', '444456789', 3000, 'male', 20104, 'Mostafa')
26 insert into employees values (20105, '20105@rayah.com', 'Qena', 'worker', '555556789', 'Commerce School', '4/december/1995', 'single', 'worker', '555556789', 4000, 'Female', 20100, 'Nada')
27 insert into employees values (20106, '20106@rayah.com', 'Alex', 'worker', '122456789', 'High School', '8/december/1990', 'single', 'worker', '122456789', 5000, 'male', 20100, 'Marwan')
28 insert into employees values (20107, '20107@rayah.com', 'Cairo', 'worker', '133456789', 'High School', '11/august/1998', 'single', 'worker', '133456789', 3500, 'male', 20100, 'Yossif')
29 insert into employees values (20108, '20108@rayah.com', 'Alex', 'worker', '144456789', 'High School', '9/aprill/2001', 'single', 'worker', '144456789', 4000, 'male', 20100, 'Shehab')
30 insert into employees values (20109, '20109@rayah.com', 'aswan', 'worker', '155456789', 'High School', '2/august/2002', 'single', 'worker', '155456789', 5000, 'male', 20100, 'Ahmed')
31
32 select * from employees
33
34 describe employees
35
36 alter table employees
37 add constraint fksuper foreign key (supervisorid) references employees (eid)
38
39 alter table employees
40 add constraint fkdep foreign key (dno) references departments (dno)

```

Al-Rayah 26-insertion

```

46 )
47
48 insert into employeephone values (20100, '01200000000')
49 insert into employeephone values (20101, '01200000001')
50 insert into employeephone values (20102, '01200000002')
51 insert into employeephone values (20103, '01200000003')
52 insert into employeephone values (20104, '01200000004')
53 insert into employeephone values (20105, '01200000005')
54 insert into employeephone values (20106, '01200000006')
55 insert into employeephone values (20107, '01200000007')
56 insert into employeephone values (20108, '01200000008')
57 insert into employeephone values (20109, '01200000009')
58
59 select * from employeephone
60
61
62 alter table employeephone
63 add constraint fkpe foreign key (eid) references employees (eid)
64 add constraint pkp primary key (eid,ephonenumber)
65
66 describe employeephone
67
68 CREATE TABLE servedby
69 (
70     eid2 int not null,
71     cid1 int not null
72 )
73
74 insert into servedby values (20101,10000)
75 insert into servedby values (20102,10002)
76 insert into servedby values (20103,10003)
77 insert into servedby values (20104,10004)
78 insert into servedby values (20105,10001)
79 insert into servedby values (20106,10006)
80 insert into servedby values (20107,10007)
81 insert into servedby values (20108,10008)
82 insert into servedby values (20109,10009)
83 insert into servedby values (20101,10005)
84
85 alter table servedby

```

Al-Rayah 27-insertion

```

90  cname varchar(50)
91  )
92  insert into customer values (10000,'nasr',2,1,'myemail@yahoo.com','Kareem')
93  insert into customer values (10001,'elmgaber',4,8,'myemail1@yahoo.com','mark')
94  insert into customer values (10002,'elbrkaa',5,4,'myemail2@yahoo.com','mostafa')
95  insert into customer values (10003,'elmtar',7,2,'myemail3@yahoo.com','mohamed')
96  insert into customer values (10004,'essan roushy',4,6,'myemail4@yahoo.com','mostafa')
97  insert into customer values (10005,'abd elaziz',6,2,'myemail5@yahoo.com','marwan')
98  insert into customer values (10006,'mohamed all',3,1,'myemail6@yahoo.com','khald')
99  insert into customer values (10007,'elakkad',7,3,'myemail7@yahoo.com','osama')
100 insert into customer values (10008,'ahmed kamal',8,3,'myemail8@yahoo.com','osman')
101 insert into customer values (10009,'abd elmenaem',4,4,'myemail9@yahoo.com','yousef')
102
103 select * from customer
104
105 describe customer
106
107 CREATE TABLE soldby
108 (
109 pcode1 int not null,
110 eid3 int not null
111 )
112
113 insert into soldby values (1,20104)
114 insert into soldby values (2,20104)
115 insert into soldby values (3,20104)
116 insert into soldby values (4,20104)
117 insert into soldby values (5,20105)
118 insert into soldby values (6,20105)
119 insert into soldby values (7,20105)
120 insert into soldby values (8,20105)
121 insert into soldby values (9,20105)
122 insert into soldby values (10,20105)
123
124 select* from soldby
125
126 alter table soldby
127 add constraint fk_ibn FOREIGN KEY (eid3) REFERENCES employee (id)

```

Normal text file

length : 13,457 lines : 342 Ln : 228 Col : 1 Pos : 8,554 Windows (CR LF) UTF-8 INS

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Al-Rayah 28-insertion

```

158
159 insert into products values (1,'egypt','rice',100,'grocery','6/july/2030',20,5)
160 insert into products values (2,'egypt','Pasta',200,'grocery','2/october/2030',15,5)
161 insert into products values (3,'egypt','beans',140,'grocery','1/august/2030',10,5)
162 insert into products values (4,'egypt','wheat',1000,'grocery','5/april/2030',12,5)
163 insert into products values (5,'Saudi Arabia','chicken',100,'chicken','6/july/2022',100,1)
164 insert into products values (6,'France','meat',100,'meat','6/july/2022',120,1)
165 insert into products values (7,'egypt','Ariel',1000,'cleaning','6/july/2030',5,7)
166 insert into products values (8,'egypt','Persil',1000,'cleaning','6/july/2030',10,7)
167 insert into products values (9,'egypt','Milk',50,'dairy','1/may/2022',20,4)
168 insert into products values (10,'egypt','Cheese',50,'Dairy','1/may/2022',20,4)
169
170 select * from products
171
172 alter table products
173 add constraint fkpd3ep foreign key (dno2) references department (dno)
174
175 describe products
176
177 CREATE TABLE purchasedit
178 (
179 pcode2 int not null,
180 cid2 int not null
181 )
182
183 insert into purchasedit values (4,10001)
184 insert into purchasedit values (1,10002)
185 insert into purchasedit values (2,10003)
186 insert into purchasedit values (3,10004)
187 insert into purchasedit values (5,10005)
188 insert into purchasedit values (6,10006)
189 insert into purchasedit values (7,10007)
190 insert into purchasedit values (8,10008)
