



Course code: CSE-208

Course Title: Database System Lab

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Title of the Project:

Customs Supervision System

Introduction:

Customs regulates the flow of goods into and out of a country. Most importantly, the customs deals with the collection of duties levied on imported goods.

Due to the huge increase in population at present, it is hard to manage customs manually. Through Database management System we will create a system called Customs Supervision System that can reduce work pressure and fulfil all the needs of customs management. Customs Supervision allows you to standardize and automate import and export procedures with customs authorities. Our goal is to ensure a smooth import and export system. We want to accelerate the flow of work and keep pace with the changing world to make a modern world.

Aim of the project:

- Modernizing customs operations and helping to improve revenue collection.
- Improving security by streamlining procedures of cargo control, transit of goods and clearance of goods.
- We can view databases from across the world.
- We can easily find how many countries imported and exported in a year
- Can easily find out what products are in the warehouse.
- Changing the pattern of conventional problematic consumer demand.
- Changing the conventional problematic terms of trade.
- Changes in the pattern of conventional problematic production.
- Promoting sustainable development by cutting down on the use of paper, through the use of electronic transactions and documents

- Facilitating trade efficiency and competitiveness by substantially reducing transaction time and costs.
- Helping fight corruption by enhancing the transparency of transactions.

Background:

Problem Define:

- Production section of the maximum company is doing the work manually.
- All the works are carried out in pen and paper.
- Sometimes administrator can not get proper information about the product.
- Buyers can not place the order easily.
- This system is not efficient and takes long time.

Features :

- Login System
- Manage all Information efficiently.
- Record Employee and Customer Billing details.
- Add, Update & Delete all information easily.
- Advanced Search features.
- Manage Security

Entities:

The main entities of Custos Supervision System are:

Importer(Importer ID, Company Name, Trade License, Phone Number, email, password)

Admin(Name, Email, Phone, Password)

Exporter(Exporter ID, Company Name, Trade License, Phone Number, email, password)

Imported Product(Importer ID, Product ID, Product Type, Import Country)

Exported Product(Exporter ID, Product ID, Product Type, Export Country)

Exported Country(Country, Product Type)

Imported Country(Country, Product Type)

Im_Customs Clearance(Name of Vessel, Date of Arrival, Importer ID, Trade License, Product Type, Product ID, importer Country, Total tax Amount)

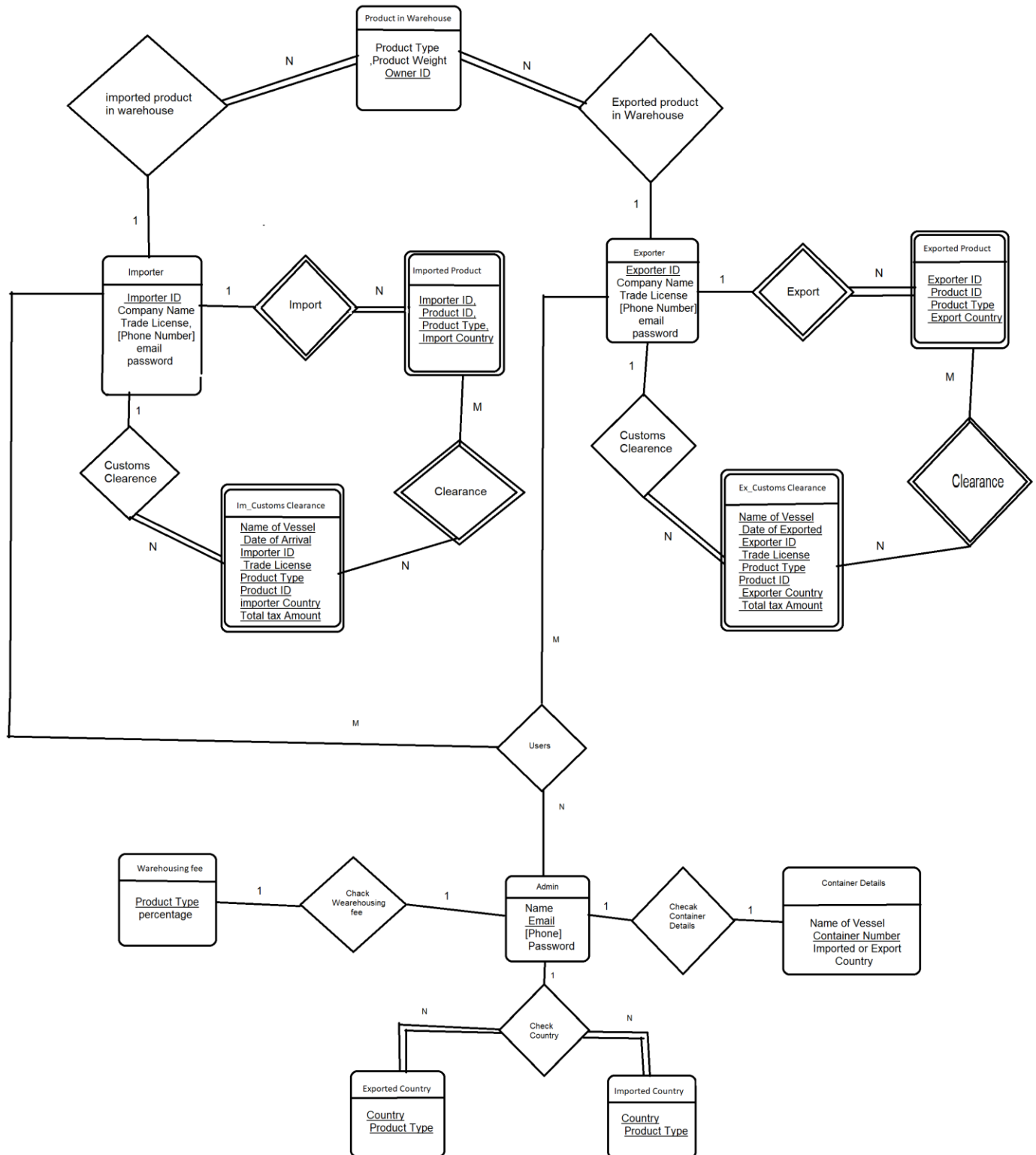
Ex_Customs Clearance(Name of Vessel, Date of Exported, Exporter ID, Trade License, Product Type, Product ID, Exporter Country, Total tax Amount)

