

IS510 Project Description Template

Project Title

Team Members

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Project Brief:

We want to design a system that will be managed by database management system for cloth store business in Pakistan. There is both sale and purchase part associated with it and for now they are managed manually. It deals with on average 50 customers daily but deals with more than that on certain occasions like Eid, Christmas, etc. Cloths are of different types and different sizes which needs different kind of measurements. This systems will help automate the system and mainly target online customers or an ease for customers associated with this.

Database Requirements

The main purpose of this database system is to keep cover every aspect of the business and people associated with it. We wanted to create history of sell purchase for the clothing store run on smaller scale for now.

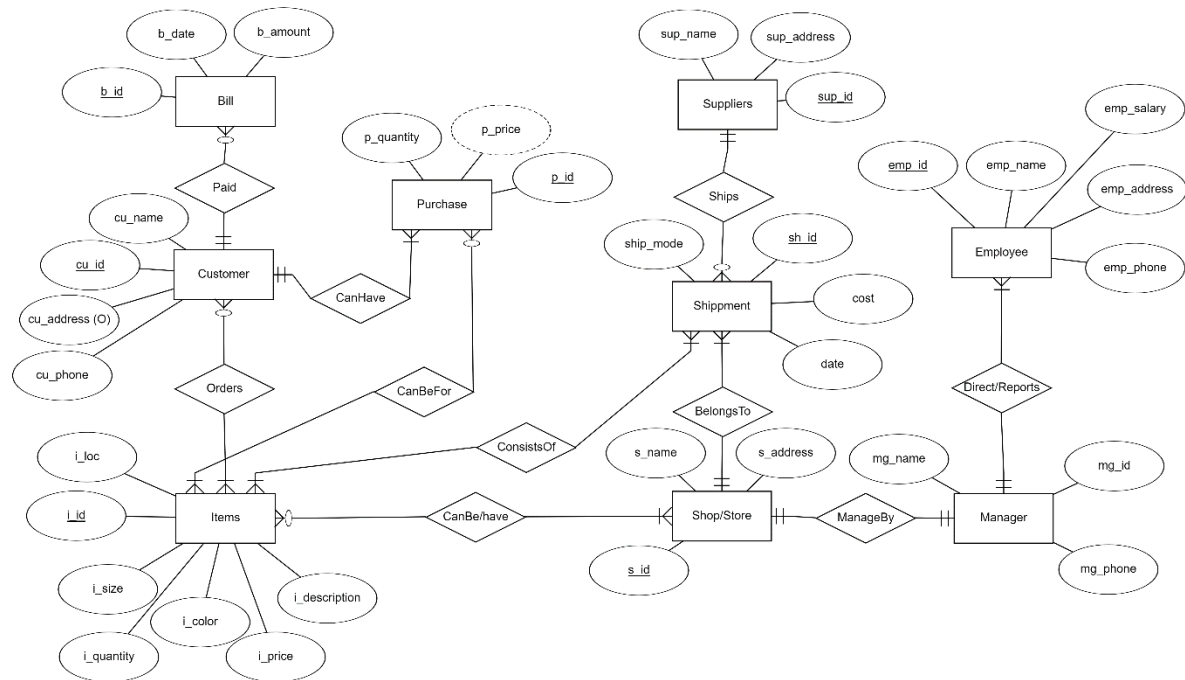
The supplier is contacted through phone and asked for supply. Each supplier has name and address associated with it. Supplier ships the order with shipment id exchange who place the order. Shipment is sent through different mode of shipments and cost of shipment, date of shipment and shipment ID is required.

Stores associated with the shop receives the shipment. It is similar to shop which has its name, physical address. Each store / shop is managed by a manager with name, phone number, and manages employers (sales man) at shop with employer ID, name, address, phone number, salary.

Each shop/store contains different kinds of items. Each item has its item ID, name (description), color, quantity, size, location in store, price. Customer of any gender can purchase items. Customer has ID, name, address, phone number. Customers purchases items with purchase id, quantity of item, and will have price associated with it. Purchase can be for one or multiple items. Items can be either purchased by none or many customers. Customer pays bill with bill id, bill date and bill amount.

