

“Nestle Pakistan”

DESCRIPTION OF PROJECT:

Nestle Pakistan is a Pakistani food company which is a subsidiary of Swiss multinational company Nestle. It is active in dairy, confectionery, coffee, beverages, infant nutrition and bottled drinking water areas. It is based in Lahore, Pakistan. At Nestlé Pakistan, the global ideology of Nutrition, Health and Wellness is inspired by the scientific breakthrough of our founder, Henri Nestlé and ever since it runs in our DNA. We are the leading Food & Beverages Company in Pakistan, reaching out to the remotest areas, offering products and services for all stages of life, every moment of the day. A new database System that will be develop for Nestle Company will have upgraded security, lessen data manipulation and data definition errors by reducing data redundancy (increase data integrity).

TARGET USERS AND PURPOSE OF DATABASE SYSTEM

The purpose of the Nestle database system is to maintain the data of our workers, necessary data of our company regarding stock production and to sustain this data among various branches with confidentiality and consistency. The users are workers, stock production department, salary _department, company details, stock_ finance department, company manager.

EXISTING SYSTEM

The problems faced by the existing database are data inconsistency, data updating errors (due to data redundancy).

FEATURES OF DATA BASE SYSTEM:

1. Management of Data of worker of the company
2. Data management of stock production.
3. Data management of salary department.
4. Data management of company details
5. Data management of stock_ Finance department.
6. Data management of company manager.

SOFTWARE'S TO BE USED:

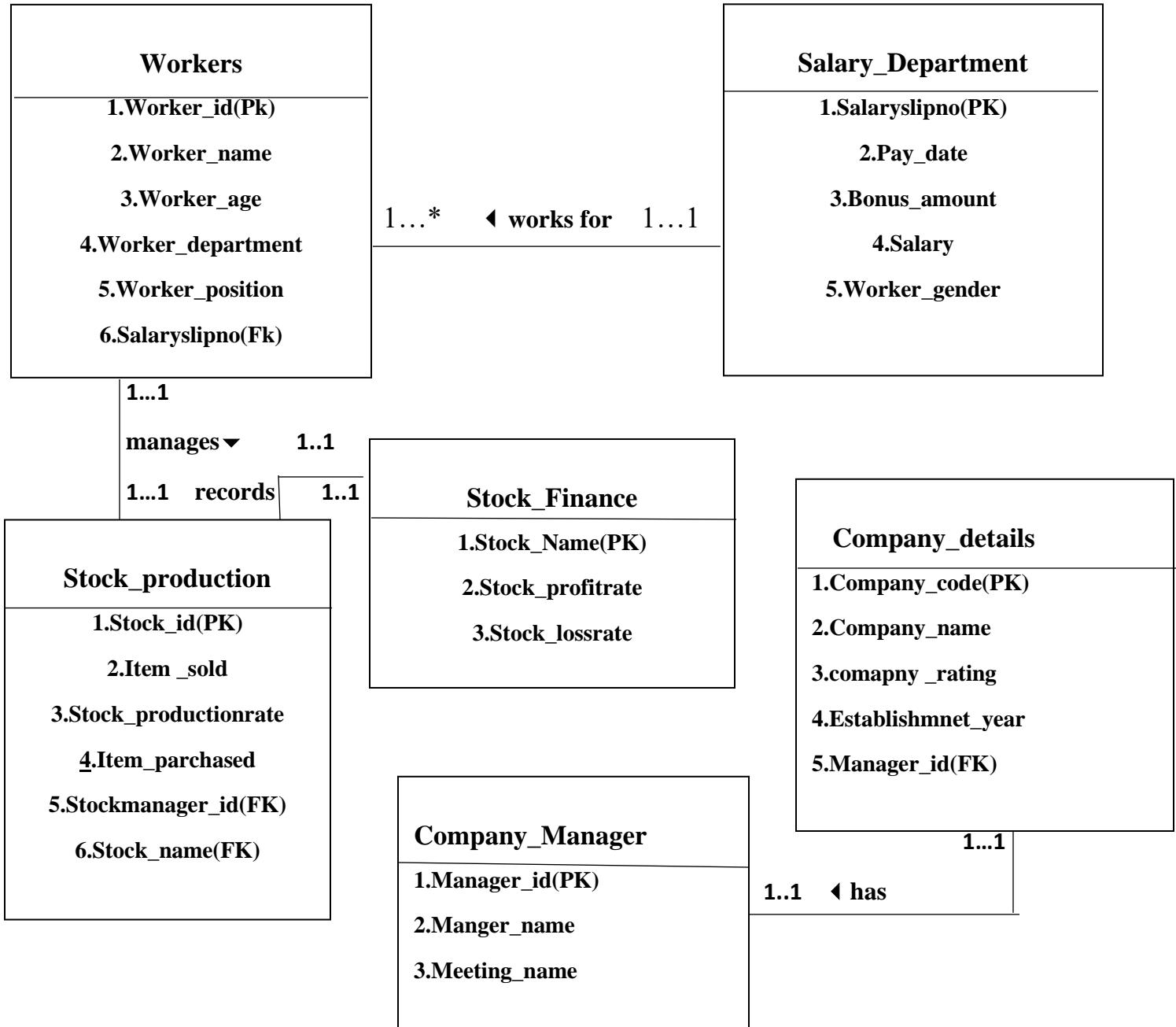
The software to be used to develop this database.

My SQL->develop backend of the database

HTML/CSS->develop frontend of the database

PHP->develop connection between front end and database

Entity-Relation Diagram:



Relational Schema:

1.Workers (Worker_id, Worker_name, Worker_age, Worker_department, Worker_position,Salaryslipno)

In this relation,the Salaryslipno is foreign key from Salary_Department.

2.Salary_Department (Salaryslipno, Pay_date, Salary, Bonus_amount, Worker_gender)

3.Stock_production (Stock_id, Item_sold, Item_purchased, Stock_productionrate, StockManager_id, Stock_name)

In this relation,the StockManager_id (i.e worker_id) and Stock_name is foreign key from the workers and Stock_Finance relation.

4.Stock_Finance (Stock_name, Stock_profitrate, Stock_lossrate)

5.Company_Details (Company_code, Company_name, Company_Rating, Establishment_year, Manager_id)

In this relation, the Manager_id is a foreign key from Company_Manager relation.

6.Company_Manager (Manager_id, Manager_Name, Meeting_Name)

Normalization:

This Relational schema or ERD of our project ‘nestle_pakistan’ is already in its normalized form as it fulfills the conditions necessary for 1NF,2NF and 3NF.

According to 1NF, all the attributes of the database relations are single-valued.

According to 2NF, there exists dependency of all non key attributes on primary key.It means that the primary key of one relation is the foreign key of the other relation in order to maintain a relationship between them.

According to 3NF, the transitive dependencies are not present among the relation's attributes of the nestle_pakistan database.

Queries (Implementation Details and Coding screenshots)

Step 1: creation of database Nestle_Pakistan.