Warehousing fee(Product Type, percentage)

Product in Warehouse(Product Type, Product Weight, Owner ID)

Apply_for_clearence(name_of_vessel, date, user_id, trade_license, product_type, i_e_product_id, product_weight, i_e_country, total_tax_amount)

ER Diagram:



Main Features:

Admin:

- Insert [Importer, Exporter]
- Delete [Importer, Exporter]
- Check Warehousing Fee
- Approve Clearance
- Add Warehouse Product
- Delete Exported Product
- Check imported & exported Country's

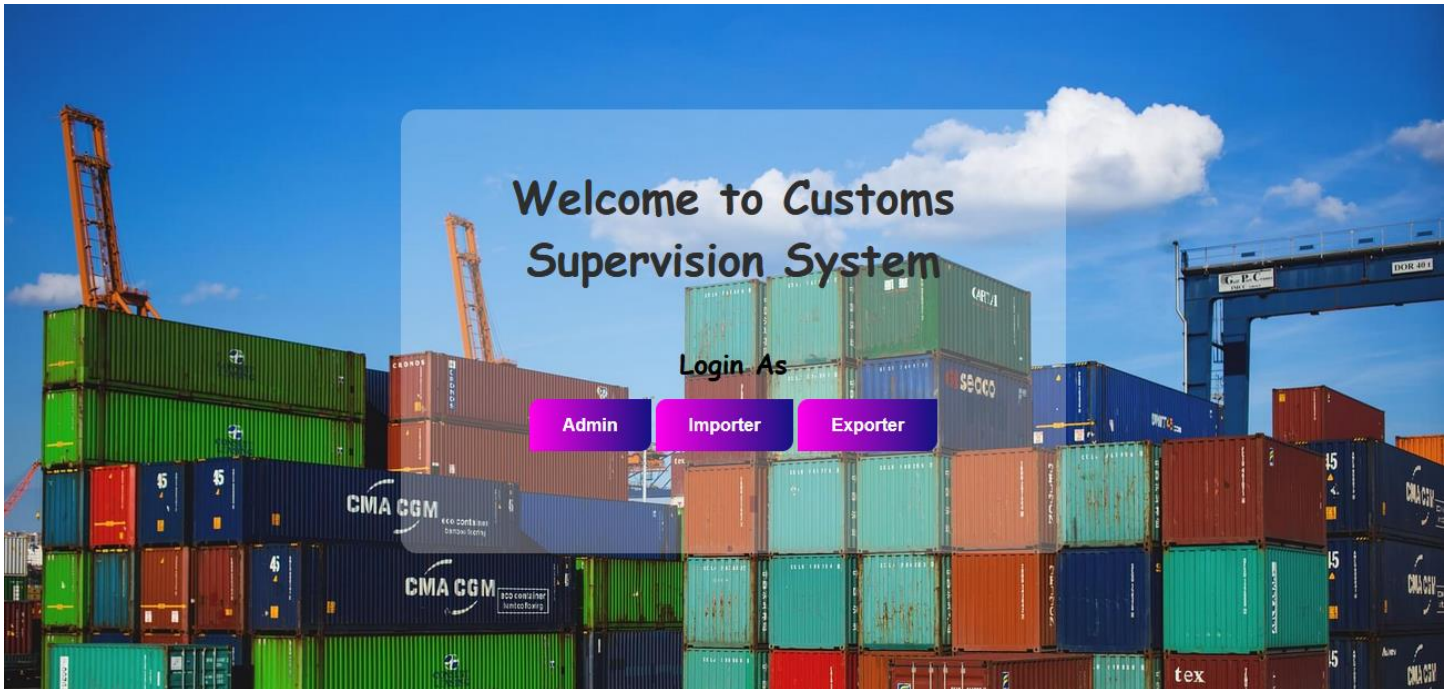
Importer:

- See All Imported Product
- Product in Warehouse
- Apply for Customs Clearance
- Warehouse Fee
- Total Paid Tax
- All Clemence
- My Account

Exporter:

- See All Exported Product
- Product in Warehouse
- Apply for Export
- Warehouse Fee
- Total Paid Tax
- All Approval
- My Account

Experiment Results:



Admin Panel

A screenshot of the 'Admin Panel' interface. The background is a dark blue gradient with faint, overlapping circular patterns. On the left side, there is a vertical list of ten buttons: 'Add New Importer' (light blue), 'Add New Exporter' (light blue), 'Delete Users' (light blue), 'All Users' (light blue), 'Warehousing Fee' (light blue), 'Approve Clerence' (light blue), 'Add Warehouse Product' (light blue), 'Delete Exported Product' (light blue), 'Country's(I/E)' (light blue), and 'My Account' (light blue). On the right side, there is a large white box with the heading 'Welcome to Admin Panel !' in a large, bold, black font. Below the heading, there are several input fields with labels: 'Importer ID' (with placeholder 'Enter Importer ID'), 'Company Name' (with placeholder 'Enter Company Name'), 'Trade License' (with placeholder 'Exp: AD780'), 'Phone Number' (with placeholder 'Phone Number'), 'Email' (with placeholder 'example@gmail.com'), and 'Password' (with placeholder 'Type Importer Password'). At the bottom of this white box is a blue button labeled 'Submit Query'.

Query For Add New Importer:

```
INSERT INTO `importer`(`importer_id`, `company_name`, `trade_license`, `phone`, `email`, `password`) VALUES(?, ?, ?, ?, ?, ?);
```

The screenshot shows the 'Welcome to Admin Panel !' interface. On the left is a sidebar with buttons: 'Add New Importer', 'Add New Exporter', 'Delete Users', 'All Users', 'Warehousing Fee', 'Approve Clerence', 'Add Warehouse Product', 'Delete Exported Product', 'Country's(I/E)', and 'My Account'. The 'Add New Importer' button is highlighted with a white star. On the right, the 'Add New Importer' form is displayed with the following fields: 'Exporter ID' (placeholder: 'Enter Exporter ID'), 'Company Name' (placeholder: 'Enter Company Name'), 'Trade License' (placeholder: 'Exp: WE508'), 'Phone Number' (placeholder: 'Phone Number'), 'Email' (placeholder: 'example@gmail.com'), and 'Password' (placeholder: 'Type Exporter password'). A blue 'Submit Query' button is at the bottom of the form.

Query for Add New Exporter:

```
INSERT INTO `exporter`(`exporter_id`, `company_name`, `trade_license`, `phone`, `email`, `password`) VALUES(?, ?, ?, ?, ?, ?);
```

The screenshot shows the 'Welcome to Admin Panel !' interface. On the left sidebar, the 'Delete Users' button is highlighted with a white star. On the right, the 'Delete Users' form is displayed with the following fields: 'Importer ID' (placeholder: 'Enter Valid Importer ID to Delete') with a red 'Delete Importer' button below it, and 'Exporter ID' (placeholder: 'Enter Valid Exporter ID to Delete') with a red 'Delete Exporter' button below it.

Query for Delete Users:

For Delete Importer:

DELETE FROM importer WHERE importer_id = '\$delete_importer';

For Delete Exporter:

DELETE FROM exporter WHERE exporter_id = '\$delete_exporter';



Welcome to Admin Panel !

Buttons in sidebar: Add New Importer, Add New Exporter, Delete Users, All Users, Warehousing Fee, Approve Clerence, Add Warehouse Product.

Importer ID	Company Name	Trade License	Phone Number	Email
101	Muhammad Export Import Co.	EH485	0145785698	muhammad@gmail.com
102	Rahmans Original Trade	ED485	01825647895	rahmans@gmail.com



Exporter ID	Company Name	Trade License	Phone Number	Email
201	JMI Export Import Co. Ltd.	WE458	01875214785	jmi@gmail.com
202	Dream Plus International Ltd.	ET482	01578248795	dpi@gmail.com
203	Muhammad Export Import Co.	EF582	01875214785	muhammad@gmail.com
204	Trust Infinity Firms Banglades	ED789	01879521478	tifb@gmail.com

