Question # 1 : P02-01- Jenny's Salon & Spa

- Create a file called P02-01
- Design the data models below
- Export the file containing the data models as a PDF file and submit

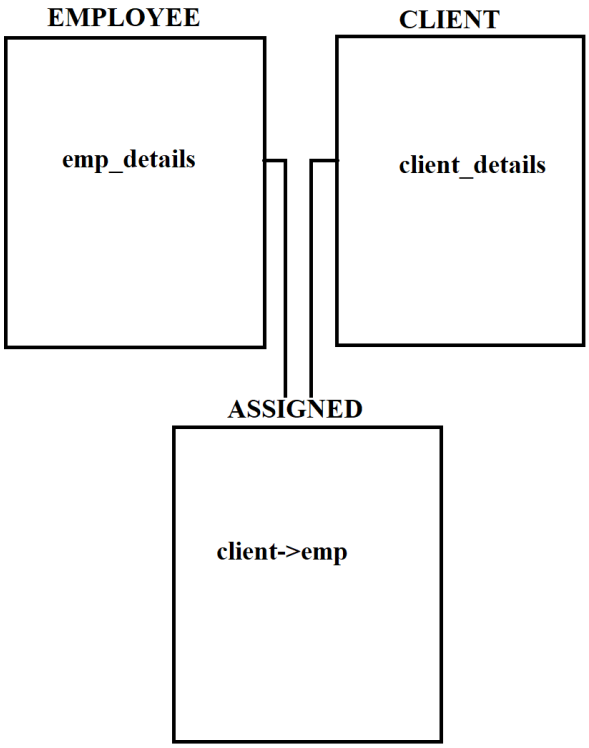
P02-01a

At Jenny's Salon & Spa, we have several hairstylists that are salaried employees. In addition to their salary, we store their first name, last name, social security number, mobile number, and email address. The salon has clients, which they record first name, last name, mobile number, email address, and preferred day. Some clients do not have a preferred day.

P02-01b

Each hairstylist is assigned clients. When a hairstylist is hired, the hairstylist is not assigned any clients during orientation. Each client is asked if they have a preferred hairstylist. If they have no preference, they are assigned a hairstylist that becomes their hairstylist. Of course, they can switch to another hairstylist at any time.

Solution:

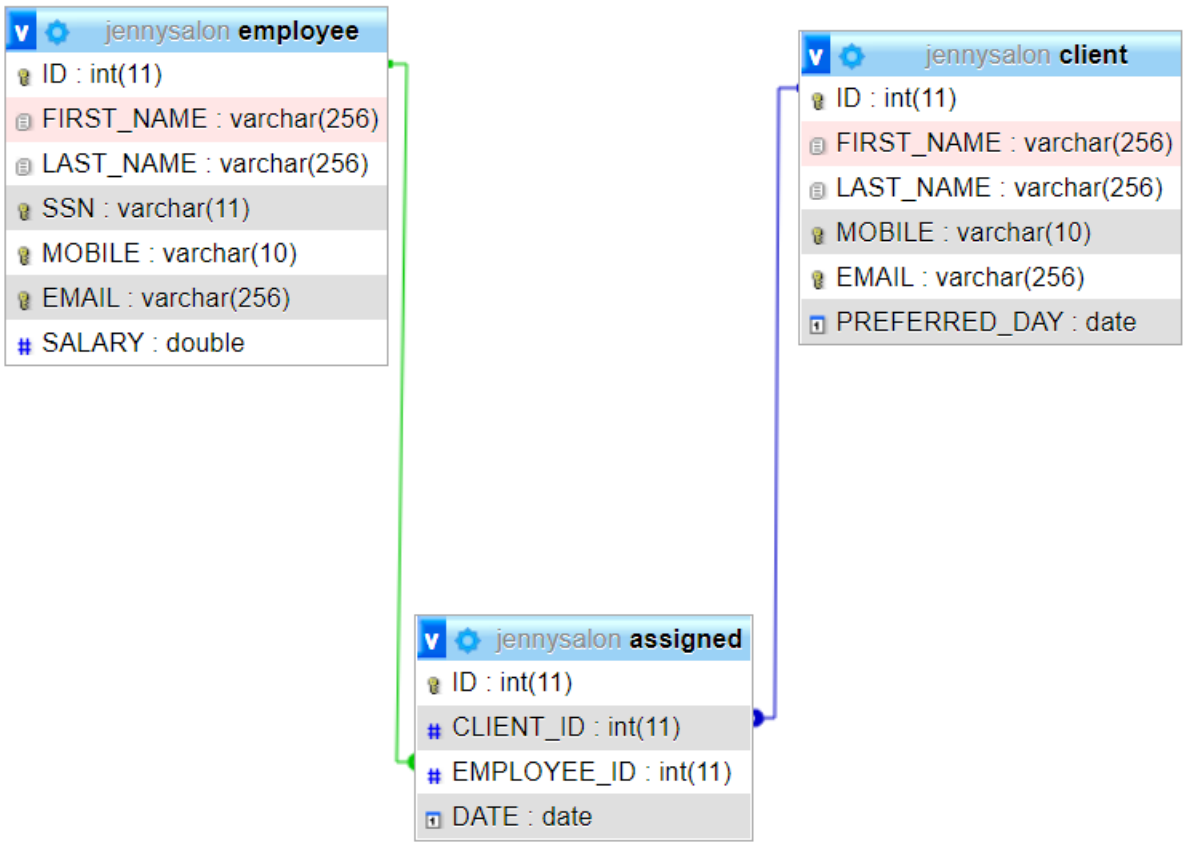


Created a database named “jennysalon”, and created three tables namely “EMPLOYEE”, “CLIENT”,”ASSIGNED” , all employees details can be recorded in the employees table and clients details can be recorded in the clients table what all new records coming can be maintained inside the assigned table that contains which client is assigned to which employees and this is linked with client ID and

employee ID client ID and employee ID act as foreign key linked with primary keys of both of those other two tables. Hey whenever new client is added and the client Marks and preferred day hair cutting appointment then one can code do you automatically assign a hair stylist which will be filled inside assigned table this assigned table can be manually edited also if client warns to have an appointment at another time or with another hair stylist

1. In employee table primary key is ID and unique key is Social Security number, mobile and email address
2. In client table primary key is ID and unique keys are mobile and email
3. In assign table primary key is ID and two foreign keys are there client ID and employee ID which is referenced from employee table and client table

This is how ER Diagram looks like



EMPLOYEE TABLE(PRIMARY KEY-ID **, UNIQUE KEY-**SSN,MOBILE,EMAIL**)**

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	ID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	FIRST_NAME	varchar(256)	utf8mb4_general_ci		No	None			Change Drop More
3	LAST_NAME	varchar(256)	utf8mb4_general_ci		No	None			Change Drop More
4	SSN	varchar(11)	utf8mb4_general_ci		No	None			Change Drop More
5	MOBILE	varchar(10)	utf8mb4_general_ci		No	None			Change Drop More
6	EMAIL	varchar(256)	utf8mb4_general_ci		No	None			Change Drop More
7	SALARY	double			No	None			Change Drop More

CLIENT TABLE PRIMARY KEY-ID **, UNIQUE KEY-** MOBILE,EMAIL**)**

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	ID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	FIRST_NAME	varchar(256)	utf8mb4_general_ci		No	None			Change Drop More
3	LAST_NAME	varchar(256)	utf8mb4_general_ci		No	None			Change Drop More
4	MOBILE	varchar(10)	utf8mb4_general_ci		No	None			Change Drop More
5	EMAIL	varchar(256)	utf8mb4_general_ci		No	None			Change Drop More
6	PREFERRED_DAY	date			No	None			Change Drop More

ASSIGNED TABLE PRIMARY KEY-ID, **FOREIGN KEY-**Client_ID**,** EMPLOYEE_ID**)**

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	ID	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	CLIENT_ID	int(11)			No	None			Change Drop More
3	EMPLOYEE_ID	int(11)			No	None			Change Drop More
4	DATE	date			No	None			Change Drop More

Taken a database dump using mysqldump command

```
1.  mysqldump -u root jennysalon > jennysalon.sql
```

