

# Database Design for an E-Commerce website

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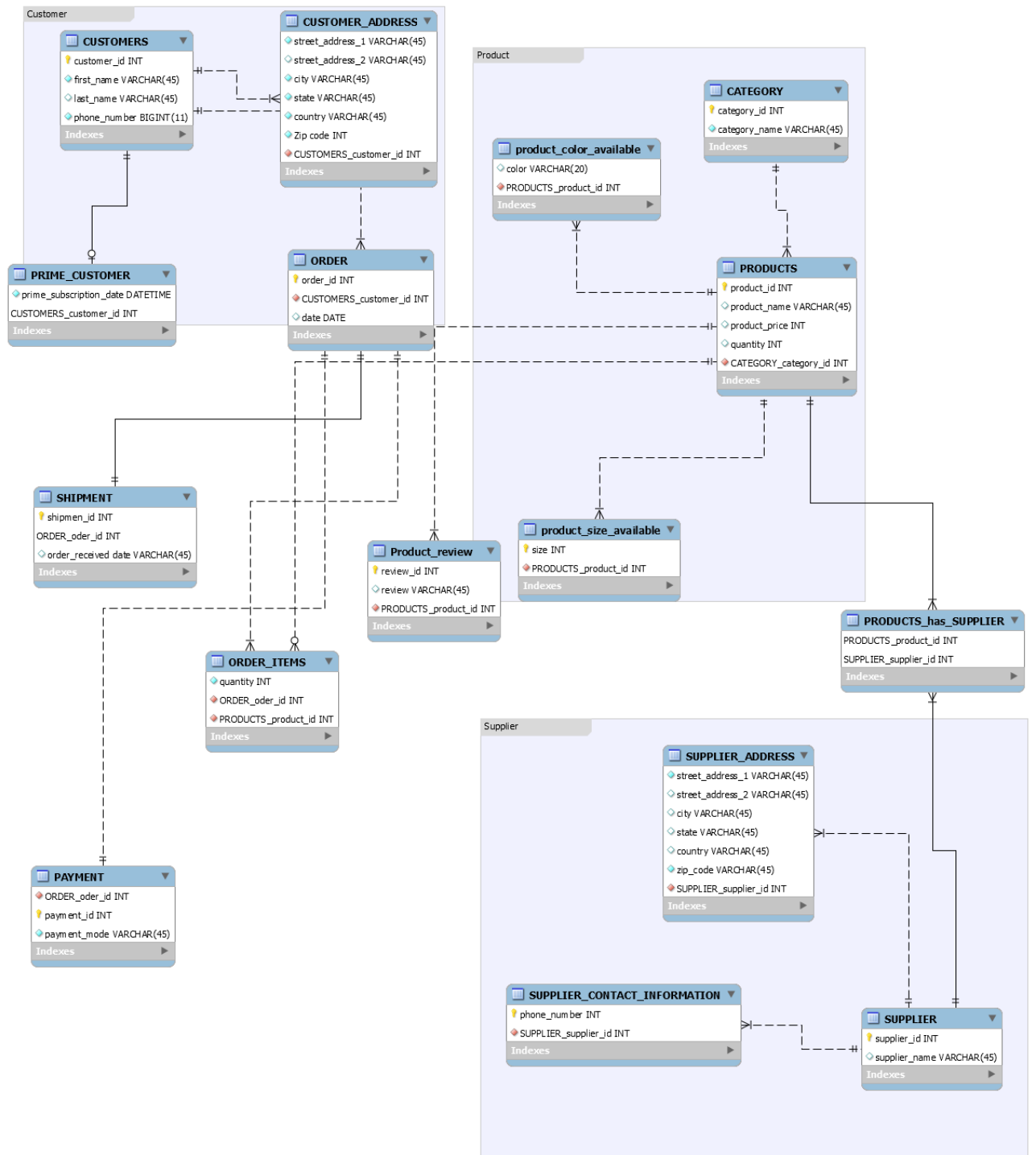
The database has been designed keeping in mind the following use-cases:

1. Customer should be able to view all the products available in the Product inventory selected by Product category.
2. Customer should be able to order products that are available in the Product Inventory. User should also be able to make a choice between the color available and the sizes available.
3. Customer should be able to cancel the order that he has placed.
4. Supplier should be able to add new products to the product inventory
5. Supplier should be able to view the products that are supplied by him.
6. Shipper should be able to see the order that he has received. He should be able to update the status of the order.

The ER- diagram is based on the following business rules:

1. Every category of products can have multiple products
2. Products can be in a variety of Colors and sizes.
3. One product can be supplied by multiple suppliers.
4. One supplier can supply multiple products
5. One customer can have many orders.
6. Every order will have multiple order items
7. Every order will have a payment method and will be allocated a shipment.

## ER Diagram



Three users have been created-

- Customer
- Supplier
- Shipper

The users have grants as follows:

- Customer
  - Customer can see table Products, product\_color\_available, product\_review, category
  - Customer can create routine on any table in the database
  - Customer can insert into product\_review, order, order\_items tables.
  - Customer can execute placing\_order\_for\_customer, Cancel\_order\_for\_customer stored procedures that are defined in the root.
- Supplier
  - Supplier can see the view product\_view\_for\_supplier which is created by the root user for supplier to see products supplied by him
  - Supplier can insert into products, product\_color\_available and category tables
- Shipper
  - Shipper can see the orders that he has received
  - Shipper can update the delivery status of the order that he has received.