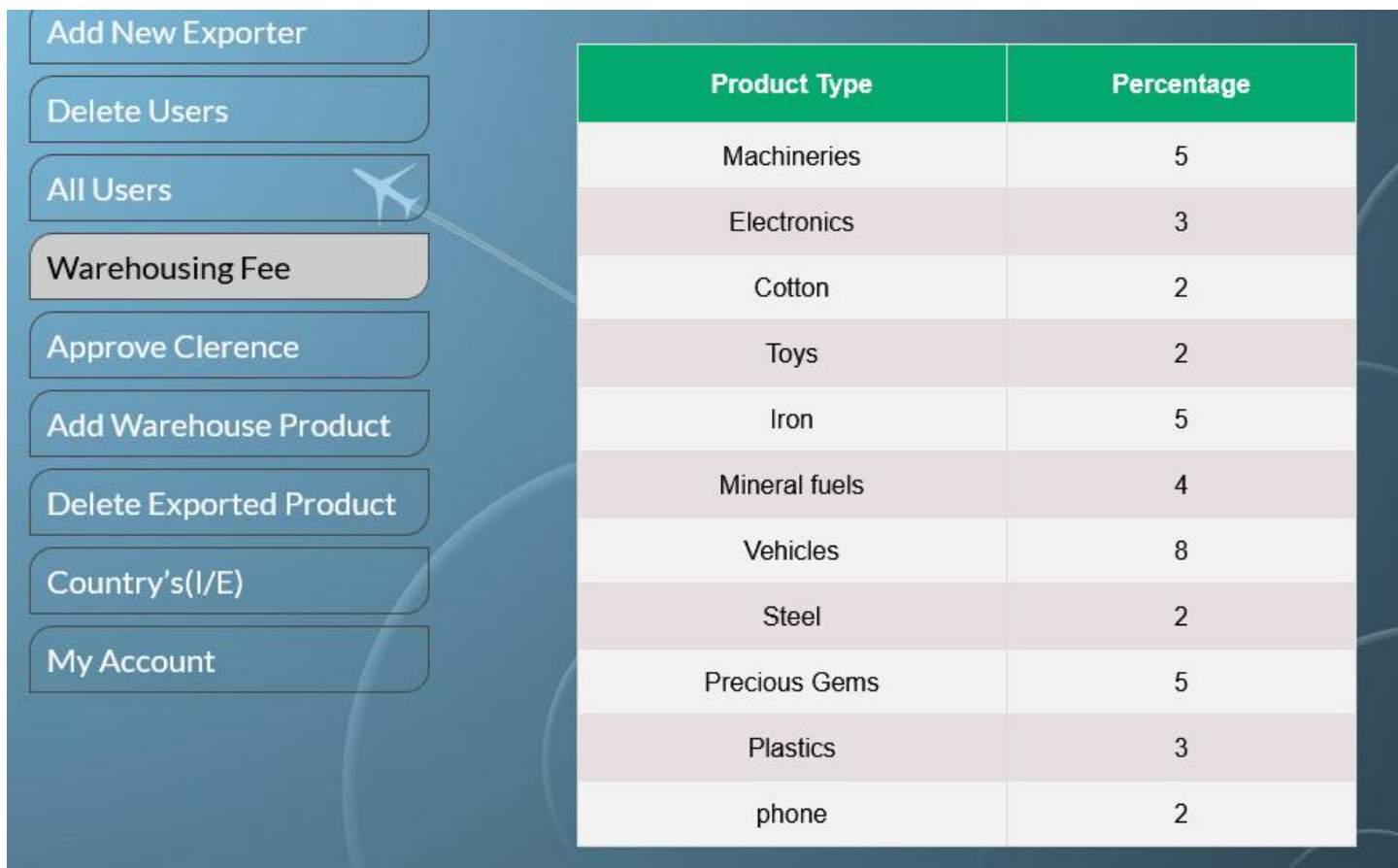
Query for All Users:

For Importer:

SELECT * FROM importer ORDER BY importer_id ASC;

For Exporter:

SELECT * FROM exporter ORDER BY exporter_id ASC;