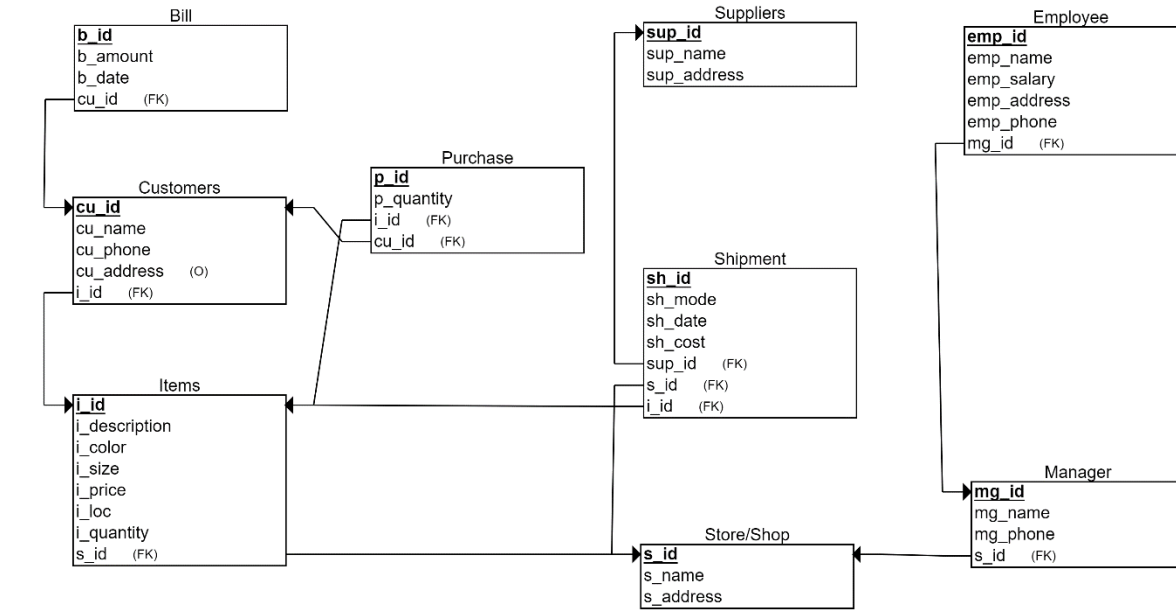
Entity Relationship Diagram

The first step in the creation of the database is an ERD model. The ERD model is based on the description shown above. The diagram is shown below:



Relational Schema

This section shows the relational schema with all the primary and foreign keys clearly specified.



Database Schema with SQL

This section shows the SQL used to create the database and tables. You may include part of DML that was used to populate the tables with data.

I created manually database by name 'store', then created tables for above schema with data entry. (I mostly worked on localphpadmin sever using WampServer application)

```
--
-- Created Database buy name: `store`
--

-----

-- Table structure for table `shop`
--

CREATE TABLE `shop` (
  `s_id` int(11) NOT NULL,
  `s_name` varchar(255) NOT NULL,
  `s_address` varchar(255) NOT NULL,
  PRIMARY KEY (`s_id`)
```

```

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `shop`
--

INSERT INTO `shop` (`s_id`, `s_name`, `s_address`) VALUES
(1, 'Bostan Brothers', 'B07 Barkat Plaza, Rawalpindi, Punjab, Pakistan'),
(2, 'Gulistan Brothers', 'B10 Barkat Plaza, Rawalpindi, Punjab, Pakistan');

--
-- Table structure for table `manager`
--

CREATE TABLE `manager` (
  `mg_id` int(11) NOT NULL,
  `mg_name` varchar(255) NOT NULL,
  `mg_phone` varchar(30) NOT NULL,
  `s_id` int(11) NOT NULL,
  PRIMARY KEY (`mg_id`),
  FOREIGN KEY (`s_id`) REFERENCES shop(`s_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `manager` (`mg_id`, `mg_name`, `mg_phone`, `s_id`) VALUES
(1, 'Ejaz Khan', '0333-9552696', 1),
(2, 'Majid', '0300-5118473', 2);

-- Table structure for table `employee`
--

CREATE TABLE `employee` (
  `emp_id` int(11) NOT NULL,
  `emp_name` varchar(255) NOT NULL,
  `emp_salary` int(20) NOT NULL,
  `emp_phone` varchar(30) NOT NULL,
  `emp_address` varchar(255) NOT NULL,
  `mg_id` int(11) NOT NULL,
  PRIMARY KEY (`emp_id`),
  FOREIGN KEY (`mg_id`) REFERENCES manager(`mg_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `employee` (`emp_id`, `emp_name`, `emp_salary`, `emp_phone`,
`emp_address`, `mg_id`) VALUES
(1, 'Tanvir Ahmad', 30000, '333-164-0000', 'sadar rawalpindi', 1),