Customer can order products by calling a stored procedure placing\_order\_for\_customer

```
delimiter //
create procedure placing_order_for_customer(IN customer_id int, IN product_id int, IN product_color varchar(10), IN product_size varchar(4), IN product_quantity int, IN payment_mode varchar(10))
begin
start transaction;
insert into project.order(CUSTOMERS_customer_id, date) values(customer_id, now());
insert into project.order_items(quantity, ORDER_order_id, PRODUCTS_product_id) values (product_quantity, (select order_id from project.order order by order_id desc limit 1), product_id);
update project.product_color_available set project.product_color_available.quantity = project.product_color_available.quantity - product_quantity
where project.product_color_available.color = product_color and project.product_color_available.size = product_size and project.product_color_available.PRODUCTS_product_id = product_id;
insert into project.payment(ORDER_order_id, payment_mode) values((select order_id from project.order order by order_id desc limit 1), payment_mode);
insert into project.shipment(ORDER_order_id, status, Date_of_order) values((select order_id from project.order order by order_id desc limit 1), "received", now());
commit;

select project.products.product_name, project.order_items.quantity, (project.products.product_price * project.order_items.quantity) as total from project.products
inner join project.order_items on project.products.product_id = project.order_items.PRODUCTS_product_id where project.products.product_id = product_id group by ORDER_order_id
having project.order_items.ORDER_order_id = (select order_id from project.order order by order_id desc limit 1) ;
```

Customer can cancel the placed order by calling a stored procedure

### Cancel\_order\_for\_customer

```
create procedure Cancel_order_for_customer(In orderID int, IN productID int)
begin
start transaction ;
delete from project.shipment where project.shipment.ORDER_oder_id = orderID;
delete from project.payment where project.payment.ORDER_oder_id = orderID;

update project.product_color_available
inner join project.order_items
On project.product_color_available.PRODUCTS_product_id = project.order_items.PRODUCTS_product_id
set project.product_color_available.quantity = project.product_color_available.quantity + project.order_items.quantity
where project.order_items.ORDER_oder_id = orderID and project.order_items.PRODUCTS_product_id = productID ;

delete from project.order_items where project.order_items.ORDER_oder_id = orderID and project.order_items.PRODUCTS_product_id =productID ;
commit;
delete from project.order where project.order.order_id = orderID;
commit;
end //
delimiter ;
```

These stored procedures have Transactions in them, which follow the isolation level Repeatable read.

Customers can view all products by calling product\_view\_for\_customer procedure which will generate output as follows

product_id	product_name	product_price	color	size	review
1	cotton kurta	100	Red	s	Good
1	cotton kurta	100	blue	XS	Good
2	bandhani Kurta	75	gray	L	Good condition
2	bandhani Kurta	75	black	S	Good condition
2	bandhani Kurta	75	green	XL	Good condition
11	kurta	50	red	XL	NULL

Supplier can see the products that are supplied by them using a view

CATEGORY_category_id	product_name	color	size	quantity
1	cotton kurta	Red	s	96
1	cotton kurta	blue	XS	20
1	bandhani Kurta	black	S	49
1	bandhani Kurta	green	XL	45
1	bandhani Kurta	gray	L	49

Supplier can add products to the product inventory by calling a stored procedure `insert_data_into_product_inventory`

```
-- procedure for supplier to insert new products into Inventory
delimiter //
create procedure insert_data_into_product_inventory(IN productName varchar(50), IN product_price int,
IN product_category int, IN colour varchar(50), IN size varchar(4), IN qty int)
begin
start transaction;
insert into project.products(project.products.product_name, project.products.product_price, project.products.CATEGORY_category_id) values
(productName,product_price,product_category);
insert into project.product_color_available(project.product_color_available.color,project.product_color_available.PRODUCTS_product_id,
project.product_color_available.size, project.product_color_available.quantity)
values(colour,last_insert_id(),size,qty);
commit;
end//
delimiter ;
```

Triggers have been created, that will not allow negative values to be inserted in the product quantity. It will also restrict ordering of products, when the products in the inventory become zero.

```
DELIMITER $$
CREATE TRIGGER `quantity_before_insert` BEFORE INSERT ON `order_items`
FOR EACH ROW
BEGIN
    CALL check_user_prduct_qty(new.quantity);
END$$
DELIMITER ;
-- before update
DELIMITER $$
CREATE TRIGGER `quantity_before_update` BEFORE UPDATE ON `product_color_available`
FOR EACH ROW
BEGIN
    CALL check_product_inventory_quantity(new.quantity);
END$$
DELIMITER ;
```

---

Shippers can see the order ID that they have received for delivery

	shipmen_id	ORDER_oder_id	status	Date_of_order
▶	1	1	delivered	NULL
	2	2	NULL	NULL
	3	3	NULL	NULL
	4	4	NULL	NULL
	5	5	NULL	NULL
	10	10	NULL	NULL
	11	11	NULL	NULL
	12	14	received	NULL
	13	15	received	2018-12-12
	14	17	received	2018-12-13
	15	18	received	2018-12-13
✱	NULL	NULL	NULL	NULL

Shippers can update the delivery status of the order.