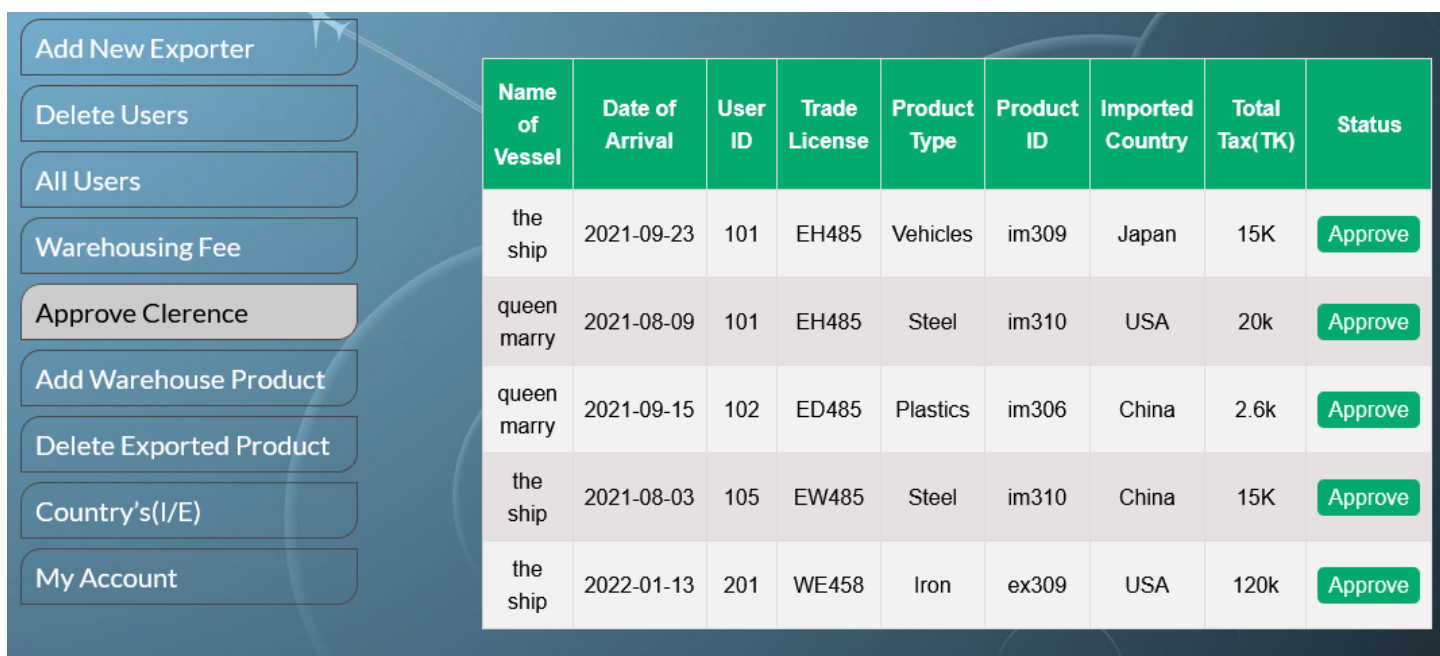


The screenshot shows a web application interface. On the left is a sidebar with several buttons: 'Add New Exporter', 'Delete Users', 'All Users', 'Warehousing Fee' (highlighted), 'Approve Clarence', 'Add Warehouse Product', 'Delete Exported Product', 'Country's(I/E)', and 'My Account'. On the right is a table with two columns: 'Product Type' and 'Percentage'.

Product Type	Percentage
Machineries	5
Electronics	3
Cotton	2
Toys	2
Iron	5
Mineral fuels	4
Vehicles	8
Steel	2
Precious Gems	5
Plastics	3
phone	2

Query for Warehousing Fee:

SELECT * FROM warehouse_fee;



The screenshot shows a web application interface. On the left is a sidebar with several buttons: 'Add New Exporter', 'Delete Users', 'All Users', 'Warehousing Fee' (highlighted), 'Approve Clarence', 'Add Warehouse Product', 'Delete Exported Product', 'Country's(I/E)', and 'My Account'. On the right is a table with columns: 'Name of Vessel', 'Date of Arrival', 'User ID', 'Trade License', 'Product Type', 'Product ID', 'Imported Country', 'Total Tax(TK)', and 'Status'.

Name of Vessel	Date of Arrival	User ID	Trade License	Product Type	Product ID	Imported Country	Total Tax(TK)	Status
the ship	2021-09-23	101	EH485	Vehicles	im309	Japan	15K	Approve
queen marry	2021-08-09	101	EH485	Steel	im310	USA	20k	Approve
queen marry	2021-09-15	102	ED485	Plastics	im306	China	2.6k	Approve
the ship	2021-08-03	105	EW485	Steel	im310	China	15K	Approve
the ship	2022-01-13	201	WE458	Iron	ex309	USA	120k	Approve

Query for Approve Clearance:

SELECT * FROM apply_for_clearence ORDER BY user_id ASC;

WELCOME TO ADMIN PANEL.

Importer ID
Enter Valid Imported ID

Imported Product ID
Exp: im_805

Product Weight(KG)
Exp: 1000kg

Product Type
Exp: Electronics

Imported Country
Exp: Japan

Add Product

Navigation Sidebar:

- Add New Importer
- Add New Exporter
- Delete Users
- All Users
- Warehousing Fee
- Approve Clerence
- Add Warehouse Product
- Delete Exported Product
- Country's(I/E)

Query for Add Warehouse Product:

```
INSERT INTO `im_warehouse`(`importer_id`, `im_product_id`, `product_weight`, `product_type`, `country`) values(?, ?, ?, ?, ?);
```

Exporter ID	Exported Product ID	Product Weight	product Type	Exported Country	Status
201	ex785	1000kg	Electronics	japan	Delete
201	ex586	1600kg	Vehicles	Brazil	Delete
201	ex896	1000kg	cotton	Japan	Delete
201	ex402	1000kg	cotton	China	Delete