```

```

(2, 'Junaid', 35000, '333-475-2893', 'Peshawar',1),
(3,'Ali', 42000, '300-777-1203', 'Nowshera',1),
(4,'Amjid', 25000, '316-988-2883', 'Nowshera',2),
(5,'Faraz', 35000, '315-000-0000', 'rawalpindi',2);

-- Table structure for table `items`
--
CREATE TABLE `items` (
  `i_id` int(11) NOT NULL,
  `i_description` varchar(255) NOT NULL,
  `i_color` varchar(20) NOT NULL,
  `i_price` int(255) NOT NULL,
  `i_loc` varchar(10) NOT NULL,
  `i_quantity` int(20) NOT NULL,
  `s_id` int(11) NOT NULL,
  PRIMARY KEY (`i_id`),
  FOREIGN KEY (`s_id`) REFERENCES shop(`s_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `items` (`i_id`, `i_description`, `i_color`, `i_price`, `i_loc`,
`i_quantity`, `s_id`) VALUES
(1,'Men Regular-Fit Long-Sleeve','aqua blue', 3500, 'c01',4,1),
(2,'Men Regular-Fit Long-Sleeve','buffalo', 3500, 'c02',3,1),
(3,'Men Regular-Fit Long-Sleeve','plaid', 3600, 'c01',2,1),
(4,'Men Regular-Fit Long-Sleeve','aqua blue', 3500, 'c01',4,1),
(5,'Mens Printed Dress Shirts Long Sleeve Easy Care Regular Fit Casual Button
Down Shirts', 'white',4000,'c03', 10,2),
(6,'Mens Printed Dress Shirts Long Sleeve Easy Care Regular Fit Casual Button
Down Shirts', 'black',4500,'c03', 9,2),
(7,'Mens Printed Dress Shirts Long Sleeve Easy Care Regular Fit Casual Button
Down Shirts', 'dark blue',4000,'c03', 10,2),
(8,'Mens Printed Dress Shirts Long Sleeve Easy Care Regular Fit Casual Button
Down Shirts', 'boatnavy',5000,'c03', 5,2);

-----

-- Table structure for table `customers`
--
CREATE table `customers`(
  `cu_id` int(11) NOT NULL,
  `cu_name` varchar(255) NOT NULL,
  `cu_phone` varchar(30) NOT NULL,
  `cu_address` varchar(255) NULL,

```

```

    `i_id` int(11) NOT NULL,
    PRIMARY KEY (`cu_id`),
    FOREIGN KEY (`i_id`) REFERENCES items(`i_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `customers` (`cu_id`, `cu_name`, `cu_phone`, `cu_address`,
`i_id`) VALUES
(1, 'Rashid', '315-261-9008', 'clarkson university', 1),
(2, 'VJ Kumar', '315-849-8572', 'clarkson university',2),
(3, 'abduallah', '333-955-2696', 'karachi',2),
(4,'adeel', '333-123-4567', 'karachi',3),
(5, 'zoya', '300-456-7890', 'lahore',8);

-- Table structure for table `purchase`

CREATE TABLE `purchase` (
  `p_id` int(11) NOT NULL,
  `p_quantity` int(15) NOT NULL,
  `i_id` int(11) NOT NULL,
  `cu_id` int(11) NOT NULL,
  PRIMARY KEY (`p_id`),
  FOREIGN KEY (`i_id`) REFERENCES items(`i_id`),
  FOREIGN KEY (`cu_id`) REFERENCES customers(`cu_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `purchase` (`p_id`, `p_quantity`, `i_id`, `cu_id`) VALUES
(1, 1, 1, 1),
(2, 1, 2, 2),
(3, 1, 2, 3),
(4, 1, 3, 4),
(5, 1, 8, 5);

-- Table structure for table `bill`

CREATE TABLE `bill`(
  `b_id` int(11) NOT NULL,
  `b_amount` int(255) NOT NULL,
  `b_date` varchar(30) NOT NULL,
  `cu_id` int(11) NOT NULL,
  PRIMARY KEY (`b_id`),
  FOREIGN KEY (`cu_id`) REFERENCES customers(`cu_id`)
) ENGINE = InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `bill` (`b_id`, `b_amount`, `b_date`, `cu_id`) VALUES
(1, '5000', 2022-12-06, 5),
(2, '3500', 2022-12-07,1),