191 insert into purchasedit values (9,10009)
192 insert into purchasedit values (10,10000)
193
194 select* from purchasedit
195
196 alter table purchasedit
197 add constraint fkln FOREIGN KEY (pcode2) REFERENCES products (pcode)

```

Normal text file

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Al-Rayah 29-insertion

```

282 CREATE TABLE registeredin
283 (
284     pcode3 int not null,
285     ino1 int not null
286 )
287
288 insert into registeredin values (1,0)
289 insert into registeredin values (2,1)
290 insert into registeredin values (3,2)
291 insert into registeredin values (4,3)
292 insert into registeredin values (5,4)
293 insert into registeredin values (6,5)
294 insert into registeredin values (7,6)
295 insert into registeredin values (8,7)
296 insert into registeredin values (9,8)
297 insert into registeredin values (10,9)
298
299 select * from registeredin
300
301 alter table registeredin
302 add constraint fkrip foreign key (pcode3) references products (pcode)
303 add constraint fkrl1 foreign key (ino1) references invoices (ino)
304 add constraint pkri primary key (pcode3,ino1)
305
306 describe registeredin
307
308 CREATE TABLE invoices
309 (
310     ino int PRIMARY KEY not null,
311     idate date not null,
312     icustomername varchar(100) not null,
313     iemployeeName varchar(100) not null,
314     itotal int not null,
315     itime varchar(50) not null,
316     cid3 int not null,
317     eid4 int not null
318 )
319
320 insert into invoices values (1,'1/jan/2022','Kareem','Mostafa',200,'20:30',10000,20104)

```

Normal text file length: 13,457 lines: 342 Ln: 228 Col: 1 Pos: 8,554 Windows (CR LF) UTF-8 INS

Al-Rayah 30-insertion

```

321 )
322 insert into invoices values (0000,'1/jan/2022','Kareem','Mostafa',300,'20:30',10000,20104)
323 insert into invoices values (0001,'2/jan/2022','yousef','Mostafa',300,'20:30',10009,20104)
324 insert into invoices values (0002,'3/jan/2022','osman ','Mostafa',300,'20:30',10008,20104)
325 insert into invoices values (0003,'4/jan/2022','osama ',Mostafa',300,'20:30',10007,20104)
326 insert into invoices values (0004,'5/jan/2022','ahmed ',Mostafa',300,'20:30',10001,20104)
327 insert into invoices values (0005,'1/jan/2022','mohamed ',jaklen',300,'20:30',10003,20104)
328 insert into invoices values (0006,'2/jan/2022','mark ',jaklen',300,'20:30',10002,20105)
329 insert into invoices values (0007,'3/jan/2022','mostafa ',jaklen',300,'20:30',10004,20105)
330 insert into invoices values (0008,'4/jan/2022','marwan ',jaklen',300,'20:30',10005,20105)
331 insert into invoices values (0009,'5/jan/2022','khald ',jaklen',300,'20:30',10006,20105)
332
333 select* from invoices
334
335 alter table invoices
336 add constraint fkinc foreign key (cid3) references customer (cid)
337 add constraint fkine foreign key (eid4) references employees (eid)
338
339 describe invoices
340
341 CREATE TABLE customerphone
342 (
343     cid4 int not null,
344     phonenumber varchar(20) not null
345 )
346
347 insert into customerphone values (10000, 01100000000)
348 insert into customerphone values (10001, 01100000001)
349 insert into customerphone values (10002, 01100000002)
350 insert into customerphone values (10003, 01100000003)
351 insert into customerphone values (10004, 01100000004)
352 insert into customerphone values (10005, 01100000005)
353 insert into customerphone values (10006, 01100000006)
354 insert into customerphone values (10007, 01100000007)
355 insert into customerphone values (10008, 01100000008)
356 insert into customerphone values (10009, 01100000009)
357
358 select * from customerphone

```

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Al-Rayah 31-insertion

```

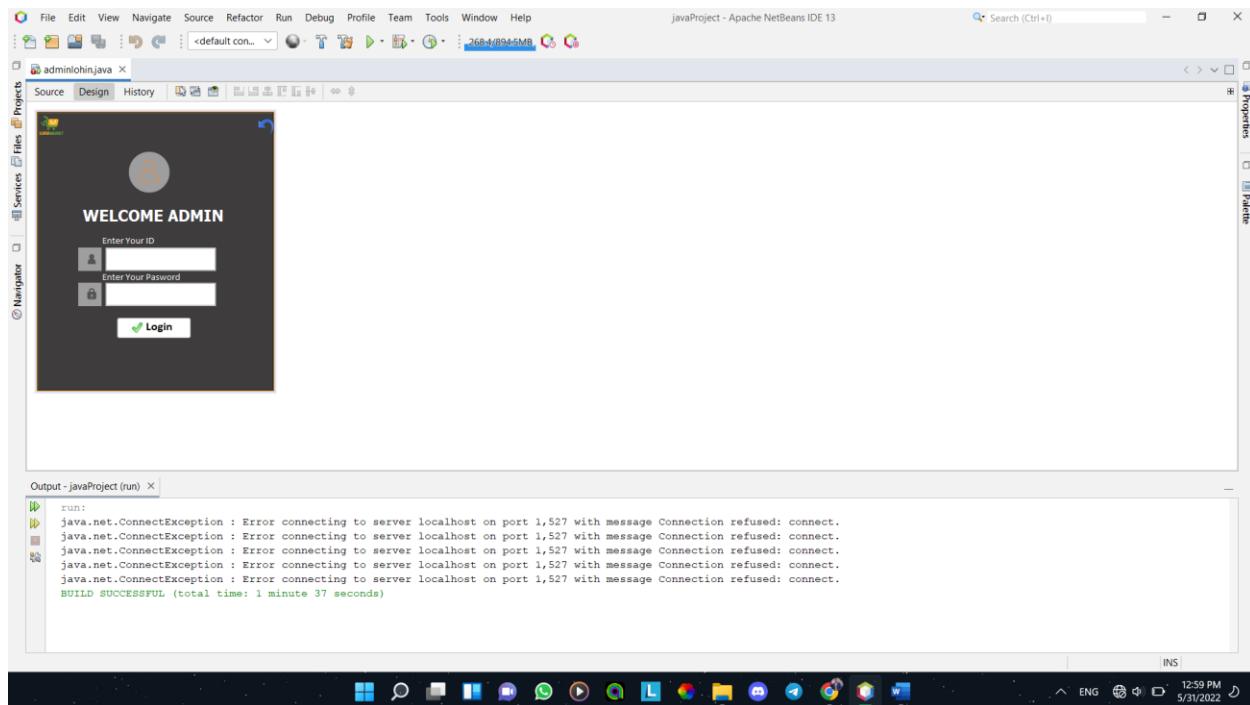
C:\Users\USER\Desktop\Database.txt - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window 2
New Text Document bt New Text Document (D) bt Database.txt
304. insert into delivery values (4,'khalid','01100000004','20:30',4,'mohamed ali, building 3, floor 1', '5/jan/2022', 10006, 20101,4)
305. insert into delivery values (5,'marwan','01100000005','20:30',5,'abd elaziz, building 6, floor 2', '1/jan/2022', 10005, 20102,5)
306. insert into delivery values (6,'mostafa','01100000006','20:30',6,'essam roushy, building 4, floor 6', '2/jan/2022', 10004, 20102,6)
307. insert into delivery values (7,'mohamed','01100000007','20:30',7,'elmtar, building 7, floor 2', '3/jan/2022', 10003, 20102,7)
308. insert into delivery values (8,'mark','01100000008','20:30',8,'elbrkaa, building 5, floor 4', '4/jan/2022', 10002, 20102,8)
309. insert into delivery values (9,'ahmed','01100000009','20:30',9,'elmqaber, building 5, floor 8', '5/jan/2022', 10001, 20102,9)
310. select* from delivery
311.
312. alter table delivery
313. add constraint fkdec foreign key (cid5) references customer (cid)
314. add constraint fkdee foreign key (eids) references employees (eid)
315. add constraint fkdei foreign key (ino2) references invoices (ino)
316.
317. describe delivery
318.
319. CREATE TABLE department
320.
321. (
322. dno int PRIMARY KEY not null,
323. dname varchar(50) not null,
324. eid6 int not null
325. )
326.
327. insert into department values (0,'management', 20100)
328. insert into department values (1,'Meat Supply', 20101)
329. insert into department values (2,'Casheir', 20102)
330. insert into department values (3,'Delivery', 20103)
331. insert into department values (4,'Dairy Supply', 20104)
332. insert into department values (5,'Grocery Supply', 20105)
333. insert into department values (6,'Customer Relations', 20106)
334. insert into department values (7,'Cleaning-Tool Supply', 20107)
335. insert into department values (8,'Cleaning Crew', 20108)
336. insert into department values (9,'Marketing', 20109)
337.
338. select * from department
339.
340. alter table department
341. add constraint fkdep foreign key (eid6) references employees (eid)
342.