Navigation Sidebar:

- Add New Exporter
- Delete Users
- All Users
- Warehousing Fee
- Approve Clerence
- Add Warehouse Product
- Delete Exported Product

Query for Delete Exported Product:

```
DELETE FROM `ex_warehouse` WHERE exporter_id = '$delete_id';
```

Add New Exporter
Delete Users
All Users
Warehousing Fee
Approve Clerence
Add Warehouse Product
Delete Exported Product
Country's(I/E)

Imported Country's	Product Type
Japan	Electronics
China	Cotton
Brazil	Plastics
Bhutan	Mineral fuels
japan	Electronics
Brazil	cotton
Japan	Electronics
China	Cotton

Exported Country's	Product Type
japan	Electronics
Brazil	Vehicles
Japan	cotton
China	cotton

Query for Country's(I/E):

For Imported Country's:

```
SELECT * FROM imported_country;
```

For Exported Country's:

```
SELECT * FROM exported_country ;
```




Query for My Account:

```
SELECT * FROM `admin` WHERE email = '$admin_email';
```



Query for Update Profile:

```
UPDATE admin SET name='$update_name' ,password='$update_password',
```

phone='\$update_phone' WHERE email = '\$admin_email';

User Panel (Importer)

Welcome to Chattogram Customs

Hello Muhammad Export Import Co. !!

product ID	Product Type	Imported Country
im_145	Electronics	japan
im_309	cotton	Brazil
im302	Electronics	Japan
im305	Iron	China
im309	Vehicles	Japan
im310	Steel	USA

Query for All Imported Product:

```
SELECT * FROM `imported_product` WHERE importer_id IN(SELECT  
importer_id FROM importer WHERE email = '$ importer_email');
```

Welcome to Chattogram Customs

Hello Muhammad Export Import Co. !!

Product ID	Product Weight	Product Type	Country
im_145	150kg	Electronics	japan
im305	1600kg	Iron	China
im309	3000kg	Vehicles	Japan
im310	2500kg	Steel	USA

Query for Product in Warehouse:

```
SELECT im_product_id,product_weight,product_type,country FROM  
im_warehouse WHERE importer_id IN(SELECT importer_id FROM  
importer WHERE email = '$ importer_email');
```


Welcome to Chattogram Customs

Hello **Muhammad Export Import Co. !!**

All Imported Product

Product in Warehouse

Apply for Clearance

My Apply

Warehouse Fee

Total Paid Tax

All Clearance

My Account

Name of Vessel

Ship Name

Date of arrival

mm / dd / yyyy

Importer ID

Your Importer ID

Trade License

Exp: AD404

Product type

Exp: Electronics

Product ID

Query for Apply for Clearance:

```
INSERT INTO `apply_for_clearence`(`name_of_vessel`, `date`,  
`user_id`, `trade_license`, `product_type`, `i_e_product_id`, `product_weight`,  
`product_weight`, `i_e_country`, `total_tax_amount`)  
values(?, ?, ?, ?, ?, ?, ?, ?, ?)
```

Welcome to Chattogram Customs

Hello **Muhammad Export Import Co. !!**

All Imported Product

Product in Warehouse

Apply for Clearance

My Apply

Warehouse Fee

Name of Vessel	Date of Arrival	Product Type	Product ID	Imported Country	Total Tax(TK)
the ship	2021-09-23	Vehicles	im309	Japan	15K
queen marry	2021-08-09	Steel	im310	USA	20k

Query for My Apply:

```
SELECT * FROM `apply_for_clearence` WHERE user_id IN(SELECT  
importer_id FROM `importer` WHERE email = '$ importer_email');
```

All Imported Product
Product in Warehouse
Apply for Clearance
My Apply
Warehouse Fee
Total Paid Tax

Product Type	Percentage
Electronics	3
Iron	5
Vehicles	8
Steel	2

Query for Warehousing Fee:

```
SELECT * FROM `warehouse_fee` WHERE product_type IN(SELECT product_type
FROM `im_warehouse` WHERE importer_id IN(SELECT importer_id FROM `importer`
WHERE email = '$importer_email'))
```

All Imported Product
Product in Warehouse
Apply for Clearance
My Apply
Warehouse Fee
Total Paid Tax
All Clearance
My Account

Welcome to Chattogram Customs

Hello **Muhammad Export Import Co. !!**

Product Type	Paid TK
Electronics	15K
cotton	1.5k

Query for Total paid Tax:

```
SELECT product_type,total_tax_amount FROM
`im_customs_clearance` WHERE importer_id IN(SELECT importer_id FROM
`importer` WHERE email = '$importer_email')
```

All Imported Product
Product in Warehouse
Apply for Clearance
My Apply
Warehouse Fee
Total Paid Tax
All Clearance

Name of Vessel	Date of Arrival	Product Type	Product ID	Imported Country's	Total paid Tax
Oasis class	2021-11-02	Electronics	im302	Japan	15K
Queen Mary	2021-08-20	cotton	im_309	Brazil	1.5k

Query for All Clearance:

```
SELECT name_of_vessel,date_of_arrival, product_type,
im_product_id, importer_country,total_tax_amount FROM
im_customs_clearance WHERE importer_id IN(SELECT importer_id FROM importer
WHERE email = '$importer_email')
```

Welcome to Chattogram Customs
Hello Muhammad Export Import Co. !!