jennysalon.sql

```sql
-- MariaDB dump 10.19  Distrib 10.4.19-MariaDB, for Win64 (AMD64)
--
-- Host: localhost    Database: jennysalon
-- ------------------------------------------------------
-- Server version 10.4.19-MariaDB

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8mb4 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;
/*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;

--
-- Table structure for table `assigned`
--

DROP TABLE IF EXISTS `assigned`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `assigned` (
  `ID` int(11) NOT NULL AUTO_INCREMENT,
  `CLIENT_ID` int(11) NOT NULL,
  `EMPLOYEE_ID` int(11) NOT NULL,
  `DATE` date NOT NULL,
  PRIMARY KEY (`ID`),
  KEY `EMPLOYEE_ID` (`EMPLOYEE_ID`),
  KEY `CLIENT_ID` (`CLIENT_ID`),
  CONSTRAINT `assigned_ibfk_1` FOREIGN KEY (`EMPLOYEE_ID`) REFERENCES `employee` (`ID`),
  CONSTRAINT `assigned_ibfk_2` FOREIGN KEY (`CLIENT_ID`) REFERENCES `client` (`ID`)
) ENGINE=InnoDB AUTO_INCREMENT=5 DEFAULT CHARSET=utf8mb4;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `assigned`
--

LOCK TABLES `assigned` WRITE;
/*!40000 ALTER TABLE `assigned` DISABLE KEYS */;
INSERT INTO `assigned` VALUES (1,1,3,'2022-01-21'),(2,2,4,'2022-01-22'),(3,3,5,'2022-01-24'),(4,4,1,'2022-01-24');
/*!40000 ALTER TABLE `assigned` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `client`
--

DROP TABLE IF EXISTS `client`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `client` (
  `ID` int(11) NOT NULL AUTO_INCREMENT,
  `FIRST_NAME` varchar(256) NOT NULL,
  `LAST_NAME` varchar(256) NOT NULL,
  `MOBILE` varchar(10) NOT NULL,
  `EMAIL` varchar(256) NOT NULL,
  `PREFERRED_DAY` date NOT NULL,
  PRIMARY KEY (`ID`),
  UNIQUE KEY `MOBILE` (`MOBILE`),
```

```
  UNIQUE KEY `EMAIL` (`EMAIL`)
) ENGINE=InnoDB AUTO_INCREMENT=8 DEFAULT CHARSET=utf8mb4;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `client`
--

LOCK TABLES `client` WRITE;
/*!40000 ALTER TABLE `client` DISABLE KEYS */;
INSERT INTO `client` VALUES (1,'CHARLIE','SCHMIDT','9835198341','charlie@gmail.com','2022-01-21'),(2,'REYNARD','KEIN','9835198343','reynard@gmail.com','2022-01-22'),(3,'CARY','BROOKS','9835198344','cary@gmail.com','2022-01-24'),(4,'TYNE','PEARSON','9835198345','tyne@gmail.com','2022-01-24');
/*!40000 ALTER TABLE `client` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `employee`
--

DROP TABLE IF EXISTS `employee`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `employee` (
  `ID` int(11) NOT NULL AUTO_INCREMENT,
  `FIRST_NAME` varchar(256) NOT NULL,
  `LAST_NAME` varchar(256) NOT NULL,
  `SSN` varchar(11) NOT NULL,
  `MOBILE` varchar(10) NOT NULL,
  `EMAIL` varchar(256) NOT NULL,
  `SALARY` double NOT NULL,
  PRIMARY KEY (`ID`),
  UNIQUE KEY `EMAIL` (`EMAIL`),
  UNIQUE KEY `MOBILE` (`MOBILE`),
  UNIQUE KEY `SSN` (`SSN`) USING BTREE
) ENGINE=InnoDB AUTO_INCREMENT=7 DEFAULT CHARSET=utf8mb4;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `employee`
--

LOCK TABLES `employee` WRITE;
/*!40000 ALTER TABLE `employee` DISABLE KEYS */;
INSERT INTO `employee` VALUES (1,'BRAVO','DEAN','247-28-2628','9835198351','bravodean@gmail.com',10000),(2,'BRAD','SHEA','247-28-2629','9835198352','bradshea@gmail.com',10000),(3,'BAILEY','MEDINA','247-28-2630','9835198353','baileymedina@gmail.com',10000),(4,'ELIOSE','MAY','247-28-2631','9835198354','eliosemay@gmail.com',10000),(5,'DORAN','NEEL','247-28-2632','9835198355','doranneel@gmail.com',10000),(6,'JACKSON','BOURN','247-28-2633','9835198356','jacksonbourn@gmail.com',10000);
/*!40000 ALTER TABLE `employee` ENABLE KEYS */;
UNLOCK TABLES;
/*!40103 SET TIME_ZONE=@OLD_TIME_ZONE */;

/*!40101 SET SQL_MODE=@OLD_SQL_MODE */;
/*!40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */;
/*!40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */;
/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
/*!40111 SET SQL_NOTES=@OLD_SQL_NOTES */;

-- Dump completed on 2022-01-20 17:23:23
```

```
120.
121.
```

Question 2 : P02-02 - Lakeside Assembly Inc.

- Create a file called P02-02
- Design the ER diagrams described below
- Export the file containing both data models as a PDF file and submit

P02-02a

Lakeside Assembly Inc. sells products assembled from parts purchased from various vendors.

For each vendor, vendor id, company name, and contact person are stored. Some vendors do not assign a contact person. For parts, part id, part description, and part cost are stored. For products, product id, product name, and selling price are stored.