343. describe departments

```

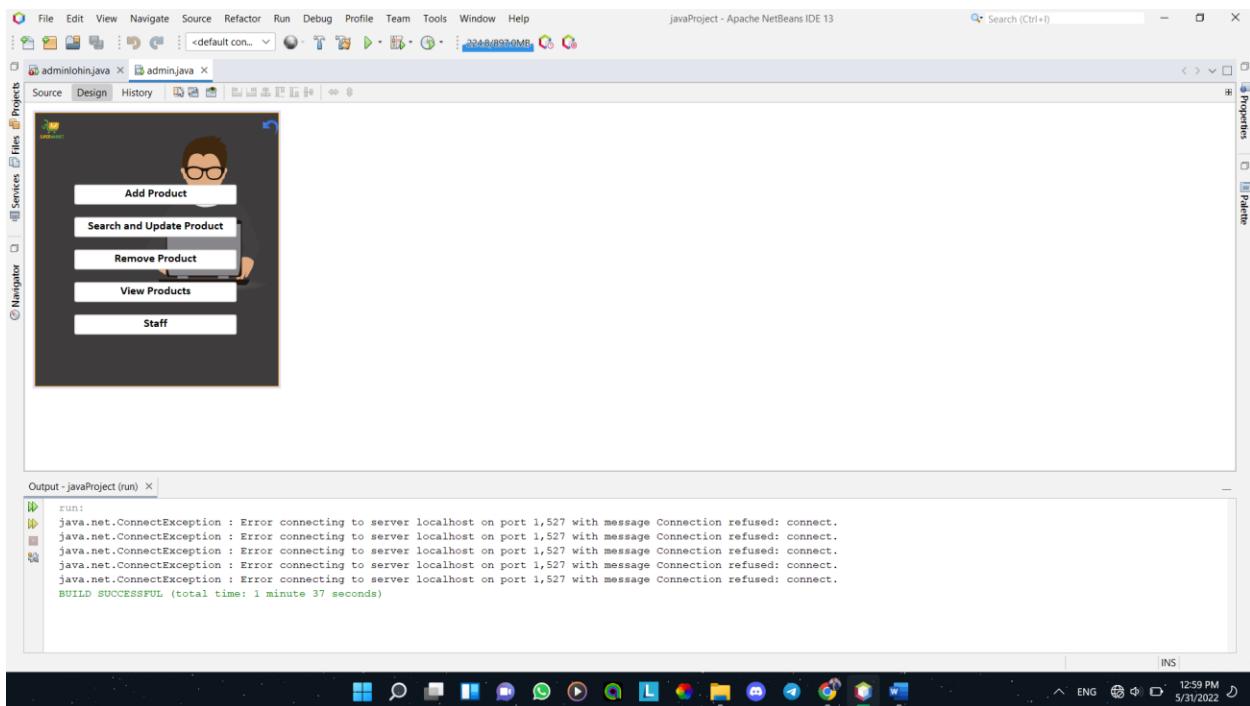
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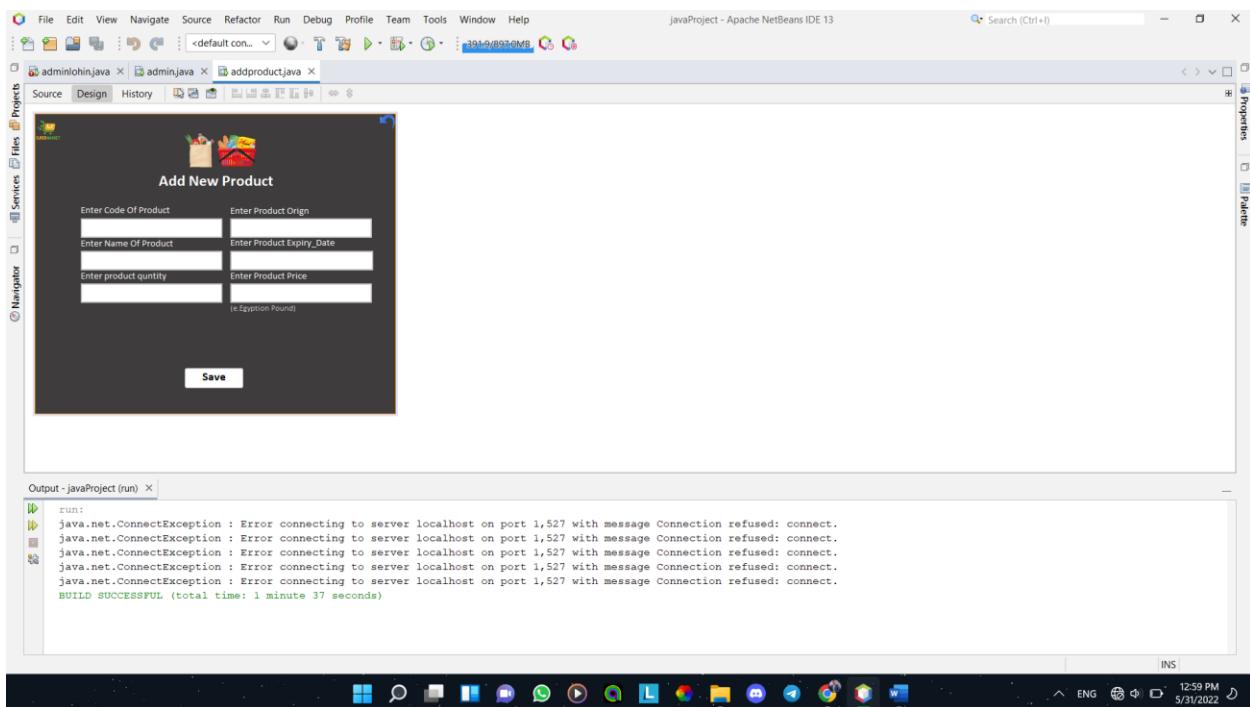
Al-Rayah 32-insertion