All Imported Product
Product in Warehouse
Apply for Clearance
My Apply
Warehouse Fee
Total Paid Tax
All Clearance
My Account

Importer ID: 101
Company Name: Muhammad Export Import Co.
Trade License: EH485
Phone Number: 0145785698
Email: muhammad@gmail.com
Password: muhammad

Edit Profile
Logout

Query for My Account:

```
SELECT * FROM importer WHERE email='$importer_email';
```

Welcome to Chattogram Customs

Hello **Muhammad Export Import Co. !!**

All Imported Product
Product in Warehouse
Apply for Clearance
My Apply
Warehouse Fee
Total Paid Tax
All Clearance
My Account

Importer ID: 101

Company Name: Muhammad Export Import Co.

Trade License: EH485

Phone Number: 0145785698

Email: muhammad@gmail.com

Password: muhammad

[Edit Profile](#) [LogOut](#)

Company Name

Trade License

Phone Number

Password

[Update](#)

Query for Update Profile:

```
UPDATE `importer` SET `company_name`='$company_name',
`trade_license`='$trade_license', `phone`='$update_phone',
`password`='$update_password' WHERE email = '$importer_email'
```

User Panel(Exporter)

Welcome to Chattogram Customs

Hello **JMI Export Import Co. Ltd.!!**

All Exported Product
Apply for Export
My Apply
Product in Warehouse
Warehouse Fee
Total Paid Tax
All Approval
My Account

product ID	Product Type	Exported Country
ex785	Electronics	japan
ex586	Vehicles	Brazil
ex896	cotton	Japan
ex402	cotton	China

Query for All Exported product:

```
SELECT * FROM `exported_product` WHERE exporter_id IN(SELECT
exporter_id FROM exporter WHERE email = '$exporter_email');
```

Welcome to Chattogram Customs

Hello **JMI Export Import Co. Ltd.!!**

All Exported Product

Apply for Export

My Apply

Product in Warehouse

Warehouse Fee

Total Paid Tax

All Approval

My Account

Name of Vessel

Ship Name

Date of Exported

mm / dd / yyyy

Exporter ID

Your Exporter ID

Trade License

Exp: EG405

Product type

Exp: Electronics

Product ID

Exp: ex409

Query for Apply for Export:

```
INSERT INTO `apply_for_clearence`(`name_of_vessel`, `date`,  
`user_id`, `trade_license`, `product_type`,  
`i_e_product_id`, `product_weight`, `i_e_country`, `total_tax_amount`)  
values(?, ?, ?, ?, ?, ?, ?, ?, ?);
```

Welcome to Chattogram Customs

Hello **JMI Export Import Co. Ltd.!!**

All Exported Product

Apply for Export

My Apply

Product in Warehouse

Warehouse Fee

Total Paid Tax

All Approval

My Account

Name of Vessel	Date of Arrival	Product Type	Product ID	Exported Country	Total Tax(TK)
the ship	2022-01-13	Iron	ex309	USA	120k

Query for My Apply:

```
SELECT * FROM `apply_for_clearence` WHERE user_id IN(SELECT
```


exporter_id FROM `exporter` WHERE email = '\$exporter_email')

Welcome to Chattogram Customs

Hello **JMI Export Import Co. Ltd.!!**

All Exported Product

Apply for Export

My Apply

Product in Warehouse

Warehouse Fee

Total Paid Tax

Product ID	Product Weight	Product Type
ex785	1000kg	Electronics
ex586	1600kg	Vehicles
ex896	1000kg	cotton
ex402	1000kg	cotton

Query for Product in Warehouse:

```
SELECT ex_product_id,product_weight,product_type FROM  
ex_warehouse WHERE exporter_id IN(SELECT exporter_id FROM exporter  
WHERE email = '$exporter_email')
```

Welcome to Chattogram Customs

Hello **JMI Export Import Co. Ltd.!!**

All Exported Product

Apply for Export

My Apply

Product in Warehouse

Warehouse Fee

Total Paid Tax

Product Type	Percentage
Electronics	3
Vehicles	8
Cotton	2

Query for Warehouse Fee:

```
SELECT * FROM `warehouse_fee` WHERE product_type IN(SELECT  
product_type FROM `ex_warehouse` WHERE exporter_id IN(SELECT  
exporter_id FROM `exporter` WHERE email = '$exporter_email'));
```