We can see the customer who has placed the maximum orders:

```
SELECT project.order.CUSTOMERS_customer_id,COUNT(*)  
FROM project.order  
GROUP BY project.order.CUSTOMERS_customer_id  
ORDER BY COUNT(*) DESC limit 1;
```

Output

	CUSTOMERS_customer_id	COUNT(*)
▶	1	8

We can see the count of product that have been ordered

```
-- Products and the number of time they have been orderd
select * from project.order_items;
select project.order_items.PRODUCTS_product_id, count(*)
from project.order_items
Group by project.order_items.PRODUCTS_product_id
order by count(*) desc;
```

## Output

	PRODUCTS_product_id	count(*)
▶	1	7
	11	5
	6	1

```

-- MySQL dump 10.13 Distrib 8.0.12, for Win64 (x86_64)
--
-- Host: 127.0.0.1 Database: project
-- -----
-- Server version 8.0.12

/*!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 */;
SET NAMES utf8 ;
/*!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 `category`
--

DROP TABLE IF EXISTS `category`;
/*!40101 SET @saved_cs_client = @@character_set_client */;

```



```
SET character_set_client = utf8mb4 ;
CREATE TABLE `category` (
  `category_id` int(11) NOT NULL,
  `category_name` varchar(45) NOT NULL,
  PRIMARY KEY (`category_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--
-- Dumping data for table `category`
--
```

```
LOCK TABLES `category` WRITE;
/*!40000 ALTER TABLE `category` DISABLE KEYS */;
INSERT INTO `category` VALUES
(1,'Kurta'),(2,'Dresses'),(3,'Sarees'),(4,'Jackets'),(5,'Jumpsuits');
/*!40000 ALTER TABLE `category` ENABLE KEYS */;
UNLOCK TABLES;
```

```
--
-- Table structure for table `customer_address`
--
```

```
DROP TABLE IF EXISTS `customer_address`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `customer_address` (
  `street_address_1` varchar(45) NOT NULL,
  `street_address_2` varchar(45) DEFAULT NULL,
  `city` varchar(45) NOT NULL,
  `state` varchar(45) NOT NULL,
  `country` varchar(45) NOT NULL,
  `Zip code` int(11) NOT NULL,
  `CUSTOMERS_customer_id` int(11) NOT NULL,
  KEY `fk_CUSTOMER_ADDRESS_CUSTOMERS1_idx` (`CUSTOMERS_customer_id`),
  CONSTRAINT `fk_CUSTOMER_ADDRESS_CUSTOMERS1` FOREIGN KEY
(`CUSTOMERS_customer_id`) REFERENCES `customers` (`customer_id`)
```

```

) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `customer_address`
--

LOCK TABLES `customer_address` WRITE;
/*!40000 ALTER TABLE `customer_address` DISABLE KEYS */;
INSERT INTO `customer_address` VALUES ('61Smith Street','Roxbury Crossing
','Boston','MA','USA',2120,1),('B702 Sahado
heights','Someshwarwadi','Pune','Maharashtra','India',411008,1);
/*!40000 ALTER TABLE `customer_address` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `customers`
--

DROP TABLE IF EXISTS `customers`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4;
CREATE TABLE `customers` (
  `customer_id` int(11) NOT NULL,
  `first_name` varchar(45) NOT NULL,
  `last_name` varchar(45) DEFAULT NULL,
  `phone_number` bigint(11) NOT NULL,
  PRIMARY KEY (`customer_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `customers`
--

LOCK TABLES `customers` WRITE;
/*!40000 ALTER TABLE `customers` DISABLE KEYS */;

```

```
INSERT INTO `customers` VALUES
(1,'Mrunal','Ghorpade',8573086053),(2,'Sameera','shah',1234567890),(3,'Vaibhav','Bhosale',9665579397),(4,'Ketan','Patil',8573054784),(5,'Manali','dey',9863465700);
/*!40000 ALTER TABLE `customers` ENABLE KEYS */;
UNLOCK TABLES;
```

```
--
-- Table structure for table `order`
--
```

```
DROP TABLE IF EXISTS `order`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `order` (
  `order_id` int(11) NOT NULL AUTO_INCREMENT,
  `CUSTOMERS_customer_id` int(11) NOT NULL,
  `order_date` date DEFAULT NULL,
  PRIMARY KEY (`order_id`),
  KEY `fk_ORDER_CUSTOMERS1_idx` (`CUSTOMERS_customer_id`),
  CONSTRAINT `fk_ORDER_CUSTOMERS1` FOREIGN KEY (`CUSTOMERS_customer_id`)
REFERENCES `customers` (`customer_id`)
) ENGINE=InnoDB AUTO_INCREMENT=20 DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_unicode_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--
-- Dumping data for table `order`
--
```

```
LOCK TABLES `order` WRITE;
/*!40000 ALTER TABLE `order` DISABLE KEYS */;
INSERT INTO `order` VALUES
(1,1,NULL),(2,1,NULL),(3,1,NULL),(4,1,NULL),(5,1,NULL),(10,1,NULL),(11,1,NULL),(12,1,NULL),(13,2,NULL),(14,2,NULL),(15,2,NULL),(16,2,NULL),(17,2,NULL),(18,2,'2018-12-13');
/*!40000 ALTER TABLE `order` ENABLE KEYS */;
UNLOCK TABLES;
```

```
--  
-- Table structure for table `order_items`  
--
```

```
DROP TABLE IF EXISTS `order_items`;  
/*!40101 SET @saved_cs_client = @@character_set_client */;  
SET character_set_client = utf8mb4 ;  
CREATE TABLE `order_items` (  
  `quantity` int(11) NOT NULL,  
  `ORDER_oder_id` int(11) NOT NULL,  
  `PRODUCTS_product_id` int(11) NOT NULL,  
  KEY `fk_ORDER_ITEMS_ORDER1_idx` (`ORDER_oder_id`),  
  KEY `fk_ORDER_ITEMS_PRODUCTS1` (`PRODUCTS_product_id`),  
  CONSTRAINT `fk_ORDER_ITEMS_ORDER1` FOREIGN KEY (`ORDER_oder_id`)  
REFERENCES `order` (`order_id`),  
  CONSTRAINT `fk_ORDER_ITEMS_PRODUCTS1` FOREIGN KEY (`PRODUCTS_product_id`)  
REFERENCES `products` (`product_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_unicode_ci;  
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--  
-- Dumping data for table `order_items`  
--
```

```
LOCK TABLES `order_items` WRITE;  
/*!40000 ALTER TABLE `order_items` DISABLE KEYS */;  
INSERT INTO `order_items` VALUES  
(2,1,1),(2,2,1),(2,3,1),(2,4,1),(2,5,1),(2,10,6),(2,11,1),(2,12,1),(2,13,11),(2,14,11),(1,15,11)  
,(2,17,11),(2,18,11);  
/*!40000 ALTER TABLE `order_items` ENABLE KEYS */;  
UNLOCK TABLES;  
/*!50003 SET @saved_cs_client = @@character_set_client */ ;  
/*!50003 SET @saved_cs_results = @@character_set_results */ ;  
/*!50003 SET @saved_col_connection = @@collation_connection */ ;  
/*!50003 SET character_set_client = utf8mb4 */ ;  
/*!50003 SET character_set_results = utf8mb4 */ ;  
/*!50003 SET collation_connection = utf8mb4_0900_ai_ci */ ;
```

```

/*!50003 SET @saved_sql_mode      = @@sql_mode */;
/*!50003 SET sql_mode              = 'STRICT_TRANS_TABLES,NO_ENGINE_SUBSTITUTION'
*/;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`quantity_before_insert` BEFORE INSERT ON `order_items` FOR EACH ROW BEGIN
    CALL check_user_product_qty(new.quantity);
END */;;
DELIMITER ;
/*!50003 SET sql_mode              = @saved_sql_mode */;
/*!50003 SET character_set_client = @saved_cs_client */;
/*!50003 SET character_set_results = @saved_cs_results */;
/*!50003 SET collation_connection = @saved_col_connection */;

--
-- Table structure for table `payment`
--

DROP TABLE IF EXISTS `payment`;
/*!40101 SET @saved_cs_client      = @@character_set_client */;
SET character_set_client = utf8mb4;
CREATE TABLE `payment` (
  `ORDER_oder_id` int(11) NOT NULL,
  `payment_id` int(11) NOT NULL AUTO_INCREMENT,
  `payment_mode` varchar(45) COLLATE utf8mb4_unicode_ci NOT NULL DEFAULT 'Cash',
  PRIMARY KEY (`payment_id`),
  KEY `fk_PAYMENT_ORDER1` (`ORDER_oder_id`),
  CONSTRAINT `fk_PAYMENT_ORDER1` FOREIGN KEY (`ORDER_oder_id`) REFERENCES
`order` (`order_id`)
) ENGINE=InnoDB AUTO_INCREMENT=18 DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_unicode_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `payment`
--