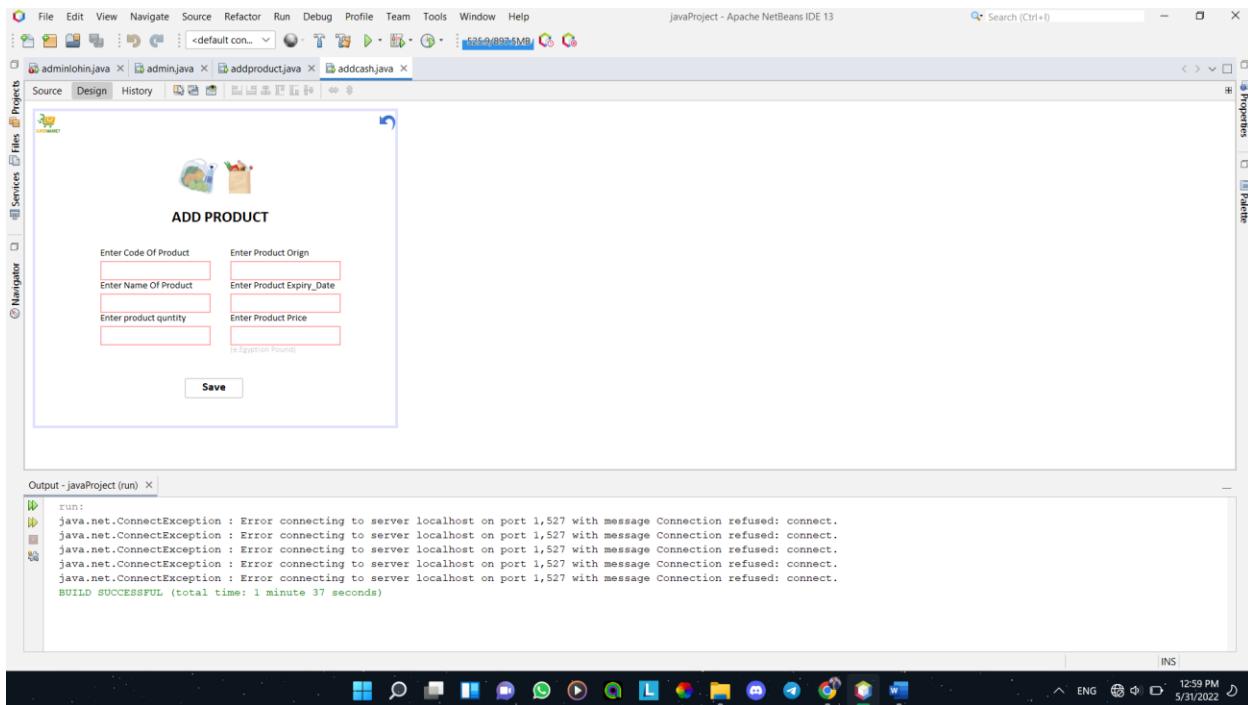
Al-Rayah 33-GUI



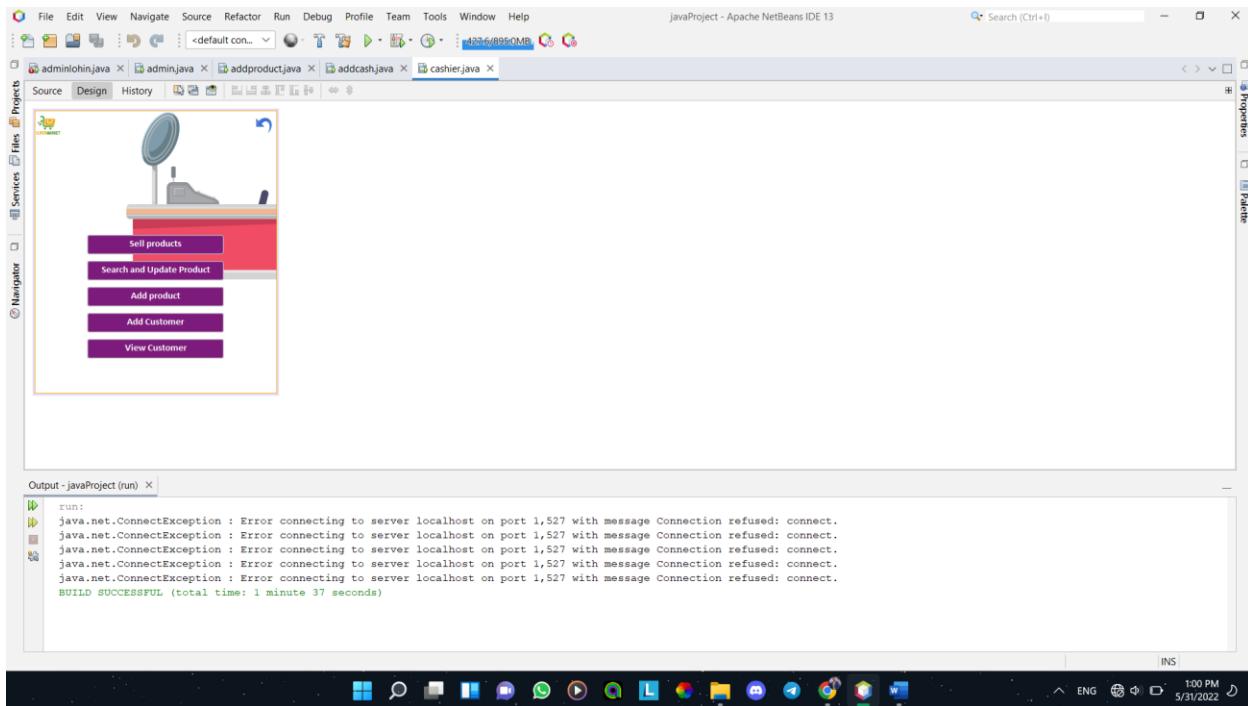
Al-Rayah 34-GUI



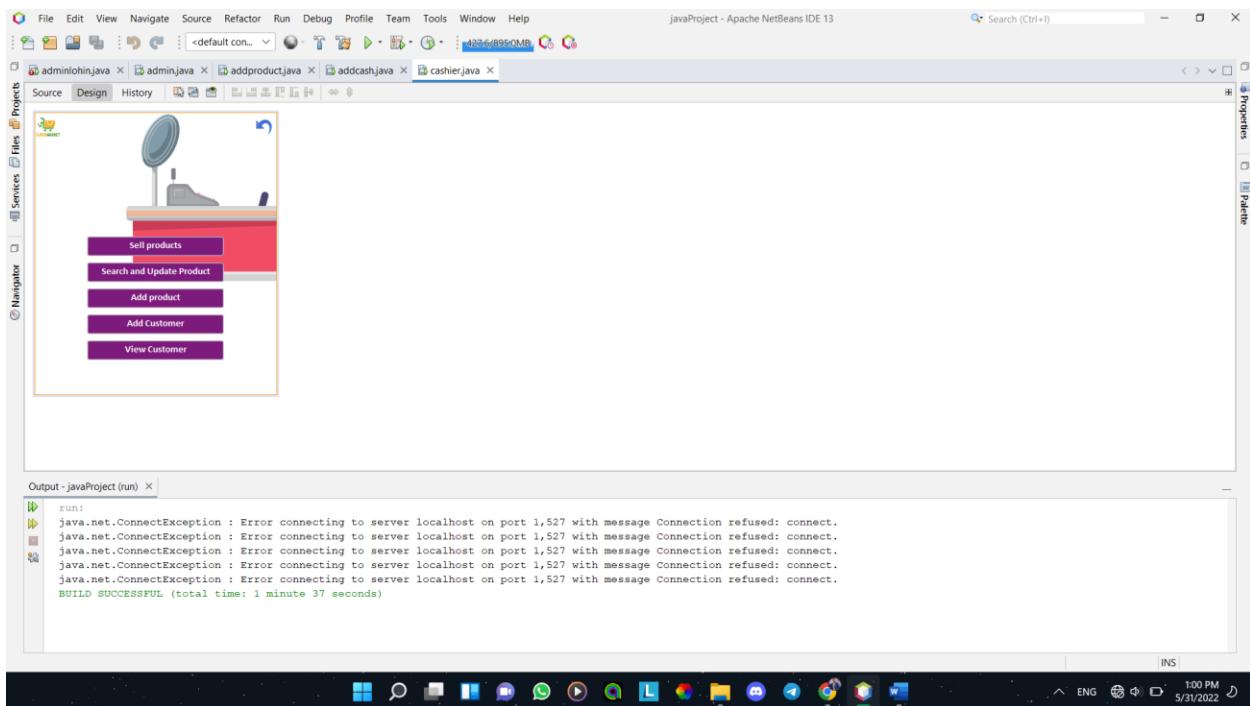