All Exported Product
Apply for Export
My Apply
Product in Warehouse
Warehouse Fee
Total Paid Tax
All Approval
My Account

Product Type	Paid TK
Electronics	20k
Vehicles	1.5k
cotton	20k
cotton	20k

Query for Total paid Tax:

SELECT product_type,total_tax_amount FROM `ex_customs` WHERE exporter_id IN(SELECT exporter_id FROM `exporter` WHERE email ='\$exporter_email');

All Exported Product
Apply for Export
My Apply
Product in Warehouse
Warehouse Fee
Total Paid Tax
All Approval
My Account

Welcome to Chattogram Customs
Hello JMI Export Import Co. Ltd.!!

Name of Vessel	Date of Exported	Product Type	Product ID	Exported Country's	Total paid Tax
queen marry	2021-09-15	Electronics	ex785	japan	20k
the ship	2021-11-11	Vehicles	ex586	Brazil	1.5k
queen marry	2022-01-20	cotton	ex896	Japan	20k
santa maria	2021-11-18	cotton	ex402	China	20k

Query for All Approval:

SELECT name_of_vessel,date_of_exported,product_type,ex_product_id,exporter_country,total_tax_amount FROM ex_customs WHERE exporter_id IN(SELECT exporter_id FROM exporter WHERE email = '\$exporter_email');

Welcome to Chattogram Customs

Hello JMI Export Import Co. Ltd.!!

All Exported Product

Apply for Export

My Apply

Product in Warehouse

Warehouse Fee

Total Paid Tax

All Approval

My Account

Exporter ID: 201

Company Name: JMI Export
Import Co. Ltd.

Trade License: WE458

Phone Number: 01875214785

Email: jmi@gmail.com

Password: jmi

Edit Profile

LogOut

Query for My Account:

```
SELECT * FROM exporter WHERE email='$exporter_email';
```

Welcome to Chattogram Customs

Hello JMI Export Import Co. Ltd.!!

All Exported Product

Apply for Export

My Apply

Product in Warehouse

Warehouse Fee

Total Paid Tax

All Approval

My Account

Exporter ID: 201

Company Name: JMI Export
Import Co. Ltd.

Trade License: WE458

Phone Number: 01875214785

Email: jmi@gmail.com

Password: jmi

Edit Profile

LogOut

Company Name

Enter Company Name

Trade License

Enter New Trade License

Phone Number

New Phone Number

Password

Type New Paassword

Update

Query for Update Profile:

```
UPDATE `exporter` SET `company_name`='$company_name',  
`trade_license`='$trade_license',`phone`='$update_phone',`password`='$  
update_password' WHERE email = '$exporter_email';
```

Discussion:

We made our project with an interface using PHP. In our Customs Supervision System, there are 3 panels- Admin, Importer, Exporter.

Admin panel: An admin can add an importer or exporter by inserting their details.

Also, an admin can delete any importer or exporter by entering their ID. Admin can see importer and exporter information through All Users and also can see warehousing fee for every product in Warehousing Fee.

When an importer applies for their product clearance then the admin can approve that product through Approve Clearance. They add an imported or exported product to the warehouse through Add Warehouse product. After exportation of a product, they will delete that product through Delete Exporting Product. An admin can see all the countries where imports and export made so far. And last the My Account section in the admin panel, where they can see their account details and they can also update their account anytime.

Importer panel: An admin can see all imported products they have imported so far and product details in All Imported products. At Product in Warehouse, they can see how many of their product arrived and are stored there. They can see every product detail here. If they want to get any of their products which already arrived from another country they have to apply for clearance from Apply for clearance option. They can see how much cost for their every product for storing it in the warehouse through Warehouse Fee. They can also see how much tax is assigned for each product and the tax paid by them in Total Paid Tax. After making their clearance they can see that product and details in All Clearance. They can also see and update their profile in My Account like admin.

Exporter panel: The exporter panel is a kind of similar to the importer panel. They can see all of their exported product through All Exported Product. They can apply for their product exportation and also can see their application like importer panel. They will see how many of their product are stored and their details at Product in Warehouse. They will see how much costing their every product through Warehouse Fee. And also they can see how much tax is assigned for each product in Total Paid Tax. An exporter can see how of their product approved by admin so far in All Approval. Lastly, there will be an option for My Account here they can see their profile and update it like admin and importer.

Conclusion:

In the present situation where the population is growing fast, it has become very difficult to maintain our old systems. Due to which many of our needs are not being met and we are losing many opportunities.

The world is moving very fast with technology. If we do not pace with it, we will fall behind. This is a small effort from us to take part to keep pace with the advancing world of technology. Our project will make the import and export process easier. The quality and quantity of industrial production will increase. New chances will increase for the young generation through our project. With all these factors in mind, we have taken the initiative to implement this project to save our generation from mentioned difficulties.