`CREATE DATABASE Nestle_Pakistan;`

The screenshot shows the phpMyAdmin interface on a Windows desktop. The left sidebar lists databases: New, data, information_schema, mysql, nestle_pakistan, oracle_db, performance_schema, phpmyadmin, student_db, and test. The main query window contains the SQL command: `CREATE DATABASE Nestle_Pakistan;`. A green message bar at the top says: "MySQL returned an empty result set (i.e. zero rows). (Query took 0.0082 seconds.)". Below the message, the query is shown again with a success icon. A warning message at the bottom says: "Error: #1046 No database selected". The taskbar at the bottom shows various open applications like Microsoft Edge, File Explorer, and FileZilla. A Microsoft Teams notification at the bottom left says: "teams.microsoft.com is sharing your screen. Stop sharing Hide". The system tray shows the date and time as 11:04 AM 1/23/2022.

Step 2: Creation of table Salary_Department

```
CREATE TABLE Salary_Department ( Salaryslipno int(10) PRIMARY KEY, Pay_date varchar(20), Salary int(20), Bonus_amount int(20), Worker_gender varchar(10) );
```

DESCRIBE salary_department;

The screenshot shows the phpMyAdmin interface for the 'nestle_pakistan' database. The left sidebar lists databases and tables, with 'salary_department' selected. The main area displays the table structure:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	Salaryslipno	int(10)			No	None			Change Drop More
2	Pay_date	varchar(20)	utf8mb4_general_ci		Yes	NULL			Change Drop More
3	Salary	int(20)			Yes	NULL			Change Drop More
4	Bonus_amount	int(20)			Yes	NULL			Change Drop More
5	Worker_gender	varchar(10)	utf8mb4_general_ci		Yes	NULL			Change Drop More

Below the table structure, there are buttons for Print, Propose table structure, Track table, Move columns, Normalize, Add (with a dropdown for column(s) and position), and Go.

The bottom section shows the index configuration:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Rename Drop	PRIMARY	BTREE	Yes	No	Salaryslipno	0	A	No	

There is also a 'Create an index on' input field with the value '1'.

Step 3: Creation of table workers

CREATE TABLE Workers (Worker_id integer(10) primary key NOT NULL, Worker_name varchar(50), Worker_age int(5), Worker_department varchar(50), Worker_position varchar(50), Salarieslipno int(10), FOREIGN KEY(Salarieslipno) REFERENCES salary_department(Salarieslipno));

DESCRIBE workers

The screenshot shows the phpMyAdmin interface for the 'nestle_pakistan' database. The 'workers' table is selected. The table structure is as follows:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	Worker_id	int(10)			No	None			Change Drop More
2	Worker_name	varchar(50)	utf8mb4_general_ci		Yes	NULL			Change Drop More
3	Worker_age	int(5)			Yes	NULL			Change Drop More
4	Worker_department	varchar(50)	utf8mb4_general_ci		Yes	NULL			Change Drop More
5	Worker_position	varchar(50)	utf8mb4_general_ci		Yes	NULL			Change Drop More
6	Salarieslipno	int(10)			Yes	NULL			Change Drop More

Below the table, there are buttons for 'Check all', 'With selected:', 'Browse', 'Change', 'Drop', 'Primary', 'Unique', 'Index', 'Spatial', and 'Fulltext'. There is also a button to 'Add' a new column after 'Salarieslipno'. The 'Indexes' section shows two indexes:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Rename Drop	PRIMARY	BTREE	Yes	No	Worker_id	0	A	No	
Edit Rename Drop	Salarieslipno	BTREE	No	No	Salarieslipno	0	A	Yes	

At the bottom, a message from Microsoft says "Activate Windows Go to Settings to activate Windows." The system tray shows the date and time as 1/23/2022 1:34 PM.

Step 4: create the table Stock_production

CREATE TABLE Stock_production (stock_id int(10) **PRIMARY KEY**, Item_sold int(20), Item_purchased int(20), Stock_productionrate float(20), StockManager_id int(10), Stock_name varchar(50), **FOREIGN KEY**(StockManager_id) **REFERENCES** workers(worker_id), **FOREIGN KEY** (Stock_name) **REFERENCES** stock_finance(stock_name));

DESCRIBE stock_production;

The screenshot shows the phpMyAdmin interface for the 'nestle_pakistan' database. The left sidebar lists databases and tables, with 'stock_production' selected. The main area displays the table structure:

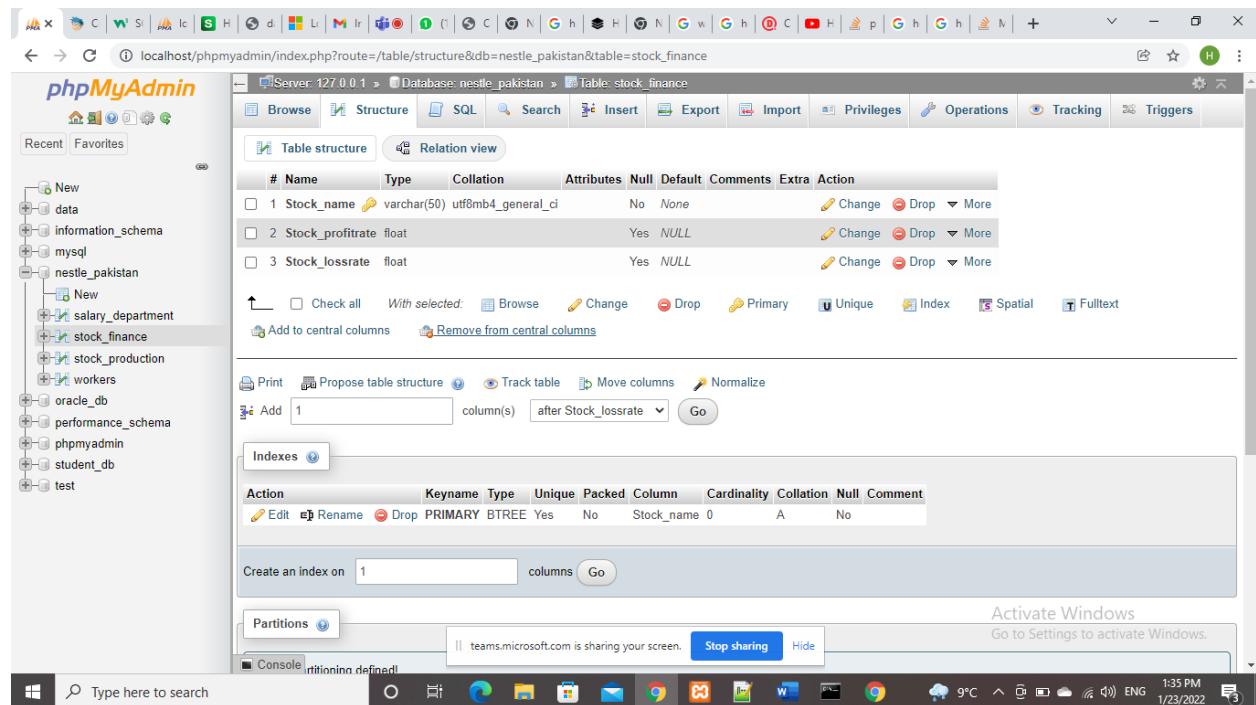
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	stock_id	int(10)			No	None			Change Drop More
2	Item_sold	int(20)			Yes	NULL			Change Drop More
3	Item_purchased	int(20)			Yes	NULL			Change Drop More
4	Stock_productionrate	float			Yes	NULL			Change Drop More
5	StockManager_id	int(10)			Yes	NULL			Change Drop More
6	Stock_name	varchar(50)	utf8mb4_general_ci		Yes	NULL			Change Drop More

Below the table structure, there are buttons for Print, Propose table structure, Track table, Move columns, Normalize, Add column(s), and Go. The bottom section shows the indexes for the table:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Rename Drop	PRIMARY	BTREE	Yes	No	stock_id	0	A	No	Activate Windows
Edit Rename Drop	StockManagerer_id	BTREE	No	No	StockManagerer_id	0	A	Yes	Go to Settings to activate Windows.
Edit Rename Drop	Stock	BTREE	No	No	Stock	1	A	Yes	teams.microsoft.com is sharing your screen.