```

```

(3, '3500', 2022-12-07,3),
(4, '3500', 2022-12-07,2),
(5, '3600', 2022-12-07,4);

CREATE TABLE `suppliers` (
  `sup_id` int(11) NOT NULL,
  `sup_name` varchar(255) NOT NULL,
  `sup_address` varchar(255) NOT NULL,
  PRIMARY KEY (`sup_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `suppliers`
--

INSERT INTO `suppliers` (`sup_id`, `sup_name`, `sup_address`) VALUES
(1, 'Garment Resources', 'Plot 92/C, Mehran Town Sector 6 F Korangi Industrial Area, Karachi, Karachi City, Sindh, Pakistan' ),
(2, 'RIJIZ INTERNATIONAL', 'Besides Majeed Honda, near Tulip Marquee, Nawan Pind Araian, Sialkot, Punjab 51310, Pakistan'),
(3, 'INTERLOOP LIMITED PAK', '1-Km Jaranwala Rd, Khurianwala, Faisalabad, Punjab, Pakistan'),
(4, 'ARTISTIC DENIM MILLS LIMITED', 'Plot No. 5-9, Plot No. 5, 9 23-26, 23-26, Mehran Town Sector 16 Korangi Industrial Area, Karachi, Karachi City, Sindh 74900, Pakistan'),
(5, 'NISHAT APPAREL', '2-km, Nishat Avenue Off 22-km Ferozepur, Road, Lahore, 54600, Pakistan'),
(6, 'FOCUS SPORTS', 'Bismillah Chowk, Pasrur Road, Bhiko Chohar Village Sialkot, Punjab 51310, Pakistan'),
(7, 'UNITED GARMENT INDUSTRIES', 'Fakhruddin Valika Rd, Metroville Sindh Industrial Trading Estate, Karachi, Karachi City, Sindh, Pakistan'),
(8, 'SIDDIQSONS LIMITED', 'WX3X+Q33, D-53, Metroville Sindh Industrial Trading Estate, Karachi, Karachi City, Sindh, Pakistan'),
(9, 'ZK INTERNATIONAL', 'Raja Ghulam, P-841 Street Number 6, Rasool Nagar Al Masoom Town, Faisalabad, Punjab 38000, Pakistan'),
(10, 'GWCC', 'Plot 17, Sector 14, Korangi Industrial Area, Sector 14 Karachi, Karachi City, Sindh 74900, Pakistan'),
(11, 'LAHORE FASHIONS PVT LTD', 'Street Number 2, Malikpur, Faisalabad, Punjab, Pakistan'),
(12, 'ARTISTIC APPAREL PVT LIMITED', 'Dr. Mahmood Husain Road, Pakistan Employees Co-Operative Housing Society Block 6 PECHS, Karachi, Karachi City, Sindh, Pakistan');
--