Al-Rayah 35-GUI



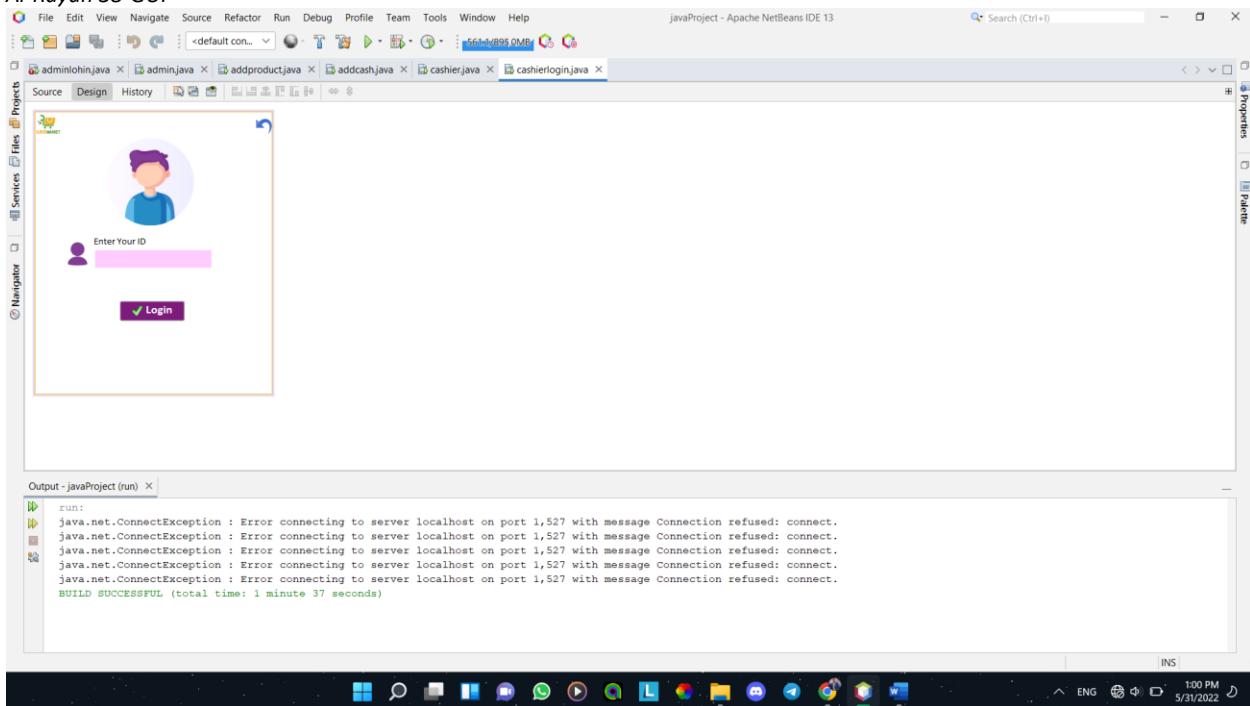
Al-Rayah 36-GUI



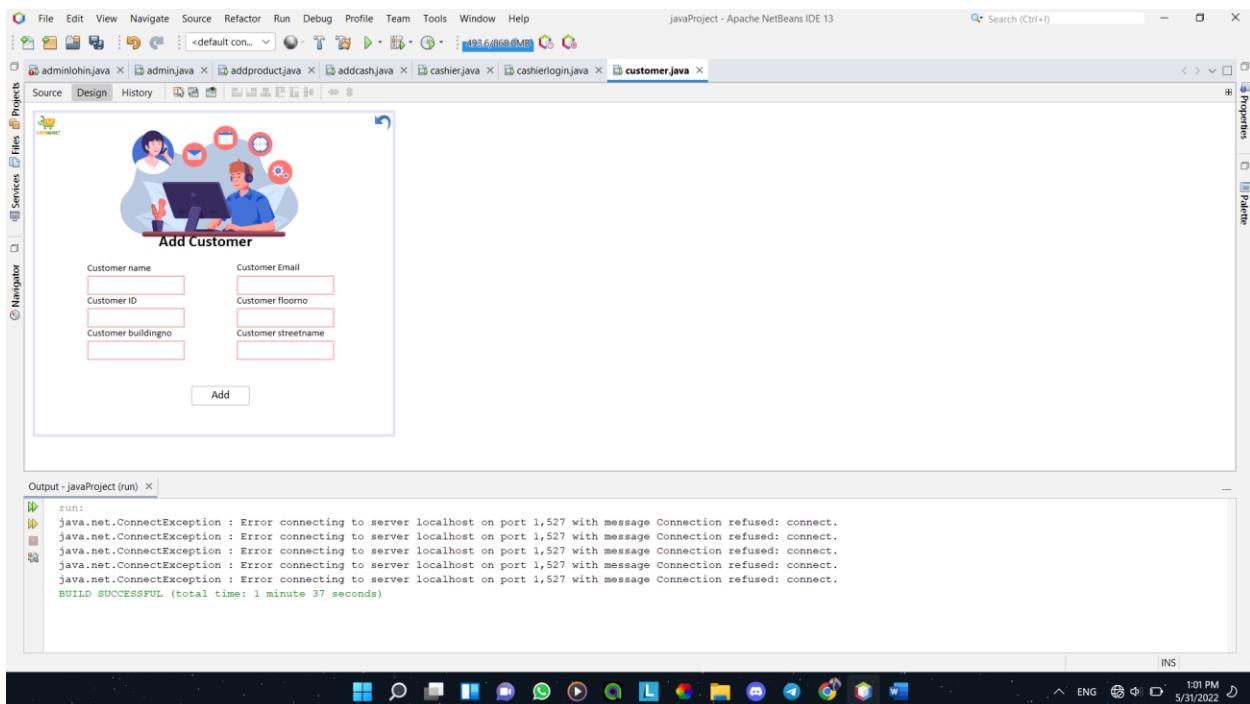
Al-Rayah 37-GUI



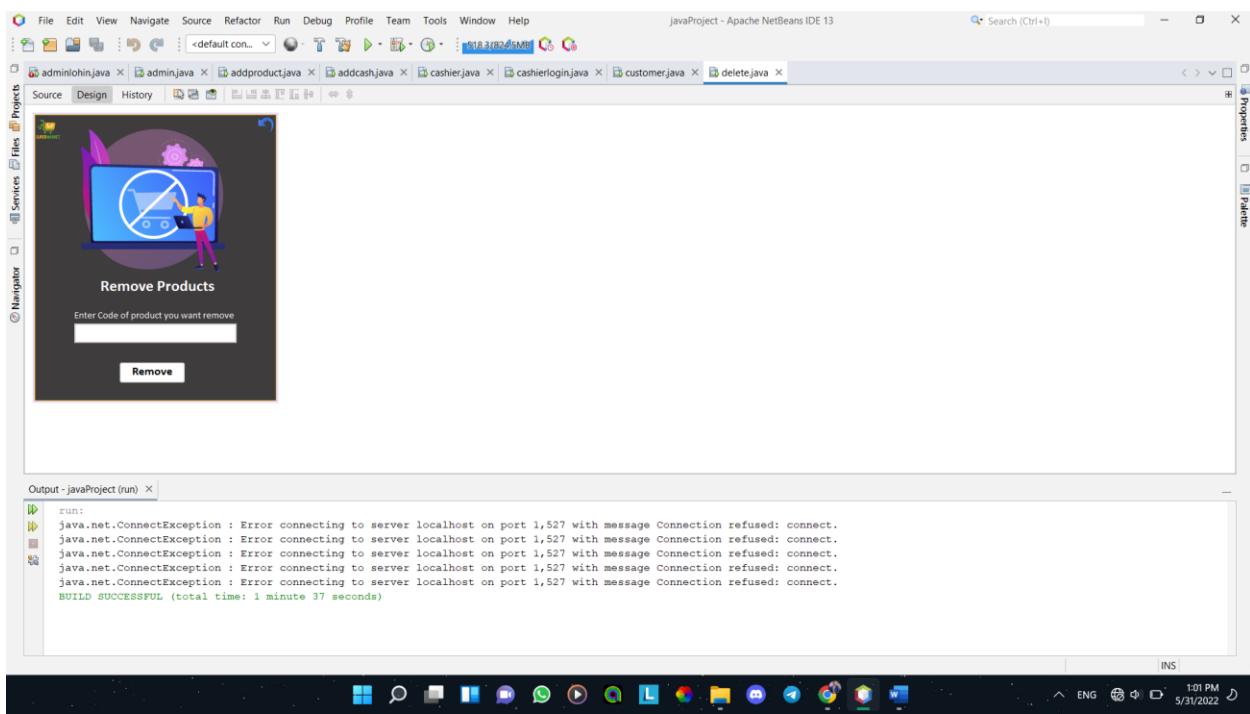