Step 5: Create table name stock_finance

CREATE TABLE stock_finance (Stock_name varchar(50) **PRIMARY KEY**, Stock_profitrate float(10), Stock_lossrate float(10));
DESCRIBE stock_finance;



The screenshot shows the phpMyAdmin interface for a database named 'nestle_pakistan'. On the left, the database structure is shown with a tree view. Under the 'nestle_pakistan' database, there is a table named 'stock_finance'. The main panel displays the 'Table structure' for this table. The table has three columns:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	Stock_name	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
2	Stock_profitrate	float			Yes	NULL			Change Drop More
3	Stock_lossrate	float			Yes	NULL			Change Drop More

Below the table structure, there are sections for 'Indexes' and 'Partitions'. An alert message from Microsoft Teams is visible at the bottom of the screen.

Step 6: Create table name Company_details

CREATE TABLE company_details(Company_code int(10) primary key, Company_name varchar(50), Company_rating int(5), Establishment_year varchar(20), Manager_id int(10), **FOREIGN KEY**(Manager_id) **REFERENCES** company_manager(Manager_id));

DESCRIBE company_details;

The screenshot shows the phpMyAdmin interface for a MySQL database named 'nestle_pakistan'. The left sidebar lists databases like 'information_schema', 'mysql', and 'nestle_pakistan'. Under 'nestle_pakistan', there are tables such as 'company_details', 'company_manager', 'salary_department', 'stock_finance', 'stock_production', and 'workers'. The 'company_details' table is selected. The main area displays the results of the DESCRIBE query:

```
DESCRIBE company_details;
```

Field	Type	Null	Key	Default	Extra
Company_code	int(10)	NO	PRI	NULL	
Company_name	varchar(50)	YES		NULL	
Company_rating	int(5)	YES		NULL	
Establishment_year	varchar(20)	YES		NULL	
Manager_id	int(10)	YES	MUL	NULL	

Below the table, there are buttons for 'Print', 'Copy to clipboard', and 'Create view'. A 'Bookmark this SQL query' section is also present.

Step 7: Create table name Company_Manager

CREATE TABLE Company_Manager (Manager_id int(10) primary key, Manager_name varchar(50), Meeting_name varchar(50));

DESCRIBE company_manager;

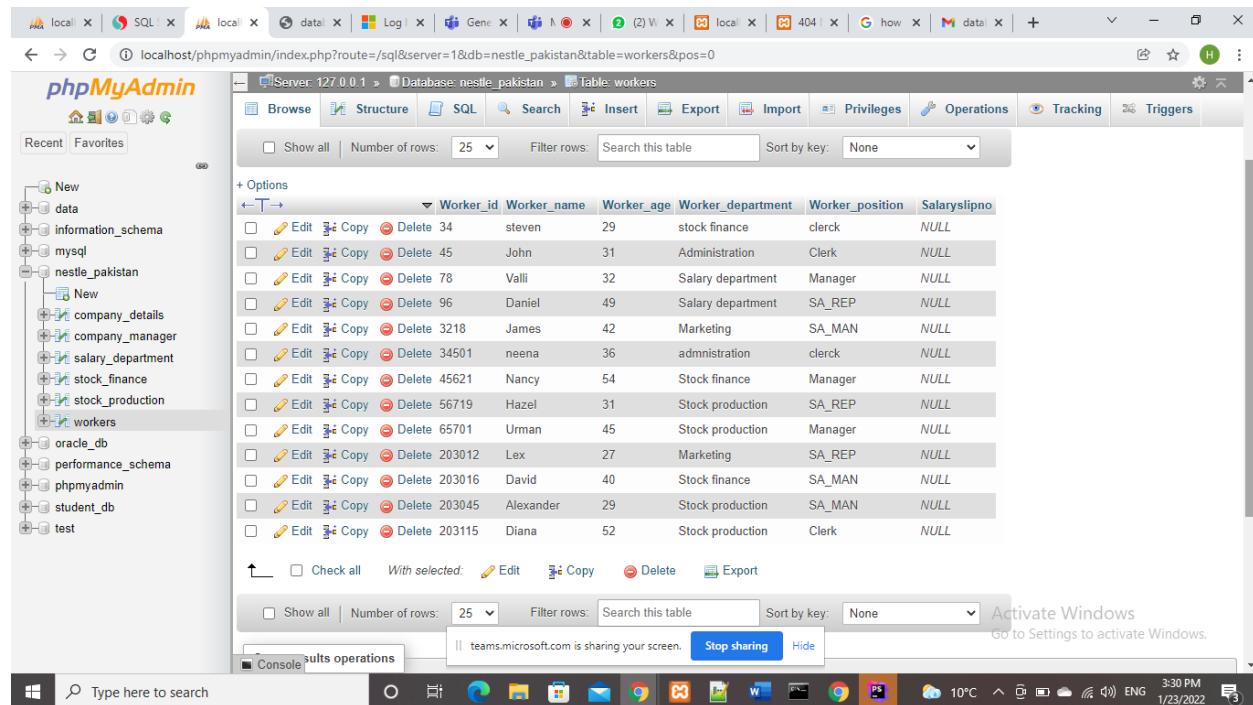
The screenshot shows the phpMyAdmin interface for the 'company_manager' table in the 'nestle_pakistan' database. The table has three columns: Manager_id (int(10)), Manager_name (varchar(50)), and Meeting_name (varchar(50)). The Manager_id column is defined as the primary key. The table structure page includes options for Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations, Tracking, and Triggers. Below the table definition, there are sections for Indexes, Partitions, and a console. A status bar at the bottom indicates 'teams.microsoft.com is sharing your screen.' and a system tray shows the date and time.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	Manager_id	int(10)			No	None			Change Drop More
2	Manager_name	varchar(50)	utf8mb4_general_ci		Yes	NULL			Change Drop More
3	Meeting_name	varchar(50)	utf8mb4_general_ci		Yes	NULL			Change Drop More

Step 8: Inserting the data into the workers:

INSERT INTO workers

(Worker_id,Worker_name,Worker_age,Worker_department,Worker_position)VA
LUES(34,'steven',29,'stock
finance','clerck'),(34501,'neena',36,'admnistration','clerck'),(203012,'Lex',27,'Marke
ting','SA_REP'),(203016,'David',40,'Stock
finance','SA_MAN'),(78,'Valli',32,'Salary
department','Manager'),(203045,'Alexander',29,'Stock
production','SA_MAN'),(45,'John',31,'Administration','Clerk'),(203115,'Diana',52,'
Stock production','Clerk'),(45621,'Nancy',54,'Stock
finance','Manager'),(96,'Daniel',49,'Salary
department','SA_REP'),(65701,'Urman',45,'Stock
production','Manager'),(3218,'James',42,'Marketing','SA_MAN'),(56719,'Hazel',31,
'Stock production','SA_REP');