```

```
LOCK TABLES `payment` WRITE;
/*!40000 ALTER TABLE `payment` DISABLE KEYS */;
INSERT INTO `payment` VALUES
(1,1,'cash'),(2,2,'cash'),(3,3,'cash'),(4,4,'cash'),(5,5,'cash'),(10,10,'card'),(11,11,'card'),(12,
12,'card'),(13,13,'card'),(14,14,'card'),(15,15,'cash'),(17,16,'cash'),(18,17,'cash');
/*!40000 ALTER TABLE `payment` ENABLE KEYS */;
UNLOCK TABLES;
```

```
--
-- Table structure for table `prime_customer`
--
```

```
DROP TABLE IF EXISTS `prime_customer`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4;
CREATE TABLE `prime_customer` (
  `prime_subscription_date` datetime NOT NULL,
  `CUSTOMERS_customer_id` int(11) NOT NULL,
  PRIMARY KEY (`CUSTOMERS_customer_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--
-- Dumping data for table `prime_customer`
--
```

```
LOCK TABLES `prime_customer` WRITE;
/*!40000 ALTER TABLE `prime_customer` DISABLE KEYS */;
INSERT INTO `prime_customer` VALUES ('2018-10-11 00:00:00',1);
/*!40000 ALTER TABLE `prime_customer` ENABLE KEYS */;
UNLOCK TABLES;
```

```
--
-- Table structure for table `product_color_available`
--
```

```
DROP TABLE IF EXISTS `product_color_available`;
```

```

/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `product_color_available` (
  `color` varchar(20) DEFAULT NULL,
  `PRODUCTS_product_id` int(11) NOT NULL,
  `size` varchar(4) DEFAULT NULL,
  `quantity` int(11) DEFAULT NULL,
  KEY `fk_product_color_available_PRODUCTS1_idx` (`PRODUCTS_product_id`),
  CONSTRAINT `fk_product_color_available_PRODUCTS1` FOREIGN KEY
(`PRODUCTS_product_id`) REFERENCES `products` (`product_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `product_color_available`
--

LOCK TABLES `product_color_available` WRITE;
/*!40000 ALTER TABLE `product_color_available` DISABLE KEYS */;
INSERT INTO `product_color_available` VALUES
('Red',1,'s',96),('blue',1,'XS',20),('black',2,'S',49),('green',2,'XL',45),('gray',2,'L',49),('orange',3,'L',54),('white',3,'M',50),('blue',4,'M',22),('black',4,'L',22),('green',5,'L',15),('red',6,NU
LL,100),('red',11,'XL',11),('red',12,'L',20),('red',13,'L',20);
/*!40000 ALTER TABLE `product_color_available` ENABLE KEYS */;
UNLOCK TABLES;
/*!50003 SET @saved_cs_client = @@character_set_client */;
/*!50003 SET @saved_cs_results = @@character_set_results */;
/*!50003 SET @saved_col_connection = @@collation_connection */;
/*!50003 SET character_set_client = utf8mb4 */;
/*!50003 SET character_set_results = utf8mb4 */;
/*!50003 SET collation_connection = utf8mb4_0900_ai_ci */;
/*!50003 SET @saved_sql_mode = @@sql_mode */;
/*!50003 SET sql_mode = 'STRICT_TRANS_TABLES,NO_ENGINE_SUBSTITUTION'
*/;
DELIMITER ;;