Al-Rayah 38-GUI



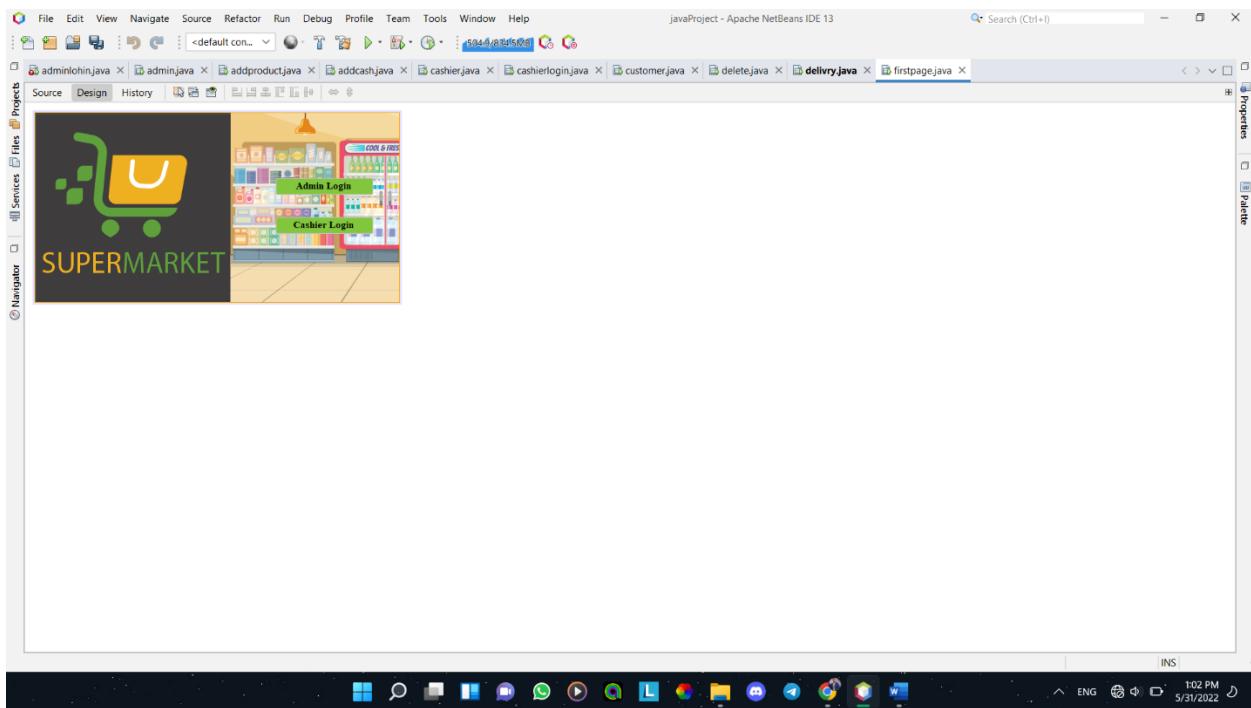
Al-Rayah 39-GUI



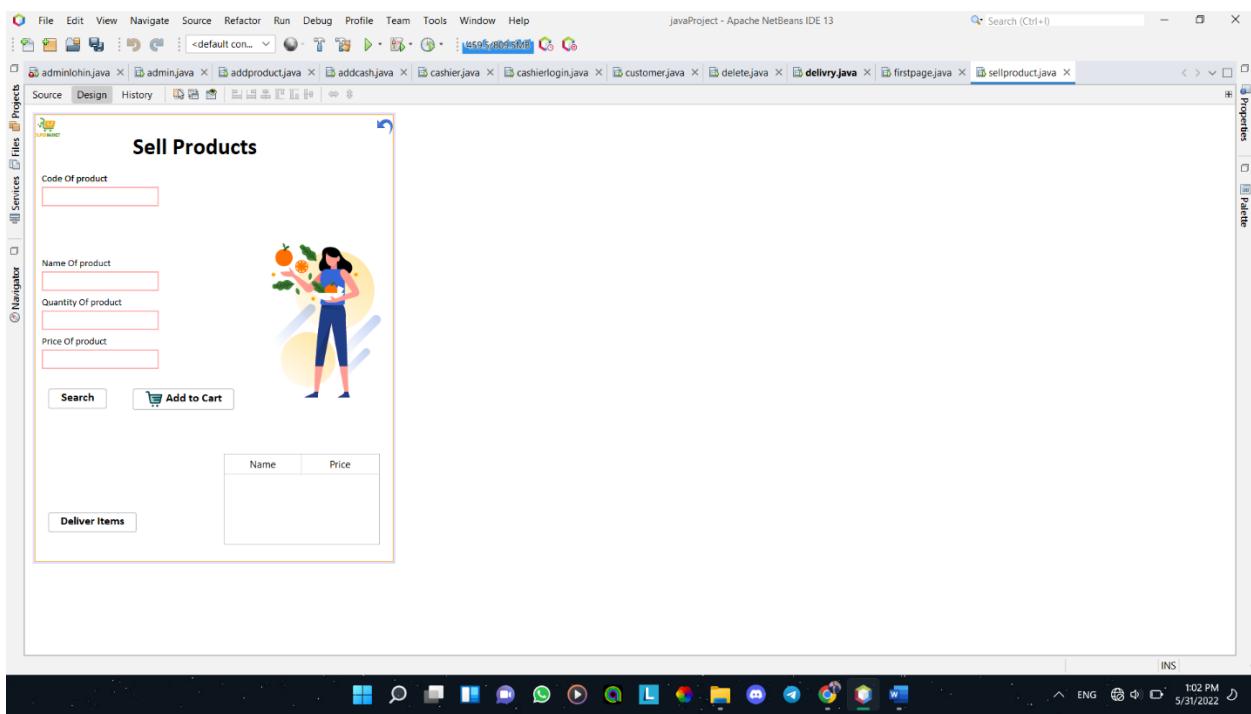
Al-Rayah 40-GUI



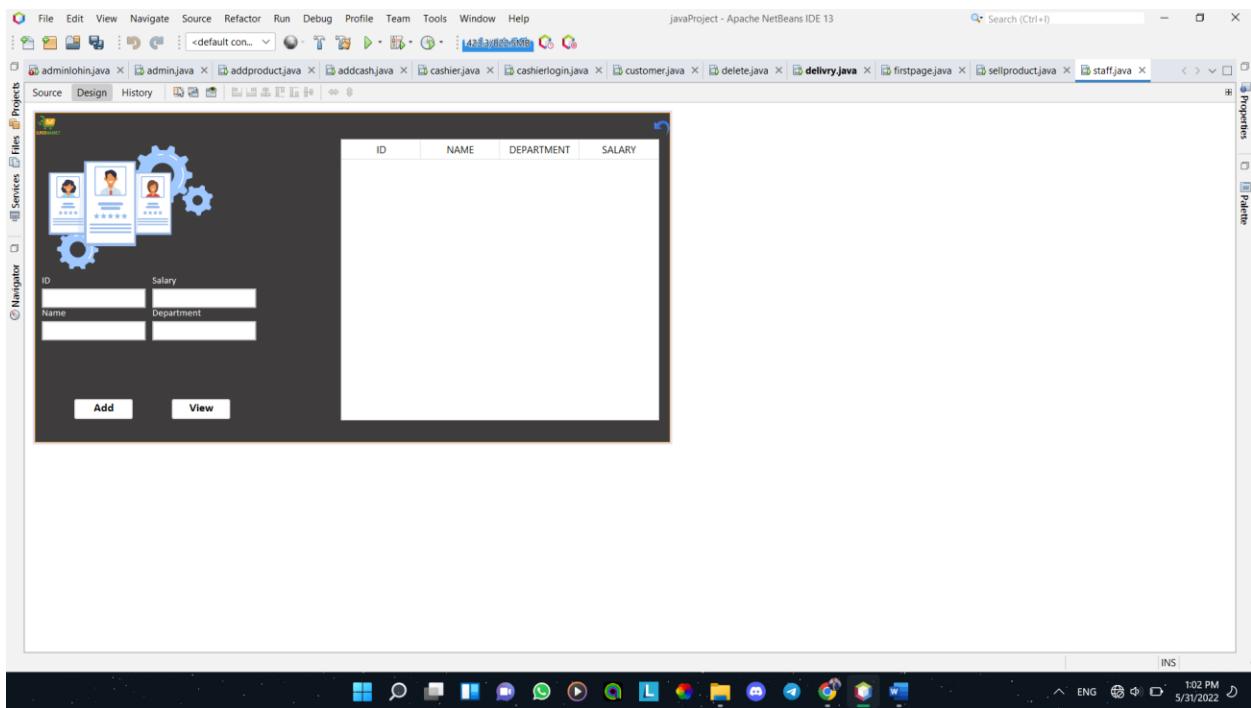
Al-Rayah 41-GUI