	Worker_id	Worker_name	Worker_age	Worker_department	Worker_position	Salaryslipno
<input type="checkbox"/>	34	steven	29	stock finance	clerck	NULL
<input type="checkbox"/>	45	John	31	Administration	Clerk	NULL
<input type="checkbox"/>	78	Valli	32	Salary department	Manager	NULL
<input type="checkbox"/>	96	Daniel	49	Salary department	SA_REP	NULL
<input type="checkbox"/>	3218	James	42	Marketing	SA_MAN	NULL
<input type="checkbox"/>	34501	neena	36	admnistration	clerck	NULL
<input type="checkbox"/>	45621	Nancy	54	Stock finance	Manager	NULL
<input type="checkbox"/>	65701	Urman	45	Stock production	SA_REP	NULL
<input type="checkbox"/>	203012	Lex	27	Marketing	SA_REP	NULL
<input type="checkbox"/>	203016	David	40	Stock finance	SA_MAN	NULL
<input type="checkbox"/>	203045	Alexander	29	Stock production	SA_MAN	NULL
<input type="checkbox"/>	203115	Diana	52	Stock production	Clerk	NULL

Step 9: Inserting data into salary department

INSERT INTO salary_department

(Salarylipno, Pay_date, Salary, Bonus_amount, Worker_gender)

VALUES (30057, '3-01-2022', 31000, 5000, 'Female'), (30012, '2-09-2022', 90000, 8000, 'Female'), (30021, '16-01-2022', 25000, 20000, 'Male'), (30011, '30-11-2022', 20000, 6000, 'Male'), (30043, '11-12-2022', 15770, 12000, 'Male'), (30065, '24-09-2022', 50000, 2000, 'Male'), (30022, '21-02-2022', 20000, 1200, 'Female'), (30045, '10-22-2022', 250000, 2300, 'Female'), (30067, '31-04-2022', 70000, 9000, 'Male'), (30098, '14-10-2022', 200000, 1000, 'Male'), (30024, '26-05-2022', 211000, 500, 'Male'), (3006, '28-08-2022', 15000, 200, 'Male'), (3002, '6-02-2022', 10000, 1400, 'Male');

The screenshot shows the phpMyAdmin interface with the following details:

- Server:** 127.0.0.1
- Database:** nestle_pakistan
- Table:** salary_department
- Table Structure:** Shows columns: Salarylipno, Pay_date, Salary, Bonus_amount, Worker_gender.
- Data:** A grid of 15 rows of data inserted into the table. The data is identical to the SQL query above.
- Toolbar:** Includes options for Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations, Tracking, and Triggers.
- Left sidebar:** Shows the database schema with the 'nestle_pakistan' database selected, containing tables like company_details, company_manager, salary_department, stock_finance, stock_production, and workers.
- Bottom status bar:** Shows system information including the date (1/23/2022), time (3:44 PM), and language (ENG).

Step 10: Inserting values into foreign key of workers

UPDATE workers set Salaryslipno=30012 where Worker_id=45;

UPDATE workers set Salaryslipno=30021 where Worker_id=78;

UPDATE workers set Salaryslipno=30011 where Worker_id=96;

UPDATE workers set Salaryslipno=3006 where Worker_id=2318;

UPDATE workers set Salaryslipno=30043 where Worker_id=34501;

UPDATE workers set Salaryslipno=30065 where Worker_id=45621;

UPDATE workers set Salaryslipno=30022 where Worker_id=56719;

UPDATE workers set Salaryslipno=30045 where Worker_id=65701;

UPDATE workers set Salaryslipno=30067 where Worker_id=203012;

UPDATE workers set Salaryslipno=30098 where Worker_id=203016;

UPDATE workers set Salaryslipno=30024 where Worker_id=203045;

UPDATE workers set Salaryslipno=30057 where Worker_id=203115;

UPDATE workers set Salaryslipno=3006 where Worker_id=3218;

	Worker_id	Worker_name	Worker_age	Worker_department	Worker_position	Salaryslipno
<input type="checkbox"/>	34	steven	29	stock finance	clerk	3002
<input type="checkbox"/>	45	John	31	Administration	Clerk	30012
<input type="checkbox"/>	78	Valli	32	Salary department	Manager	30021
<input type="checkbox"/>	96	Daniel	49	Salary department	SA_REP	30011
<input type="checkbox"/>	3218	James	42	Marketing	SA_MAN	3006
<input type="checkbox"/>	34501	neena	36	admminstration	clerk	30043
<input type="checkbox"/>	45621	Nancy	54	Stock finance	Manager	30065
<input type="checkbox"/>	56719	Hazel	31	Stock production	SA_REP	30022
<input type="checkbox"/>	65701	Urman	45	Stock production	Manager	30045
<input type="checkbox"/>	203012	Lex	27	Marketing	SA_REP	30067
<input type="checkbox"/>	203016	David	40	Stock finance	SA_MAN	30098
<input type="checkbox"/>	203045	Alexander	29	Stock production	SA_MAN	30024
<input type="checkbox"/>	203115	Diana	52	Stock production	Clerk	30057

Step 11: Inserting data into stock_finance relation

```
INSERT into stock_finance (Stock_name, Stock_profitrate, Stock_lossrate) VALUES ('Hot coca', 90, 10), ('Novartis Ovaltine', 85, 15), ('Mct Oil', 85, 15), ('Coffee', 95, 5), ('Water', 79, 21), ('Cereals', 89, 11), ('Yogurt', 95, 5), ('Frozen Food', 99, 1), ('Eye care', 89, 11), ('Instant foods', 80, 20), ('Chilled', 96, 4), ('Pet care', 91, 9), ('Beverages', 89, 11);
```

```
SELECT * FROM stock_finance;
```

The screenshot shows the phpMyAdmin interface for the 'nestle_pakistan' database. The left sidebar lists databases and tables, with 'stock_finance' selected. The main area displays the contents of the 'stock_finance' table:

	Stock_name	Stock_profitrate	Stock_lossrate
<input type="checkbox"/>	Beverages	89	11
<input type="checkbox"/>	Cereals	89	11
<input type="checkbox"/>	Chilled	96	4
<input type="checkbox"/>	Coffee	95	5
<input type="checkbox"/>	Eye care	89	11
<input type="checkbox"/>	Frozen Food	99	1
<input type="checkbox"/>	Hot coca	90	10
<input type="checkbox"/>	Instant foods	80	20
<input type="checkbox"/>	Mct Oil	85	15
<input type="checkbox"/>	Novartis Ovaltine	85	15
<input type="checkbox"/>	Pet care	91	9
<input type="checkbox"/>	Water	79	21
<input type="checkbox"/>	Yogurt	95	5