```

```

/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`quantity_before_update` BEFORE UPDATE ON `product_color_available` FOR EACH
ROW BEGIN
    CALL check_product_inventory_quantity(new.quantity);
END */;;
DELIMITER ;
/*!50003 SET sql_mode          = @saved_sql_mode */ ;
/*!50003 SET character_set_client = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection = @saved_col_connection */ ;

--
-- Table structure for table `product_review`
--

DROP TABLE IF EXISTS `product_review`;
/*!40101 SET @saved_cs_client    = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `product_review` (
  `review_id` int(11) NOT NULL AUTO_INCREMENT,
  `review` varchar(45) DEFAULT NULL,
  `PRODUCTS_product_id` int(11) NOT NULL,
  PRIMARY KEY (`review_id`),
  KEY `fk_Product_review_PRODUCTS1_idx` (`PRODUCTS_product_id`),
  CONSTRAINT `fk_Product_review_PRODUCTS1` FOREIGN KEY
(`PRODUCTS_product_id`) REFERENCES `products` (`product_id`)
) ENGINE=InnoDB AUTO_INCREMENT=4 DEFAULT CHARSET=utf8;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `product_review`
--

LOCK TABLES `product_review` WRITE;
/*!40000 ALTER TABLE `product_review` DISABLE KEYS */;
INSERT INTO `product_review` VALUES (1,'Good',1),(2,'Good condition',2),(3,'Good
fitting',3);

```



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

```
--
```

```
-- Temporary view structure for view `product_view_for_supplire`
```

```
--
```

```
DROP TABLE IF EXISTS `product_view_for_supplire`;  
/*!50001 DROP VIEW IF EXISTS `product_view_for_supplire`*/;  
SET @saved_cs_client = @@character_set_client;  
SET character_set_client = utf8mb4;  
/*!50001 CREATE VIEW `product_view_for_supplire` AS SELECT  
  1 AS `CATEGORY_category_id`,  
  1 AS `product_name`,  
  1 AS `color`,  
  1 AS `size`,  
  1 AS `quantity`*/;  
SET character_set_client = @saved_cs_client;
```

```
--
```

```
-- Table structure for table `products`
```

```
--
```

```
DROP TABLE IF EXISTS `products`;  
/*!40101 SET @saved_cs_client = @@character_set_client */;  
SET character_set_client = utf8mb4 ;  
CREATE TABLE `products` (  
  `product_id` int(11) NOT NULL AUTO_INCREMENT,  
  `product_name` varchar(45) DEFAULT NULL,  
  `product_price` int(11) DEFAULT NULL,  
  `CATEGORY_category_id` int(11) NOT NULL,  
  PRIMARY KEY (`product_id`),  
  KEY `fk_PRODUCTS_CATEGORY1_idx` (`CATEGORY_category_id`),  
  CONSTRAINT `fk_PRODUCTS_CATEGORY1` FOREIGN KEY (`CATEGORY_category_id`)  
REFERENCES `category` (`category_id`)  
) ENGINE=InnoDB AUTO_INCREMENT=14 DEFAULT CHARSET=utf8;  
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--  
-- Dumping data for table `products`  
--
```

```
LOCK TABLES `products` WRITE;  
/*!40000 ALTER TABLE `products` DISABLE KEYS */;  
INSERT INTO `products` VALUES (1,'cotton kurta',100,1),(2,'bandhani Kurta',75,1),(3,'ray  
ban dress ',46,2),(4,'malhotra dress',200,2),(5,'silk saree',250,3),(6,'cotton  
saree',150,3),(7,'cotton jacket',71,4),(8,'polka dots  
jumpsuit',39,5),(11,'kurta',50,1),(12,'dress',50,2),(13,'reddress',50,2);  
/*!40000 ALTER TABLE `products` ENABLE KEYS */;  
UNLOCK TABLES;
```

```
--  
-- Table structure for table `products_has_supplier`  
--
```

```
DROP TABLE IF EXISTS `products_has_supplier`;  
/*!40101 SET @saved_cs_client = @@character_set_client */;  
SET character_set_client = utf8mb4 ;  
CREATE TABLE `products_has_supplier` (  
  `PRODUCTS_product_id` int(11) NOT NULL,  
  `SUPPLIER_supplier_id` int(11) NOT NULL,  
  PRIMARY KEY (`PRODUCTS_product_id`,`SUPPLIER_supplier_id`),  
  KEY `fk_PRODUCTS_has_SUPPLIER_SUPPLIER1_idx` (`SUPPLIER_supplier_id`),  
  KEY `fk_PRODUCTS_has_SUPPLIER_PRODUCTS1_idx` (`PRODUCTS_product_id`),  
  CONSTRAINT `fk_PRODUCTS_has_SUPPLIER_PRODUCTS1` FOREIGN KEY  
(`PRODUCTS_product_id`) REFERENCES `products` (`product_id`),  
  CONSTRAINT `fk_PRODUCTS_has_SUPPLIER_SUPPLIER1` FOREIGN KEY  
(`SUPPLIER_supplier_id`) REFERENCES `supplier` (`supplier_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8;  
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--  
-- Dumping data for table `products_has_supplier`  
--
```

```
LOCK TABLES `products_has_supplier` WRITE;
/*!40000 ALTER TABLE `products_has_supplier` DISABLE KEYS */;
INSERT INTO `products_has_supplier` VALUES (1,1),(2,1),(2,2),(3,2),(3,3),(5,4),(4,5);
/*!40000 ALTER TABLE `products_has_supplier` ENABLE KEYS */;
UNLOCK TABLES;
```

```
--
-- Table structure for table `shipment`
--
```

```
DROP TABLE IF EXISTS `shipment`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4;
CREATE TABLE `shipment` (
  `shipmen_id` int(11) NOT NULL AUTO_INCREMENT,
  `ORDER_oder_id` int(11) NOT NULL,
  `status` varchar(20) COLLATE utf8mb4_unicode_ci DEFAULT NULL,
  `Date_of_order` date DEFAULT NULL,
  PRIMARY KEY (`shipmen_id`,`ORDER_oder_id`),
  KEY `fk_SHIPMENT_ORDER1_idx` (`ORDER_oder_id`),
  CONSTRAINT `fk_SHIPMENT_ORDER1` FOREIGN KEY (`ORDER_oder_id`) REFERENCES
`order` (`order_id`)
) ENGINE=InnoDB AUTO_INCREMENT=16 DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_unicode_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--
-- Dumping data for table `shipment`
--
```

```
LOCK TABLES `shipment` WRITE;
/*!40000 ALTER TABLE `shipment` DISABLE KEYS */;
INSERT INTO `shipment` VALUES
(1,1,'delivered',NULL),(2,2,NULL,NULL),(3,3,NULL,NULL),(4,4,NULL,NULL),(5,5,NULL,NULL
),(10,10,NULL,NULL),(11,11,NULL,NULL),(12,14,'received',NULL),(13,15,'received','2018-
12-12'),(14,17,'received','2018-12-13'),(15,18,'received','2018-12-13');
```