```



```

-- Table structure for table `shipment`
--

CREATE TABLE `shipment` (
  `sh_id` int(11) NOT NULL AUTO_INCREMENT,
  `sh_mode` varchar(30) NOT NULL,
  `sh_date` varchar (30) NOT NULL,
  `sh_cost` int(255) NOT NULL,
  `sup_id` int(11) NOT NULL,
  `s_id` int(11) NOT NULL,
  `i_id` int(11) NOT NULL,
  PRIMARY KEY (`sh_id`),
  FOREIGN KEY (`sup_id`) REFERENCES suppliers(`sup_id`),
  FOREIGN KEY (`s_id`) REFERENCES shop(`s_id`),
  FOREIGN KEY (`i_id`) REFERENCES items(`i_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- ALTER table `shipment`
--   ADD `sup_id` int(11);
-- ALTER table `shipment`
--   ADD CONSTRAINT `shipment_ibfk_1` FOREIGN KEY (`sup_id`) REFERENCES
`suppliers`(`sup_id`);

-- ALTER TABLE `shipment`
--   ADD CONSTRAINT `shipment_ibfk_1` FOREIGN KEY (`sup_id`) REFERENCES
`suppliers` (`sup_id`),
--   ADD CONSTRAINT `shipment_ibfk_2` FOREIGN KEY (`s_id`) REFERENCES `shop`
(`s_id`),
--   ADD CONSTRAINT `shipment_ibfk_3` FOREIGN KEY (`i_id`) REFERENCES `items`
(`i_id`);
--
-- Dumping data for table `shipment`
--

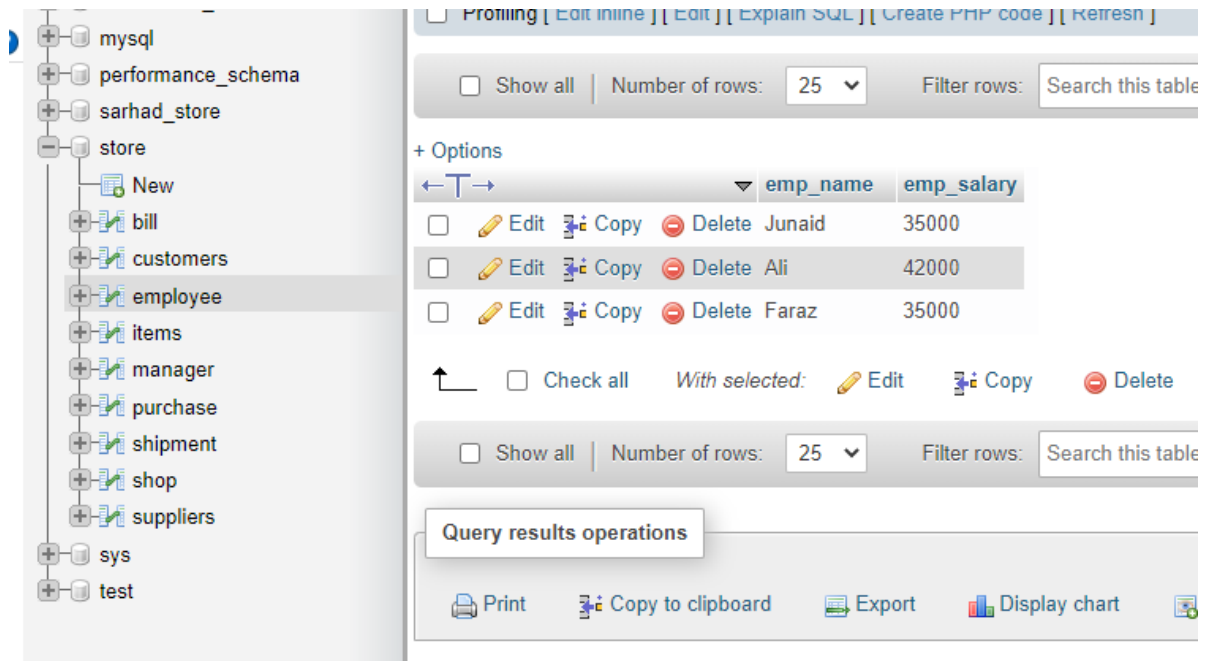
INSERT INTO `shipment` (`sh_id`, `sh_mode`, `sh_date`, `sh_cost`, `sup_id`,
`s_id`, `i_id`) VALUES
(1, 'air cargo', '2022-12-01', 10500,1,1,1),
(2, 'train cargo', '2022-12-2',30000,2,1,2),
(3, 'bus cargo', '2022-12-3', 50000,3,2,2);

```

Sample Queries

//How to get all the employee with salary more than 30000?

```
SELECT emp_name, emp_salary
FROM employee
WHERE emp_salary > 30000
```



The screenshot shows a database management interface. On the left, a tree view displays the database structure, including 'mysql', 'performance_schema', 'sarhad_store', and 'store'. The 'store' database is expanded, showing tables like 'bill', 'customers', 'employee', 'items', 'manager', 'purchase', 'shipment', 'shop', and 'suppliers'. The 'employee' table is selected. On the right, the 'Promoting' tab is active, showing the table's data. The table has two columns: 'emp_name' and 'emp_salary'. There are three rows of data: Junaid (35000), Ali (42000), and Faraz (35000). The interface includes options for 'Show all', 'Number of rows' (set to 25), and 'Filter rows'. Below the table, there are buttons for 'Edit', 'Copy', and 'Delete' for each row, and a 'Check all' button. At the bottom, there are buttons for 'Print', 'Copy to clipboard', 'Export', and 'Display chart'.