Step 12: Inserting data into stock_production

```
insert into stock_production (Stock_id, Item_sold, Item_purchased, Stock_productionrate, StockManager_id, Stock_name) VALUES (1001, 1500, 2000, 50, 78, 'Hot coca'), ( 1002, 1300, 6710, 70, 45621, 'Novartis Ovaltine'), ( 1003, 1400, 567800, 120, 65701, 'Mct Oil'), ( 1004, 5000, 3210, 90, 78, 'Coffee'), ( 1005, 7800, 5460, 70, 78, 'Water'), ( 1006, 5470, 4300, 40, 45621, 'Cereals'), ( 1007, 5410, 2190, 56, 65701, 'Yogurt'), ( 1008, 801, 5400, 89, 65701, 'Frozen Food'), ( 1009, 8760, 3000, 35, 45621, 'Eye care'), ( 1010, 2103, 6700, 64, 45621, 'Instant foods'), ( 1011, 3012, 2100, 80, 45621, 'Chilled'), ( 1012, 9021, 5000, 100, 65701, 'Pet care'), ( 1013, 9801, 9000, 110, 45621, 'Beverages');
```

stock_id	Item_sold	Item_purchased	Stock_productionrate	StockManager_id	Stock_name
1001	1500	2000	50	78	Hot coca
1002	1300	6710	70	45621	Novartis Ovaltine
1003	1400	567800	120	65701	Mct Oil
1004	5000	3210	90	78	Coffee
1005	7800	5460	70	78	Water
1006	5470	4300	40	45621	Cereals
1007	5410	2190	56	65701	Yogurt
1008	801	5400	89	65701	Frozen Food
1009	8760	3000	35	45621	Eye care
1010	2103	6700	64	45621	Instant foods
1011	3012	2100	80	45621	Chilled
1012	9021	5000	100	65701	Pet care
1013	9801	9000	110	45621	Beverages

Step 13: Inserting data into the company_manager

```
insert into company_manager (Manager_id, Manager_name, Meeting_name) VALUES ( 102011, 'Hamid', 'Board Break Experience at the event'), ( 102023, 'Asher', 'Charting Course'), ( 102045, 'Hades', 'First Friday Forum'), ( 102065, 'Abel', 'Staff Meeting'), ( 102087, 'Adrien', 'Back on Top'), ( 102090, 'Adam', 'Network');
```

```
SELECT * FROM company_manager;
```

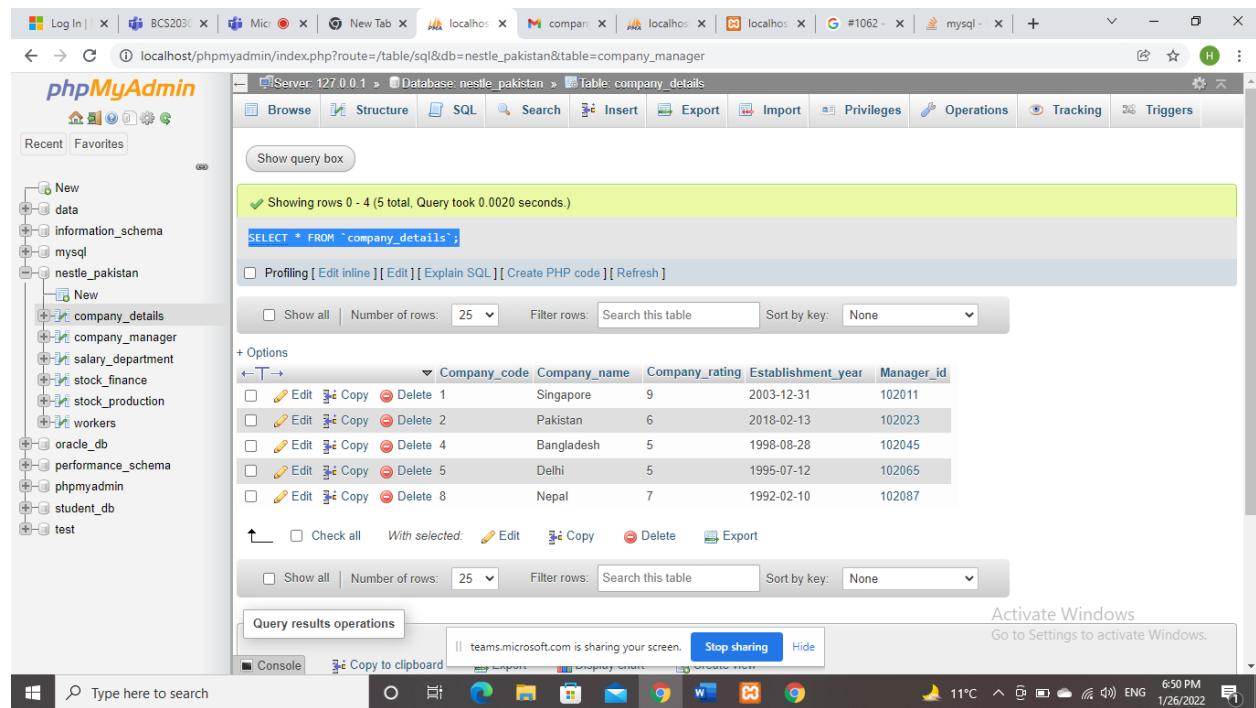
The screenshot shows the phpMyAdmin interface for the 'nestle_pakistan' database. The left sidebar lists databases and tables, including 'company_manager'. The main area displays the contents of the 'company_manager' table:

Manager_id	Manager_name	Meeting_name
102011	Hamid	Board Break Experience at the event
102023	Asher	Charting Course
102045	Hades	First Friday Forum
102065	Abel	Staff Meeting
102087	Adrien	Back on Top
102090	Adam	Network

Step 14: Inserting the data into company_details

```
INSERT INTO company_details (Company_code, Company_name, Company_rating, Establishment_year, Manager_id) VALUES ( 001, 'Singapore', 9, '2003-12-31', 102011), ( 002, 'Pakistan', 6, '2018-02-13', 102023), ( 004, 'Bangladesh', 5, '1998-08-28', 102045), ( 005, 'Delhi', 5, '1995-07-12', 102065), ( 008, 'Nepal', 7, '1992-02-10', 102087 );
```

```
SELECT * FROM `company_details`;
```



The screenshot shows the phpMyAdmin interface for the 'nestle_pakistan' database. The 'company_details' table is selected. The table structure includes columns: Company_code, Company_name, Company_rating, Establishment_year, and Manager_id. The data is as follows:

Company_code	Company_name	Company_rating	Establishment_year	Manager_id
1	Singapore	9	2003-12-31	102011
2	Pakistan	6	2018-02-13	102023
4	Bangladesh	5	1998-08-28	102045
5	Delhi	5	1995-07-12	102065
8	Nepal	7	1992-02-10	102087

Step 15: “Queries”

1. Show the information of all workers whose id is greater than or equal to 100.

SELECT *from workers where worker_id>=100;

The screenshot shows the phpMyAdmin interface for the 'nestle_pakistan' database. The left sidebar lists databases and tables, with 'workers' selected. The main area displays the results of the query 'SELECT * from workers where worker_id>=100;'. The results table has columns: Worker_id, Worker_name, Worker_age, Worker_department, Worker_position, and Salarieslipno. The data shows 9 rows of workers with IDs ranging from 3218 to 203115. The interface includes various navigation and search tools at the top and bottom.