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

```
--  
-- Table structure for table `supplier`  
--
```

```
DROP TABLE IF EXISTS `supplier`;  
/*!40101 SET @saved_cs_client = @@character_set_client */;  
SET character_set_client = utf8mb4 ;  
CREATE TABLE `supplier` (  
  `supplier_id` int(11) NOT NULL,  
  `supplier_name` varchar(45) DEFAULT NULL,  
  PRIMARY KEY (`supplier_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8;  
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--  
-- Dumping data for table `supplier`  
--
```

```
LOCK TABLES `supplier` WRITE;  
/*!40000 ALTER TABLE `supplier` DISABLE KEYS */;  
INSERT INTO `supplier` VALUES (1,'Emma'),(2,'Olivia'),(3,'James'),(4,'Mia'),(5,'Amelia');  
/*!40000 ALTER TABLE `supplier` ENABLE KEYS */;  
UNLOCK TABLES;
```

```
--  
-- Table structure for table `supplier_address`  
--
```

```
DROP TABLE IF EXISTS `supplier_address`;  
/*!40101 SET @saved_cs_client = @@character_set_client */;  
SET character_set_client = utf8mb4 ;  
CREATE TABLE `supplier_address` (  
  `street_address_1` varchar(45) NOT NULL,  
  `street_address_2` varchar(45) DEFAULT NULL,
```

```
`city` varchar(45) DEFAULT NULL,  
`state` varchar(45) DEFAULT NULL,  
`country` varchar(45) DEFAULT NULL,  
`zip_code` varchar(45) NOT NULL,  
`SUPPLIER_supplier_id` int(11) NOT NULL,  
KEY `fk_SUPPLIER_ADDRESS_SUPPLIER1_idx` (`SUPPLIER_supplier_id`),  
CONSTRAINT `fk_SUPPLIER_ADDRESS_SUPPLIER1` FOREIGN KEY  
(`SUPPLIER_supplier_id`) REFERENCES `supplier` (`supplier_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8;  
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--  
-- Dumping data for table `supplier_address`  
--
```

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

```
--  
-- Table structure for table `supplier_contact_information`  
--
```

```
DROP TABLE IF EXISTS `supplier_contact_information`;  
/*!40101 SET @saved_cs_client = @@character_set_client */;  
SET character_set_client = utf8mb4 ;  
CREATE TABLE `supplier_contact_information` (  
  `phone_number` int(11) NOT NULL,  
  `SUPPLIER_supplier_id` int(11) NOT NULL,  
  PRIMARY KEY (`phone_number`),  
  KEY `fk_SUPPLIER_CONTACT_INFORMATION_SUPPLIER1_idx` (`SUPPLIER_supplier_id`),  
  CONSTRAINT `fk_SUPPLIER_CONTACT_INFORMATION_SUPPLIER1` FOREIGN KEY  
  (`SUPPLIER_supplier_id`) REFERENCES `supplier` (`supplier_id`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8;  
/*!40101 SET character_set_client = @saved_cs_client */;
```

--

-- Dumping data for table `supplier\_contact\_information`

--

LOCK TABLES `supplier\_contact\_information` WRITE;

/\*!40000 ALTER TABLE `supplier\_contact\_information` DISABLE KEYS \*/;

/\*!40000 ALTER TABLE `supplier\_contact\_information` ENABLE KEYS \*/;

UNLOCK TABLES;

--

-- Dumping routines for database 'project'

--

/\*!50003 DROP PROCEDURE IF EXISTS `Cancel\_order\_for\_customer` \*/;

/\*!50003 SET @saved\_cs\_client = @@character\_set\_client \*/;

/\*!50003 SET @saved\_cs\_results = @@character\_set\_results \*/;

/\*!50003 SET @saved\_col\_connection = @@collation\_connection \*/;