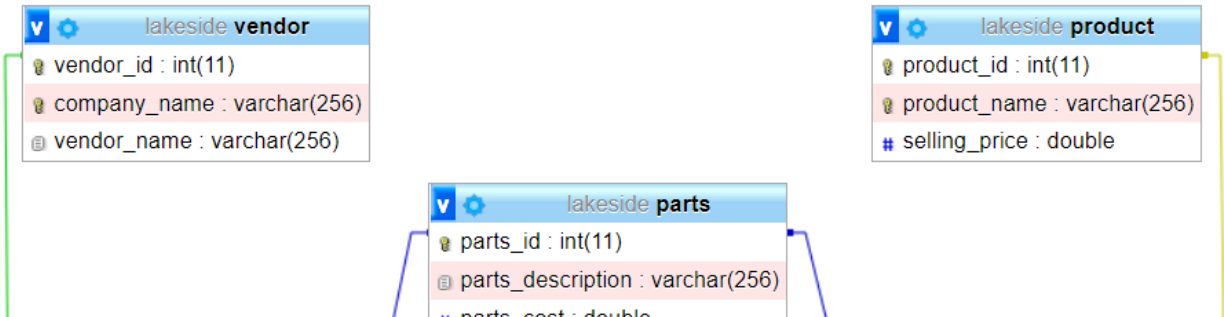
P02-02b

Each part is purchased from one specific vendor. Of course, each vendor may supply several parts. Usually, but not always, a vendor relationship is established before any parts are purchased. Each product is assembled from one or more parts. Each part is unique and is used in the assembly of one specific product. Modify the ERD and include the ERD language.

Solution :

I have created total of 5 tables 3(vendor, product, parts) and linking these other 2(vendor_parts,product_parts)

1. In Vendor table will contain the list of vendors, primary key is vendor ID and unique key is company name
2. In Product table it will contain list of products where primary key is product ID and unique key is product name
3. In Parts table there will be list of parts primary key is parts ID and there is no unique key
4. In vendor parts table there will be list of which vendor provides which part here we cannot have unique vendor ID or part ID like multiple vendor can provide multiple parts here we have two foreign keys vendor ID and parts ID which is linked to vendor and parts table
5. In products part table there will be listof products that can be made using different parts here we cannot have anything unique like multiple products can be formed using multiple parts here we have one primary key as ID and two foreign key that is parts ID and product ID linked with parts stable and products tabe



PARTS TABLE(PRIMARY KEY-ID)

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	parts_id	int(11)			No	None			Change Drop More
2	parts_description	varchar(256)	utf8mb4_general_ci		No	None			Change Drop More
3	parts_cost	double			No	None			Change Drop More

VENDORS TABLE(PRIMARY KEY-ID, UNIQUE KEY-COMPANY NAME)

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	vendor_id	int(11)			No	None			Change Drop More
2	company_name	varchar(256)	utf8mb4_general_ci		No	None			Change Drop More
3	vendor_name	varchar(256)	utf8mb4_general_ci		Yes	NULL			Change Drop More

PRODUCTS TABLE(PRIMARY KEY-ID, UNIQUE KEY-PRODUCT NAME)

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	product_id	int(11)			No	None			Change Drop More
2	product_name	varchar(256)	utf8mb4_general_ci		No	None			Change Drop More
3	selling_price	double			No	None			Change Drop More

PRODUCTS-PARTS TABLE(PRIMARY KEY-ID, UNIQUE KEY-PRODUCT ID,PARTS ID)

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None			Change Drop More
2	product_id	int(11)			No	None			Change Drop More
3	parts_id	int(11)			No	None			Change Drop More

VENDOR-PARTS TABLE(PRIMARY KEY-ID, **UNIQUE KEY-**VENDOR ID, PART ID**)**

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	*None*			Change Drop More
2	vendor_id	int(11)			No	*None*			Change Drop More
3	part_id	int(11)			No	*None*			Change Drop More

Taken a database dump using mysqldump command

```
1.  mysqldump -u root lakeside > lakeside.sql
```