Worker_id	Worker_name	Worker_age	Worker_department	Worker_position	Salarieslipno
3218	James	42	Marketing	SA_MAN	3006
34501	neena	36	administration	clerk	30043
45621	Nancy	54	Stock finance	Manager	30065
56719	Hazel	31	Stock production	SA_REP	30022
65701	Urman	45	Stock production	Manager	30045
203012	Lex	27	Marketing	SA_REP	30067
203016	David	40	Stock finance	SA_MAN	30098
203045	Alexander	29	Stock production	SA_MAN	30024
203115	Diana	52	Stock production	Clerk	30057

2. Show all the items purchased and sort them by the stock id in descending order.

SELECT Item_purchased,Stock_id **from Stock_production **ORDER BY** Stock_id **DESC;****

The screenshot shows the phpMyAdmin interface on a Windows desktop. The left sidebar lists databases: New, data, information_schema, mysql, nestle_pakistan, oracle_db, performance_schema, phpmyadmin, student_db, and test. The 'nestle_pakistan' database is selected. The main area shows the 'Stock_production' table with the following data:

	Item_purchased	Stock_id
<input type="checkbox"/>	9000	1013
<input type="checkbox"/>	5000	1012
<input type="checkbox"/>	2100	1011
<input type="checkbox"/>	6700	1010
<input type="checkbox"/>	3000	1009
<input type="checkbox"/>	5400	1008
<input type="checkbox"/>	2190	1007
<input type="checkbox"/>	4300	1006
<input type="checkbox"/>	5460	1005
<input type="checkbox"/>	3210	1004
<input type="checkbox"/>	567800	1003
<input type="checkbox"/>	6710	1002
<input type="checkbox"/>	2000	1001

At the bottom of the interface, there is a message: "Activate Windows Go to Settings to activate Windows." The taskbar at the bottom shows various open applications including Microsoft Teams, which is currently sharing the screen.

3. Show the name of the workers whose age is between 30 to 50.

SELECT Worker_name from workers where Worker_age BETWEEN 30 AND 50;

The screenshot shows the phpMyAdmin interface on a Windows desktop. The left sidebar lists databases: New, information_schema, mysql, nestle_pakistan, oracle_db, performance_schema, phpmyadmin, student_db, and test. The nestle_pakistan database is selected. In the center, under the 'workers' table, a query result is displayed:

```
SELECT Worker_name from workers where Worker_age BETWEEN 30 AND 50;
```

The results show eight rows of worker names:

Worker_name
John
Valli
Daniel
James
neena
Hazel
Urman
David

At the bottom, a message from Microsoft Teams says "teams.microsoft.com is sharing your screen." The taskbar at the bottom shows various open applications including File Explorer, Edge, Mail, and Google Chrome.

4. Show the manager names for each company.

```
SELECT m.Manager_name,Company_name c from Company_Manager m JOIN Company_Details c on m.Manager_id=c.Manager_id;
```

The screenshot shows the phpMyAdmin interface for a MySQL database named 'nestle_pakistan'. The left sidebar lists various databases and tables. The main area displays the results of a SELECT query:

```
SELECT m.Manager_name,Company_name c from Company_Manager m JOIN Company_Details c on m.Manager_id=c.Manager_id;
```

The results table shows the following data:

Manager_name	c
Hamid	Singapore
Asher	Pakistan
Hades	Bangladesh
Abel	Delhi
Adrien	Nepal

Below the table, there are buttons for 'Print' and 'Copy to clipboard'. A status bar at the bottom right indicates 'Activate Windows' and shows the date and time as '7:43 PM 1/26/2022'.

5. Show the record of the stock finance name starting from 'A' or 'C'.

`SELECT *from Stock_Finance where Stock_name LIKE 'A%' OR Stock_name LIKE 'C%';`

The screenshot shows the phpMyAdmin interface on a Windows desktop. The left sidebar lists databases: 'nestle_pakistan' is selected. The main area shows the 'Stock_Finance' table with three rows of data. The bottom status bar indicates 'Activate Windows'.

Query results:

```
SELECT *from Stock_Finance where Stock_name LIKE 'A%' OR Stock_name LIKE 'C%';
```

	Stock_name	Stock_profitrate	Stock_lossrate
<input type="checkbox"/>	Cereals	89	11
<input type="checkbox"/>	Chilled	96	4
<input type="checkbox"/>	Coffee	95	5

6. Show the manager names of the company whose name have the a in ending.

SELECT *FROM Company_Manager where Manager_Name LIKE '%a';

The screenshot shows the phpMyAdmin interface on a Windows desktop. The left sidebar displays a tree view of databases and tables, including 'nestle_pakistan' which contains 'company_manager'. The main panel shows the results of a SQL query:

```
SELECT * FROM Company_Manager where Manager_Name LIKE '%a';
```

The results table has columns: Manager_id, Manager_name, Meeting_name. There are no rows returned. A message at the top says: "MySQL returned an empty result set (i.e. zero rows). (Query took 0.0027 seconds.)".

The taskbar at the bottom shows various open applications like Microsoft Edge, File Explorer, and Google Chrome. A message from Microsoft Teams indicates that the screen is being shared.

7. Display the average of stock production rate.

SELECT avg(Stock_productionrate) from Stock_production;

The screenshot shows the phpMyAdmin interface on a Windows desktop. The left sidebar lists databases: New, information_schema, mysql, nestle_pakistan, oracle_db, performance_schema, phpmyadmin, student_db, and test. The nestle_pakistan database is selected. In the main area, the 'SQL' tab is active, displaying the query:

```
SELECT avg(Stock_productionrate) from Stock_production;
```

Below the query, the result is shown:

+ Options
avg(Stock_productionrate)
74.92307692307692

At the bottom, there are operations like Print, Copy to clipboard, Export, Display chart, and Create view. A message at the bottom indicates "teams.microsoft.com is sharing your screen." The taskbar at the bottom shows various application icons.

8. Display the Stock_name when the profit rate is greater than 20% and lossrate is less than 5%.

SELECT Stock_name from Stock_Finance where Stock_profitrate>20 AND Stock_lossrate<5;

The screenshot shows the phpMyAdmin interface for a MySQL database named 'nestle_pakistan'. The left sidebar lists databases like 'data', 'information_schema', 'mysql', and 'nestle_pakistan' which contains tables such as 'company_details', 'company_manager', 'salary_department', 'stock_finance', 'stock_production', and 'workers'. The main panel displays the results of a query: 'SELECT Stock_name from Stock_Finance where Stock_profitrate>20 AND Stock_lossrate<5;'. The results show two rows: 'Chilled' and 'Frozen Food'. Below the results, there are buttons for 'Edit', 'Copy', and 'Delete'. At the bottom, there are links for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'. A 'Bookmark this SQL query' button is also present. The status bar at the bottom right shows the date and time: '1/26/2022 7:56 PM'.