/\*!50003 SET character\_set\_client = utf8mb4 \*/;

/\*!50003 SET character\_set\_results = utf8mb4 \*/;

/\*!50003 SET collation\_connection = utf8mb4\_0900\_ai\_ci \*/;

/\*!50003 SET @saved\_sql\_mode = @@sql\_mode \*/;

/\*!50003 SET sql\_mode = 'STRICT\_TRANS\_TABLES,NO\_ENGINE\_SUBSTITUTION' \*/;

DELIMITER ;;

CREATE DEFINER=`root`@`localhost` PROCEDURE `Cancel\_order\_for\_customer`(In  
orderID int, IN productID int)

begin

start transaction ;

delete from project.shipment where project.shipment.ORDER\_oder\_id = orderID;

delete from project.payment where project.payment.ORDER\_oder\_id = orderID;

update project.product\_color\_available

inner join project.order\_items

On project.product\_color\_available.PRODUCTS\_product\_id =

project.order\_items.PRODUCTS\_product\_id

set project.product\_color\_available.quantity = project.product\_color\_available.quantity  
+ project.order\_items.quantity

```
where project.order_items.ORDER_oder_id = orderID and  
project.order_items.PRODUCTS_product_id = productID ;
```

```
delete from project.order_items where project.order_items.ORDER_oder_id = orderID  
and project.order_items.PRODUCTS_product_id =productID ;  
commit;  
delete from project.order where project.order.order_id = orderID;  
commit;  
end ;;
```

```
DELIMITER ;
```

```
/*!50003 SET sql_mode          = @saved_sql_mode */ ;  
/*!50003 SET character_set_client = @saved_cs_client */ ;  
/*!50003 SET character_set_results = @saved_cs_results */ ;  
/*!50003 SET collation_connection = @saved_col_connection */ ;  
/*!50003 DROP PROCEDURE IF EXISTS `check_product_inventory_quantity` */;  
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;  
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;  
/*!50003 SET @saved_col_connection = @@collation_connection */ ;  
/*!50003 SET character_set_client = utf8mb4 */ ;  
/*!50003 SET character_set_results = utf8mb4 */ ;  
/*!50003 SET collation_connection = utf8mb4_0900_ai_ci */ ;  
/*!50003 SET @saved_sql_mode       = @@sql_mode */ ;  
/*!50003 SET sql_mode              = 'STRICT_TRANS_TABLES,NO_ENGINE_SUBSTITUTION'  
*/ ;
```

```
DELIMITER ;;
```

```
CREATE DEFINER=`root`@`localhost` PROCEDURE  
`check_product_inventory_quantity`(IN qty int)  
begin
```

```
IF qty < 0 THEN  
    SIGNAL SQLSTATE '45000'  
    SET MESSAGE_TEXT = 'No enough quantity available in the inventory';  
END IF;
```

```
end ;;
```

```
DELIMITER ;
```

```
/*!50003 SET sql_mode          = @saved_sql_mode */ ;
```

```

/*!50003 SET character_set_client = @saved_cs_client */;
/*!50003 SET character_set_results = @saved_cs_results */;
/*!50003 SET collation_connection = @saved_col_connection */;
/*!50003 DROP PROCEDURE IF EXISTS `check_user_prduct_qty` */;
/*!50003 SET @saved_cs_client = @@character_set_client */;
/*!50003 SET @saved_cs_results = @@character_set_results */;
/*!50003 SET @saved_col_connection = @@collation_connection */;
/*!50003 SET character_set_client = utf8mb4 */;
/*!50003 SET character_set_results = utf8mb4 */;
/*!50003 SET collation_connection = utf8mb4_0900_ai_ci */;
/*!50003 SET @saved_sql_mode = @@sql_mode */;
/*!50003 SET sql_mode = 'STRICT_TRANS_TABLES,NO_ENGINE_SUBSTITUTION'
*/;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `check_user_prduct_qty`(IN qty1 int)
begin

IF qty1 < 0 THEN
SIGNAL SQLSTATE '45001'
SET MESSAGE_TEXT = 'Quantity cannot be less than zero';
END IF;
end ;;
DELIMITER ;
/*!50003 SET sql_mode = @saved_sql_mode */;
/*!50003 SET character_set_client = @saved_cs_client */;
/*!50003 SET character_set_results = @saved_cs_results */;
/*!50003 SET collation_connection = @saved_col_connection */;
/*!50003 DROP PROCEDURE IF EXISTS `insert_data_into_product_inventory` */;
/*!50003 SET @saved_cs_client = @@character_set_client */;
/*!50003 SET @saved_cs_results = @@character_set_results */;
/*!50003 SET @saved_col_connection = @@collation_connection */;
/*!50003 SET character_set_client = utf8mb4 */;
/*!50003 SET character_set_results = utf8mb4 */;
/*!50003 SET collation_connection = utf8mb4_0900_ai_ci */;
/*!50003 SET @saved_sql_mode = @@sql_mode */;
/*!50003 SET sql_mode = 'STRICT_TRANS_TABLES,NO_ENGINE_SUBSTITUTION'
*/;