lakeside.sql

```
1.  -- MariaDB dump 10.19  Distrib 10.4.19-MariaDB, for Win64 (AMD64)
2.  --
3.  -- Host: localhost    Database: lakeside
4.  -- ------------------------------------------------------
5.  -- Server version 10.4.19-MariaDB
6.
7.  /*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
8.  /*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
9.  /*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
10. /*!40101 SET NAMES utf8mb4 */;
11. /*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
12. /*!40103 SET TIME_ZONE='+00:00' */;
13. /*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
14. /*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;
15. /*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
16. /*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;
17.
18. --
19. -- Table structure for table `parts`
20. --
21.
22. DROP TABLE IF EXISTS `parts`;
23. /*!40101 SET @saved_cs_client     = @@character_set_client */;
24. /*!40101 SET character_set_client = utf8 */;
25. CREATE TABLE `parts` (
26.   `parts_id` int(11) NOT NULL,
27.   `parts_description` varchar(256) NOT NULL,
```

```
  `parts_cost` double NOT NULL,
  PRIMARY KEY (`parts_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `parts`
--

LOCK TABLES `parts` WRITE;
/*!40000 ALTER TABLE `parts` DISABLE KEYS */;
/*!40000 ALTER TABLE `parts` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `product`
--

DROP TABLE IF EXISTS `product`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `product` (
  `product_id` int(11) NOT NULL,
  `product_name` varchar(256) NOT NULL,
  `selling_price` double NOT NULL,
  PRIMARY KEY (`product_id`),
  UNIQUE KEY `product_name` (`product_name`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `product`
--

LOCK TABLES `product` WRITE;
/*!40000 ALTER TABLE `product` DISABLE KEYS */;
/*!40000 ALTER TABLE `product` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `product_parts`
--

DROP TABLE IF EXISTS `product_parts`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!40101 SET character_set_client = utf8 */;
CREATE TABLE `product_parts` (
  `id` int(11) NOT NULL,
  `product_id` int(11) NOT NULL,
  `parts_id` int(11) NOT NULL,
  PRIMARY KEY (`id`),
  KEY `product_id` (`product_id`),
  KEY `parts_id` (`parts_id`),
  CONSTRAINT `product_parts_ibfk_1` FOREIGN KEY (`parts_id`) REFERENCES `parts`
(`parts_id`),
  CONSTRAINT `product_parts_ibfk_2` FOREIGN KEY (`product_id`) REFERENCES `product`
(`product_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `product_parts`
--

LOCK TABLES `product_parts` WRITE;
```

```
/*!40000 ALTER TABLE `product_parts` DISABLE KEYS */;
/*!40000 ALTER TABLE `product_parts` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `vendor`
--

DROP TABLE IF EXISTS `vendor`;
 /*!40101 SET @saved_cs_client     = @@character_set_client */;
 /*!40101 SET character_set_client = utf8 */;
 CREATE TABLE `vendor` (
   `vendor_id` int(11) NOT NULL,
   `company_name` varchar(256) NOT NULL,
   `vendor_name` varchar(256) DEFAULT NULL,
   PRIMARY KEY (`vendor_id`),
   UNIQUE KEY `company_name` (`company_name`)
 ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
 /*!40101 SET character_set_client = @saved_cs_client */;

 --
 -- Dumping data for table `vendor`
 --

 LOCK TABLES `vendor` WRITE;
 /*!40000 ALTER TABLE `vendor` DISABLE KEYS */;
 /*!40000 ALTER TABLE `vendor` ENABLE KEYS */;
 UNLOCK TABLES;

 --
 -- Table structure for table `vendor_parts`
 --

 DROP TABLE IF EXISTS `vendor_parts`;
 /*!40101 SET @saved_cs_client     = @@character_set_client */;
 /*!40101 SET character_set_client = utf8 */;
 CREATE TABLE `vendor_parts` (
   `id` int(11) NOT NULL,
   `vendor_id` int(11) NOT NULL,
   `part_id` int(11) NOT NULL,
   PRIMARY KEY (`id`),
   KEY `vendor_id` (`vendor_id`),
   KEY `part_id` (`part_id`),
   CONSTRAINT `vendor_parts_ibfk_1` FOREIGN KEY (`vendor_id`) REFERENCES `vendor`
   (`vendor_id`),
   CONSTRAINT `vendor_parts_ibfk_2` FOREIGN KEY (`part_id`) REFERENCES `parts` (`parts_id`)
 ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
 /*!40101 SET character_set_client = @saved_cs_client */;

 --
 -- Dumping data for table `vendor_parts`
 --

 LOCK TABLES `vendor_parts` WRITE;
 /*!40000 ALTER TABLE `vendor_parts` DISABLE KEYS */;
 /*!40000 ALTER TABLE `vendor_parts` ENABLE KEYS */;
 UNLOCK TABLES;
 /*!40103 SET TIME_ZONE=@OLD_TIME_ZONE */;
 /*!40101 SET SQL_MODE=@OLD_SQL_MODE */;
 /*!40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */;
 /*!40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */;
 /*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
 /*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
 /*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
```

```
154.  /*!40111 SET SQL_NOTES=@OLD_SQL_NOTES */;
```