9. Display the worker name, Slip number , Pay_date, Salary and Bonus_amount of the workers salary.

```
SELECT w.Worker_name, s.Salaryslipno, s.Pay_date, s.Salary, s.Bonus_amount fr  
om workers w JOIN Salary_Department s on s.salaryslipno=w.salaryslipno;
```

The screenshot shows the phpMyAdmin interface for a MySQL database named 'nestle_pakistan'. The current table is 'Stock_Finance'. The query executed is:

```
SELECT w.Worker_name, s.Salaryslipno, s.Pay_date, s.Salary, s.Bonus_amount from workers w JOIN Salary_Department s on s.salaryslipno=w.salaryslipno;
```

The results are displayed in a table:

Worker_name	Salaryslipno	Pay_date	Salary	Bonus_amount
steven	3002	6-02-2022	10000	1400
John	30012	2-09-2022	90000	8000
Valli	30021	16-01-2022	25000	20000
Daniel	30011	30-11-2022	20000	6000
James	3006	28-08-2022	15000	200
neena	30043	11-12-2022	15770	12000
Nancy	30065	24-09-2022	50000	2000
Hazel	30022	21-02-2022	20000	1200
Urman	30045	10-22-2022	250000	2300
Lex	30067	31-04-2022	70000	9000
David	30098	14-10-2022	200000	1000
Alexander	30024	26-05-2022	210000	500
Diana	30057	3-01-2022	31000	500

10. Display the data of all workers except JOHN.

SELECT *from Workers where Worker_name!=John';

The screenshot shows the phpMyAdmin interface for a MySQL database named 'nestle_pakistan'. The 'Workers' table is selected. A SQL query is entered in the query editor: 'SELECT *from Workers where Worker_name!=John';. The results show 14 rows of worker data. The columns are: Worker_id, Worker_name, Worker_age, Worker_department, Worker_position, and Salarieslipno. The data includes various workers like Steven, Valli, Daniel, James, Neena, Nancy, Hazel, Urman, Lex, David, Alexander, Diana, etc., across different departments such as stock finance, salary department, marketing, administration, and stock production.

Worker_id	Worker_name	Worker_age	Worker_department	Worker_position	Salarieslipno
34	steven	29	stock finance	clerk	3002
78	Valli	32	Salary department	Manager	30021
96	Daniel	49	Salary department	SA_REP	30011
3218	James	42	Marketing	SA_MAN	3006
34501	neena	36	administration	clerk	30043
45621	Nancy	54	Stock finance	Manager	30065
56719	Hazel	31	Stock production	SA_REP	30022
65701	Urman	45	Stock production	Manager	30045
203012	Lex	27	Marketing	SA_REP	30067
203016	David	40	Stock finance	SA_MAN	30098
203045	Alexander	29	Stock production	SA_MAN	30024
203115	Diana	52	Stock production	Clerk	30057

11. Sort the data of the company manager in a descending order.

SELECT *FROM Company_Manager ORDER BY Manager_id **DESC**;

The screenshot shows the phpMyAdmin interface for a MySQL database named 'nestle_pakistan'. The left sidebar lists databases like 'data', 'information_schema', 'mysql', and 'nestle_pakistan'. Under 'nestle_pakistan', there are tables: 'New', 'company_details', 'company_manager', 'salary_department', 'stock_finance', 'stock_production', and 'workers'. The 'company_manager' table is selected, showing its structure with columns: Manager_id, Manager_name, and Meeting_name. A green status bar at the top indicates 'Showing rows 0 - 5 (6 total, Query took 0.0033 seconds.) [Manager_id: 102090... - 102011...]' and displays the SQL query: 'SELECT * FROM Company_Manager ORDER BY Manager_id DESC;'. Below the table, a message from Microsoft Teams says '|| teams.microsoft.com is sharing your screen.' with buttons 'Stop sharing' and 'Hide'. The bottom status bar shows system information: 'Activate Windows', 'Go to Settings to activate Windows.', 'Console', 'Copy to clipboard', 'Stop sharing', 'Hide', '10°C', 'ENG', '8:04 PM', and '1/26/2022'.

Manager_id	Manager_name	Meeting_name
102090	Adam	Network
102087	Adrien	Back on Top
102065	Abel	Staff Meeting
102045	Hades	First Friday Forum
102023	Asher	Charting Course
102011	Hamid	Board Break Experience at the event

12. Find out the location of company named Pakistan.

`SELECT LOCATE('Pakistan',Company_Details.Company_name) from Company_Details;`

The screenshot shows the phpMyAdmin interface for a MySQL database named 'nestle_pakistan'. The left sidebar lists various databases and tables. The main area displays the results of the SQL query:

```
SELECT LOCATE('Pakistan',Company_Details.Company_name) from Company_Details;
```

The results table shows the output of the LOCATE function for each row in the 'Company_Details' table. The results are:

LOCATE('Pakistan',Company_Details.Company_name)
0
1
0
0
0

Below the results, there are options to print, copy to clipboard, export, display chart, or create a view of the results.

13. Delete the data of the Stock named “Cereals”.

DELETE FROM stock_production where Stock_name='Cereals';

The screenshot shows the phpMyAdmin interface for the 'nestle_pakistan' database. The left sidebar lists databases and tables, with 'stock_production' selected. The main area displays the contents of the 'stock_production' table:

stock_id	Item_sold	Item_purchased	Stock_productionrate	StockManager_id	Stock_name
1001	1500	2000	50	78	Hot coca
1002	1300	6710	70	45621	Novartis Ovaltine
1003	1400	567800	120	65701	Mct Oil
1004	5000	3210	90	78	Coffee
1005	7800	5460	70	78	Water
1007	5410	2190	56	65701	Yogurt
1008	801	5400	89	65701	Frozen Food
1009	8760	3000	35	45621	Eye care
1010	2103	6700	64	45621	Instant foods
1011	3012	2100	80	45621	Chilled
1012	9021	5000	100	65701	Pet care
1013	9801	9000	110	45621	Beverages

14. Update the ratings of all companies to 5.

UPDATE company_Details SET Company_Rating=5;

The screenshot shows the phpMyAdmin interface for the 'nestle_pakistan' database. The left sidebar lists databases and tables, with 'company_details' selected. The main area displays the contents of the 'company_details' table:

Company_code	Company_name	Company_rating	Establishment_year	Manager_id
1	Singapore	5	2003-12-31	102011
2	Pakistan	5	2018-02-13	102023
4	Bangladesh	5	1998-08-28	102045
5	Delhi	5	1995-07-12	102065
8	Nepal	5	1992-02-10	102087

Below the table, there are buttons for 'Edit', 'Copy', and 'Delete' for each row. The status bar at the bottom indicates 'Activate Windows' and shows system information like '10°C', 'ENG', and the date '1/26/2022'.

15. Display all the data of company having the code 005.

SELECT *FROM Company_Details where Company_code=005;

The screenshot shows the phpMyAdmin interface for a MySQL database named 'nestle_pakistan'. The left sidebar lists databases and tables, including 'Company_Details'. The main area displays the results of the query 'SELECT *FROM Company_Details where Company_code=005;'. The results table has columns: Company_code, Company_name, Company_rating, Establishment_year, and Manager_id. One row is shown: Company_code 5, Company_name Delhi, Company_rating 5, Establishment_year 1995-07-12, and Manager_id 102065. Below the table are options to edit, copy, or delete the row, and buttons for Print, Copy to clipboard, Export, Display chart, and Create view. A message at the bottom indicates that 'teams.microsoft.com is sharing your screen.' and provides a 'Stop sharing' button.