	emp_name	emp_salary
<input type="checkbox"/>	Junaid	35000
<input type="checkbox"/>	Ali	42000
<input type="checkbox"/>	Faraz	35000

//How to find items whose price is between 3000-4000 but not color buffalo?

```
select i_description, i_color, i_price, i_loc
from items
where
(3500 < i_price < 4000)
and not(i_color = 'buffalo')
```

i_description	i_color	i_price	i_loc
Men Regular-Fit Long-Sleeve	aqua blue	3500	c01
Men Regular-Fit Long-Sleeve	plaid	3600	c01
Men Regular-Fit Long-Sleeve	aqua blue	3500	c01
Mens Printed Dress Shirts Long Sleeve Easy Care Re...	white	4000	c03
Mens Printed Dress Shirts Long Sleeve Easy Care Re...	black	4500	c03
Mens Printed Dress Shirts Long Sleeve Easy Care Re...	dark blue	4000	c03
Mens Printed Dress Shirts Long Sleeve Easy Care Re...	boatnavy	5000	c03

```

select sup_name, sup_address
from suppliers
where sup_address like '%Karachi%'

```

//How to get all suppliers name and address located in Karachi?

```

select sup_name, sup_address
from suppliers
where sup_address like '%Karachi%'

```

sup_name	sup_address
Garment Resources	Plot 92/C, Mehran Town Sector 6 F Korangi Industri...
ARTISTIC DENIM MILLS LIMITED	Plot No. 5-9, Plot No. 5, 9 23-26, 23-26, Mehran T...
UNITED GARMENT INDUSTRIES	Fakhruddin Valika Rd, Metroville Sindh Industrial ...
SIDDIQSONS LIMITED	WX3X+Q33, D-53, Metroville Sindh Industrial Tradin...
GWCC	Plot 17, Sector 14, Korangi Industrial Area, Secto...
ARTISTIC APPAREL PVT LIMITED	Dr. Mahmood Husain Road, Pakistan Employees Co-Ope...

```

select sum(b_amount), COUNT(b_amount)
from bill

```

//How to show the total number of items sold and total amount?

```

select sum(b_amount), COUNT(b_amount)
from bill

```

Your SQL query has been executed successfully.

```
select sum(b_amount), COUNT(b_amount) from bill;
```

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

+ Options

sum(b_amount)	COUNT(b_amount)
19100	5

Query results operations

[Print](#) [Copy to clipboard](#) [Export](#) [Display chart](#) [Create v](#)

//How to list the item number, item description, and store name where they are located?

```
select a.i_id, a.i_description, b.s_id,b.s_name
FROM items a, shop b
WHERE a.s_id=b.s_id
```

Showing rows 0 - 7 (8 total, Query took 0.0049 seconds.)

```
select a.i_id, a.i_description, b.s_id,b.s_name FROM items a, shop b WHERE a.s_id=b.s_id;
```

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

i_id	i_description	s_id	s_name
1	Men Regular-Fit Long-Sleeve	1	Bostan Brothers
2	Men Regular-Fit Long-Sleeve	1	Bostan Brothers
3	Men Regular-Fit Long-Sleeve	1	Bostan Brothers
4	Men Regular-Fit Long-Sleeve	1	Bostan Brothers
5	Mens Printed Dress Shirts Long Sleeve Easy Care Re...	2	Gulistan Brothers
6	Mens Printed Dress Shirts Long Sleeve Easy Care Re...	2	Gulistan Brothers
7	Mens Printed Dress Shirts Long Sleeve Easy Care Re...	2	Gulistan Brothers
8	Mens Printed Dress Shirts Long Sleeve Easy Care Re...	2	Gulistan Brothers

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

End Notes:

We have exported the database from my system and attached it to my project file by name '**store.sql**'. We have also attached the file where we typed Create, insert and sample queries file by name '**create_insert_sampleQ.sql**' and ERD and Schema high resolution pictures. Further, we started designing front-end ([see preview below](#)) for it and do all the essential back-end and further improvements do database designed as required by potential users.

Thank you