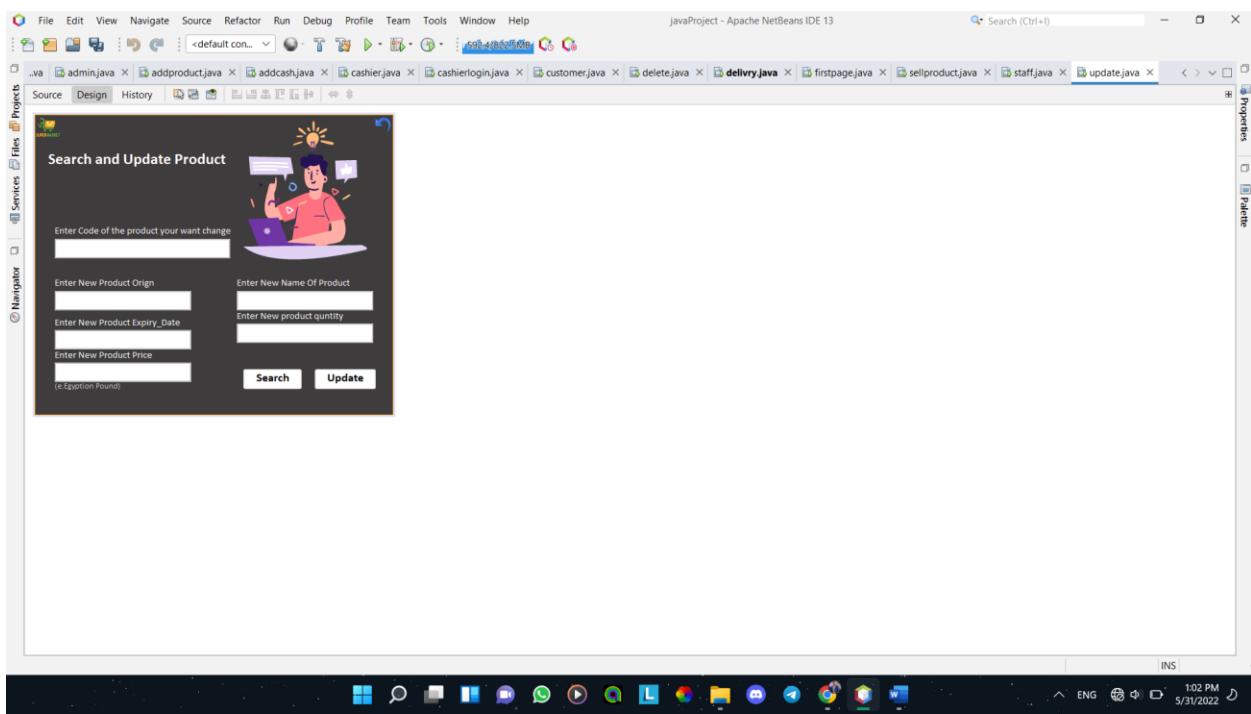
Al-Rayah 42-GUI



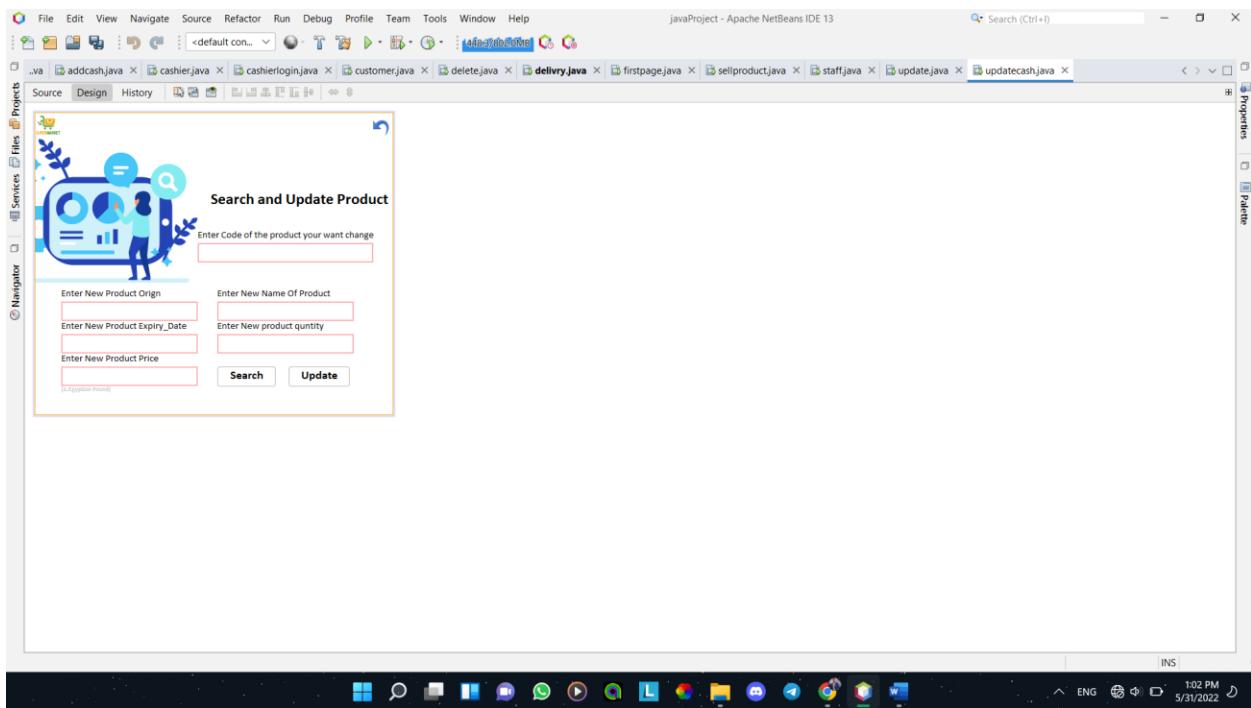
Al-Rayah 43-GUI



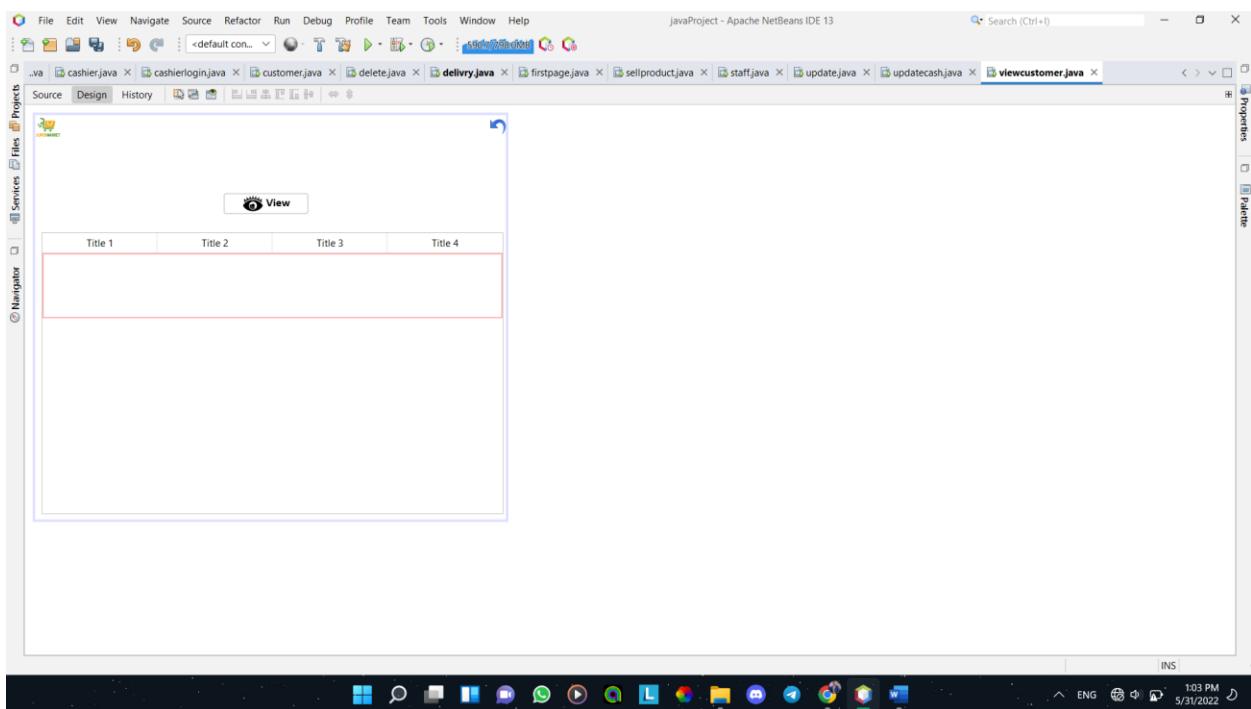
Al-Rayah 44-GUI