```



```

DELIMITER ;;
CREATE DEFINER='supplier'@'localhost' PROCEDURE
`insert_data_into_product_inventory`(IN productName varchar(50), IN product_price
int, IN product_category int, IN colour varchar(50), IN size varchar(4), IN qty int)
begin
start transaction;
insert into project.products(project.products.product_name,
project.products.product_price, project.products.CATEGORY_category_id) values
(productName,product_price,product_category);
insert into
project.product_color_available(project.product_color_available.color,project.product_
color_available.PRODUCTS_product_id,project.product_color_available.size,
project.product_color_available.quantity)
values(colour,last_insert_id(),size,qty);
commit;
end ;;
DELIMITER ;
/*!50003 SET sql_mode          = @saved_sql_mode */ ;
/*!50003 SET character_set_client = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection = @saved_col_connection */ ;
/*!50003 DROP PROCEDURE IF EXISTS `placing_order_for_customer` */;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client = utf8mb4 */ ;
/*!50003 SET character_set_results = utf8mb4 */ ;
/*!50003 SET collation_connection = utf8mb4_0900_ai_ci */ ;
/*!50003 SET @saved_sql_mode       = @@sql_mode */ ;
/*!50003 SET sql_mode              = 'STRICT_TRANS_TABLES,NO_ENGINE_SUBSTITUTION'
*/ ;
DELIMITER ;;
CREATE DEFINER='root'@'localhost' PROCEDURE `placing_order_for_customer`(IN
customer_id int, IN product_id int, IN product_color varchar(10), IN product_size
varchar(4), IN product_quantity int, IN payment_mode varchar(10))
begin
start transaction;

```

```

insert into project.order(CUSTOMERS_customer_id, order_date)
values(customer_id,now());
insert into project.order_items(quantity,ORDER_oder_id,PRODUCTS_product_id) values
(product_quantity, (select order_id from project.order order by order_id desc limit
1),product_id);
update project.product_color_available Set project.product_color_available.quantity =
project.product_color_available.quantity - product_quantity
where project.product_color_available.color = product_color and
project.product_color_available.size =product_size and
project.product_color_available.PRODUCTS_product_id = product_id;
insert into project.payment(ORDER_oder_id,payment_mode) values((select order_id
from project.order order by order_id desc limit 1),payment_mode);
insert into project.shipment(ORDER_oder_id, status, Date_of_order) values((select
order_id from project.order order by order_id desc limit 1),"received", now());
commit;

```

```

select project.products.product_name,
project.order_items.quantity,(project.products.product_price *
project.order_items.quantity) as total from project.products
inner join project.order_items on project.products.product_id =
project.order_items.PRODUCTS_product_id where project.products.product_id
=product_id group by ORDER_oder_id
having project.order_items.ORDER_oder_id =(select order_id from project.order order
by order_id desc limit 1) ;

```

```

end ;;
DELIMITER ;
/*!50003 SET sql_mode          = @saved_sql_mode */ ;
/*!50003 SET character_set_client = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection = @saved_col_connection */ ;
/*!50003 DROP PROCEDURE IF EXISTS `product_view_for_customer` */;
ALTER DATABASE `project` CHARACTER SET utf8 COLLATE utf8_general_ci ;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;

```

```

/*!50003 SET character_set_client = utf8mb4 */ ;
/*!50003 SET character_set_results = utf8mb4 */ ;
/*!50003 SET collation_connection = utf8mb4_0900_ai_ci */ ;
/*!50003 SET @saved_sql_mode      = @@sql_mode */ ;
/*!50003 SET sql_mode             = 'STRICT_TRANS_TABLES,NO_ENGINE_SUBSTITUTION'
*/ ;
DELIMITER ;;
CREATE DEFINER='customer'@'localhost' PROCEDURE `product_view_for_customer`(IN
categoryid int)
begin
select project.products.product_id, project.products.product_name,
project.products.product_price,
project.product_color_available.color,project.product_color_available.size,project.prod
uct_review.review from products
LEFT JOIN product_color_available
ON project.products.product_id =
project.product_color_available.PRODUCTS_product_id
left join project.product_review ON project.products.product_id =
project.product_review.PRODUCTS_product_id
where project.products.CATEGORY_category_id = categoryid order by
project.products.product_id;
end ;;
DELIMITER ;
/*!50003 SET sql_mode             = @saved_sql_mode */ ;
/*!50003 SET character_set_client = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection = @saved_col_connection */ ;
ALTER DATABASE `project` CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci ;

--
-- Final view structure for view `product_view_for_supplire`
--

/*!50001 DROP VIEW IF EXISTS `product_view_for_supplire`*/;
/*!50001 SET @saved_cs_client      = @@character_set_client */;
/*!50001 SET @saved_cs_results     = @@character_set_results */;
/*!50001 SET @saved_col_connection = @@collation_connection */;

```

```

/*!50001 SET character_set_client    = utf8mb4 */;
/*!50001 SET character_set_results   = utf8mb4 */;
/*!50001 SET collation_connection    = utf8mb4_0900_ai_ci */;
/*!50001 CREATE ALGORITHM=UNDEFINED */
/*!50013 DEFINER=`root`@`localhost` SQL SECURITY DEFINER */
/*!50001 VIEW `product_view_for_supplire` AS select
`products`.`CATEGORY_category_id` AS
`CATEGORY_category_id`,`products`.`product_name` AS
`product_name`,`product_color_available`.`color` AS
`color`,`product_color_available`.`size` AS `size`,`product_color_available`.`quantity` AS
`quantity` from (((`products` left join `product_color_available`
on((`products`.`product_id` = `product_color_available`.`PRODUCTS_product_id`))) join
`products_has_supplier` on((`products`.`product_id` =
`products_has_supplier`.`PRODUCTS_product_id`))) join `supplier`
on((`supplier`.`supplier_id` = `products_has_supplier`.`SUPPLIER_supplier_id`))) where
(`supplier`.`supplier_id` = 1) */;
/*!50001 SET character_set_client    = @saved_cs_client */;
/*!50001 SET character_set_results   = @saved_cs_results */;
/*!50001 SET collation_connection    = @saved_col_connection */;
/*!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 2018-12-13 9:48:48