PROGRAM 6. ORDER PROCESSING DATABASE

Consider the following relations for an Order Processing database application in a company.

CUSTOMER (CUST #: int, cname: String, city: String)

ORDER (order #: int, odate: date, cust #: int, ord-Amt: int)

ITEM (item #: int, unit-price: int)

ORDER-ITEM (order #: int, item #: int, qty: int)

WAREHOUSE (warehouse #: int, city: String)

SHIPMENT (order #: int, warehouse #: int, ship-date: date)

i. Create the above tables by properly specifying the primary keys and the foreign keys and the foreign keys.

```
CREATE TABLE `order_processing`.`customer` ( `cust` INT NOT NULL , `cnam e` VARCHAR(50) NOT NULL , `city` VARCHAR(50) NOT NULL , PRIMARY KEY (`cust`));
```

```
CREATE TABLE `order_processing`.`item` ( `item#` INT NOT NULL , `unit-
price` INT NOT NULL , PRIMARY KEY (`item#`));
```

```
CREATE TABLE `order_processing`.`warehouse` ( `warehouse#` INT NOT NULL
, `city` VARCHAR(50) NOT NULL , PRIMARY KEY (`warehouse#`));
```

```
CREATE TABLE `order_processing`.`order_item` ( `orderno` INT NOT NULL , `itemno` INT NOT NULL , `qty` INT NOT NULL , PRIMARY KEY (`orderno`));
```

ALTER TABLE order item ADD FOREIGN KEY (itemno) REFERENCES item(itemno);

CREATE TABLE `order_processing`.`orders` (`orderno` INT NOT NULL , `odate` DATE NOT NULL , `custno` INT NOT NULL , `ord_amt` INT NOT NULL , PRIMARY KEY (`orderno`)) ENGINE = InnoDB;

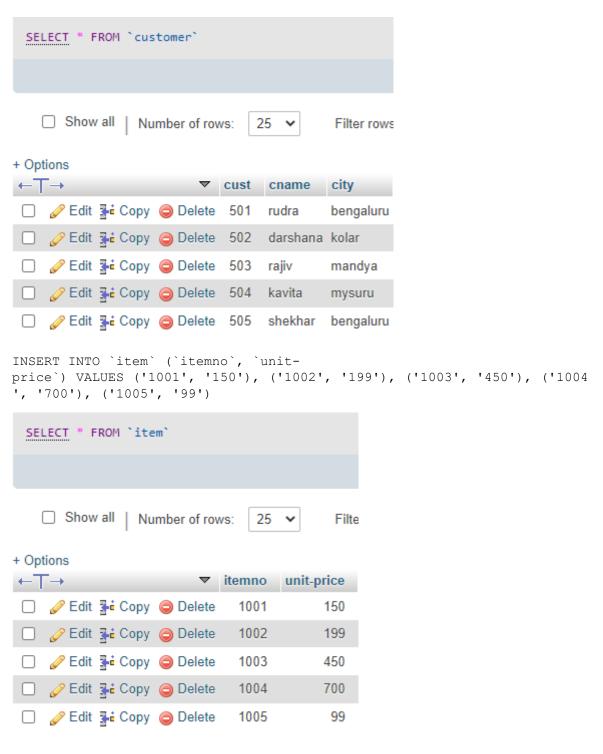
ALTER TABLE orders ADD FOREIGN KEY(custno) REFERENCES customer(cust)

```
CREATE TABLE `order_processing`.`shipment` ( `orderno` INT NOT NULL , `w
arehouseno` INT NOT NULL , `ship_date` DATE NOT NULL , PRIMARY KEY (`ord
erno`));
```

```
ALTER TABLE shipment ADD FOREIGN KEY (warehouseno) REFERENCES warehouse(warehouseno);
```

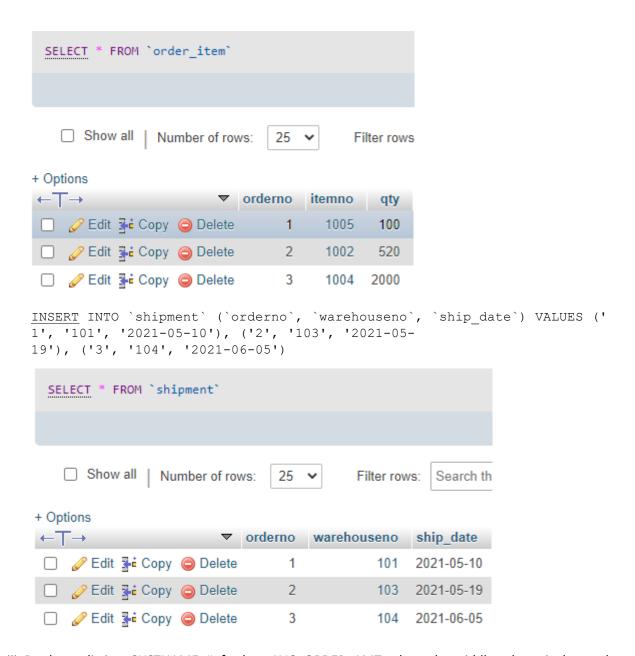
ii. Enter at least five tuples for each relation.

```
INSERT INTO `customer` (`cust`, `cname`, `city`) VALUES ('501', 'rudra',
  'bengaluru'), ('502', 'darshana', 'kolar'), ('503', 'rajiv', 'mandya'),
  ('504', 'kavita', 'mysuru'), ('505', 'shekhar', 'bengaluru')
```



INSERT INTO `warehouse` (`warehouseno`, `city`) VALUES ('101', 'bengalur
u'), ('102', 'kolar'), ('103', 'mysuru'), ('104', 'bengaluru'), ('105',
'mysuru')





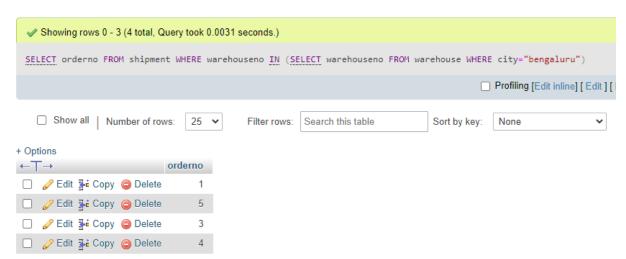
iii. Produce a listing: CUSTNAME, #oforders, AVG_ORDER_AMT, where the middle column is the total numbers of orders by the customer and the last column is the average order amount for that customer.

SELECT c.cname, COUNT(o.orderno) AS nooforders ,AVG(o.ord_amt) AS AVG_order_amt FROM customer c ,orders o WHERE c.cust=o.custno GROUP BY c.cname



iii. List the order# for orders that were shipped from all warehouses that the company has in a specific city.

SELECT orderno FROM shipment WHERE warehouseno IN (SELECT warehouseno FROM warehouse WHERE city="bengaluru")



iv. Demonstrate how you delete item# 10 from the ITEM table and make that field null in the ORDER_ITEM table.

ALTER TABLE order_item ADD FOREIGN KEY (itemno) REFERENCES item(itemno) ON DELETE SET NULL;