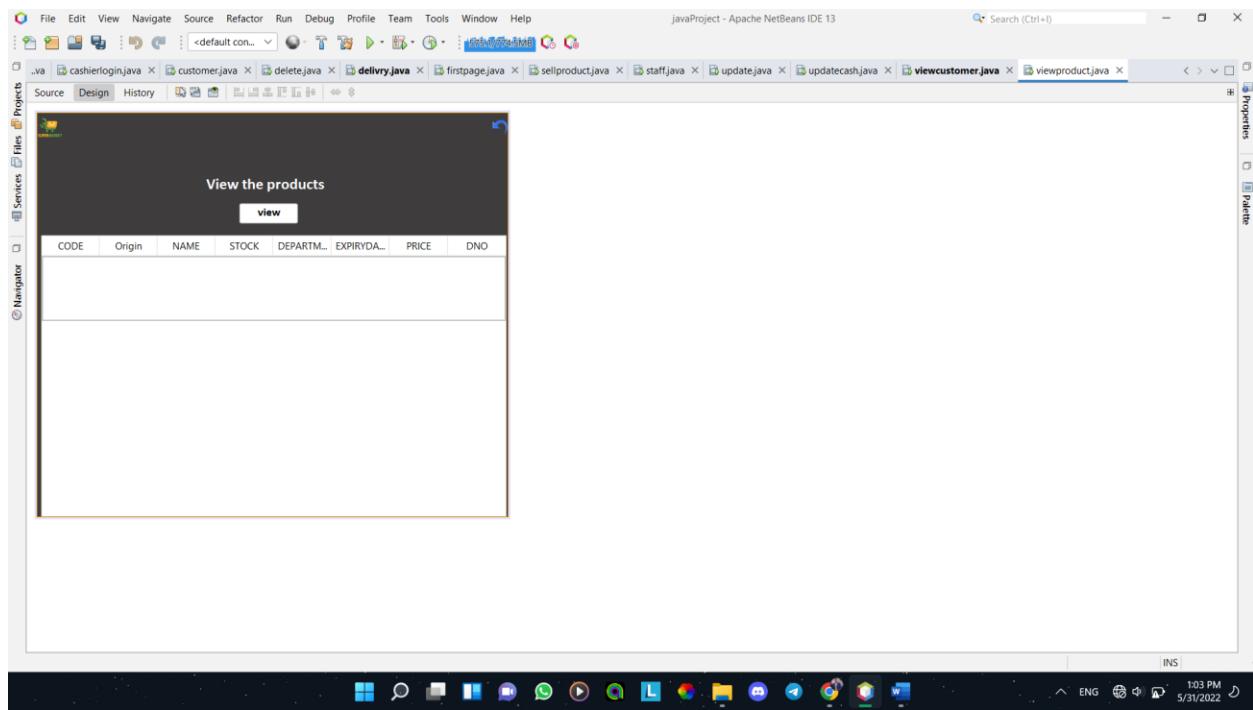
Al-Rayah 45-GUI



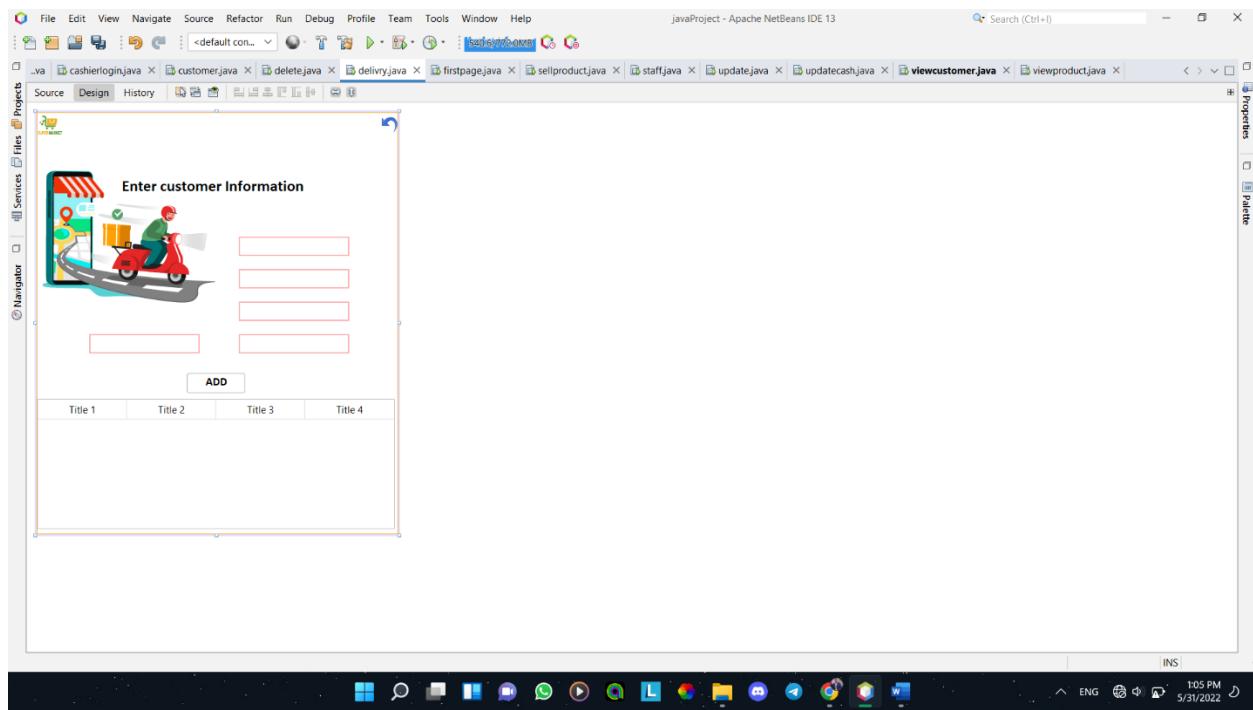
Al-Rayah 46-GUI



Al-Rayah 47-GUI



Al-Rayah 48-GUI



Al-Rayah 49-GUI