Company_code	Company_name	Company_rating	Establishment_year	Manager_id
5	Delhi	5	1995-07-12	102065

(Front End of the nestle_pakistan database)

1.db_connection

```
<?php  
  
$servername = "localhost";  
  
$username = "root";  
  
$password = "";  
  
$databasename="nestle_pakistan";  
  
// Create connection  
  
$conn = mysqli_connect($servername, $username, $password,$databasename);  
  
// Check connection  
  
if (!$conn)  
{  
  
die("Connection failed: " . mysqli_connect_error());  
  
}  
  
echo "Connected successfully";  
  
?>
```

2. style.css

```
body{  
    font-size:19px;  
}  
  
table{  
    width: 50%;  
    margin: 30px auto;  
    border-collapse: collapse;  
    text-align: left;  
}  
  
tr{
```

```
border-bottom:1px solid #cfcfcf;
}

th,td{
    border: none;
    height: 30px;
    padding: 2px;
}

tr:hover{
    background: #F5F5F5;
}

form{
    width:45%;
    margin:50px auto;
    text-align:left;
    padding: 20px;
    border: 1px solid #bbbbbb;
    border-radius: 5px;
}

.input-group{
    margin: 10px 0px 10px 0px;
}

.input-group label {
    display: block;
    text-align: left;
    margin:3px;
}

.input-group input{
    height: 30px;
}
```

```
        width: 93%;  
        padding: 5px 10px;  
        font-size: 16px;  
        border-radius: 5px;  
        border: 1px solid gray;  
    }  
  
.btn{  
    padding: 10px;  
    font-size: 15px;  
    color: white;  
    background: #5F9EA0;  
    border: none;  
    border-radius: 5px;  
}  
  
.edit_btn{  
    text-decoration: none;  
    padding: 2px 5px;  
    background: #2E8B57;  
    color: white;  
    border-radius: 3px;  
}  
  
.del_btn{  
    text-decoration: none;  
    padding: 2px 5px;  
    color: white;  
    border-radius: 3px;  
    background: #800000;  
}
```

```
.msg{  
    margin: 30px auto;  
    padding: 10px;  
    border-radius: 5px;  
    color: #3c763d;  
    background: #dff0d8;  
    border: 1px solid #3c763d;  
    width: 50%;  
    text-align: centre;  
}
```

3. first.php

```
<html>  
<head>  
    <link rel="stylesheet" type="text/css" href="style.css">  
</head>  
<body>  
<form action="phpcode.php" method="post">  
    <div class="input-group">  
        <label> worker id</label> <input type="text" name="worker_id">  
    </div>  
    <div class="input-group">  
        <label> worker Name </label> <input type="text" name="worker_name">  
    </div>  
    <div class="input-group">  
        <label> worker age</label> <input type="text" name="worker_age">  
    </div>
```

```
<div class="input-group">
    <label> worker department</label> <input type="text"
name="worker_department">
</div>

<div class="input-group">
    <label> worker position</label> <input type="text" name="worker_position">
</div>

<div class="input-group">
    <label> worker salary slip number</label> <input type="text"
name="salaryslipno">
</div>

<div class="input-group">
    <button class="btn" type="submit" name="save">Save</button>
</div>
</form>
```

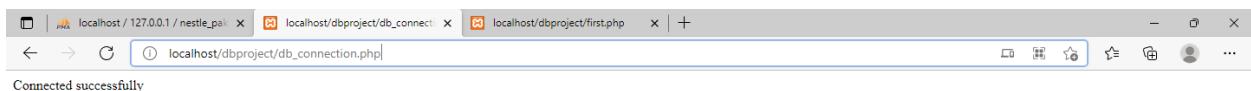
4. phpcode.php

```
<?php
include('db_connection.php');

$worker_id="";
$worker_name="";
$worker_age="";
$worker_department="";
```

```
$worker_position="";
$salaryslipno="";
if(isset($_POST['save'])){
    //echo "mariam"; exit;
    $worker_id = $_POST['worker_id'];
    $worker_name = $_POST['worker_name'];
    $worker_age = $_POST['worker_age'];
    $worker_department=$_POST['worker_department'];
    $worker_position=$_POST['worker_position'];
    $salaryslipno=$_POST['salaryslipno'];
    $query="INSERT INTO workers(worker_id, worker_name, worker_age,
    worker_department, worker_position, salaryslipno)
    VALUES('$worker_id','$worker_name' ,'$worker_age'
    ,'$worker_department','$worker_position','$salaryslipno')";
    //exit;
    //mysqli_query($conn,$query:"INSERT INTO student_info(student_id, student_name,
    student_address)
    //VALUES('$student_id', '$student_name', '$student_add')");
    $yes=mysqli_query($conn, $query);
    //echo"saved";
}
```

(Final Output of Front end)



A screenshot of a Microsoft Edge browser window. The address bar shows the URL `localhost/dbproject/first.php`. The page displays a form with the following fields:

worker id	<input type="text" value="123"/>
worker Name	<input type="text" value="Zoya"/>
worker age	<input type="text" value="23"/>
worker department	<input type="text" value="finance"/>
worker position	<input type="text" value="manager"/>
worker salary slip number	<input type="text" value="12378"/>

Below the form is a green "Save" button.



localhost / 127.0.0.1 / nestle_pak x localhost/dbproject/db_connect x localhost/dbproject/phpcode.php x +

localhost/phpmyadmin/index.php?route=/table/sql&db=nestle_pakistan&table=workers

phpMyAdmin

Recent Favorites

Server 127.0.0.1 > Database: nestle_pakistan > Table: workers

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Show query box

Showing rows 0 - 13 (14 total, Query took 0.0007 seconds.)

SELECT * FROM `workers`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

	Worker_id	Worker_name	Worker_age	Worker_department	Worker_position	Salaryslipno
<input type="checkbox"/>	Edit Copy Delete	steven	29	stock finance	clerk	3002
<input type="checkbox"/>	Edit Copy Delete	John	31	Administration	Clerk	30012
<input type="checkbox"/>	Edit Copy Delete	Valli	32	Salary department	Manager	30021
<input type="checkbox"/>	Edit Copy Delete	Daniel	49	Salary department	SA_REP	30011
<input checked="" type="checkbox"/>	Edit Copy Delete	Zoya	23	finance	manager	12376
<input type="checkbox"/>	Edit Copy Delete	James	42	Marketing	SA_MAN	3006
<input type="checkbox"/>	Edit Copy Delete	neena	36	admistration	clerck	30043
<input type="checkbox"/>	Edit Copy Delete	Nancy	54	Stock finance	Manager	30065
<input type="checkbox"/>	Edit Copy Delete	Hazel	31	Stock production	SA_REP	30022
<input type="checkbox"/>	Edit Copy Delete	Urman	45	Stock production	Manager	30045
<input type="checkbox"/>	Edit Copy Delete	Lex	27	Marketing	SA_REP	30067
<input type="checkbox"/>	Edit Copy Delete	David	40	Stock finance	SA_MAN	30098
<input type="checkbox"/>	Edit Copy Delete	Alexander	29	Stock production	SA_MAN	30024
<input type="checkbox"/>	Edit Copy Delete	Diana	52	Stock production	Clerk	30057

Check all With selected: Edit Copy Delete Export

Type here to search

Console

9°C Fog 9:47 AM 2/1/2022