

WORKSHEET 3 SQL

Q1

```
CREATE DATABASE sales_purshase;  
USE sales_purshase;
```

```
CREATE TABLE customers (  
  customerNumber int(11) NOT NULL,  
  customerName varchar(50) NOT NULL,  
  contactLastName varchar(50) NOT NULL,  
  contactFirstName varchar(50) NOT NULL,  
  phone varchar(50) NOT NULL,  
  addressLine1 varchar(50) NOT NULL,  
  addressLine2 varchar(50) DEFAULT NULL,  
  city varchar(50) NOT NULL,  
  state varchar(50) DEFAULT NULL,  
  postalCode varchar(15) DEFAULT NULL,  
  country varchar(50) NOT NULL,  
  salesRepEmployeeNumber int(11) DEFAULT NULL,  
  creditLimit decimal(10,2) DEFAULT NULL,  
  PRIMARY KEY (customerNumber),  
  FOREIGN KEY (salesRepEmployeeNumber) REFERENCES employees (employeeNumber)  
);
```

Q2

```
CREATE TABLE orders (  
  orderNumber int(11) NOT NULL,  
  orderDate date NOT NULL,  
  requiredDate date NOT NULL,  
  shippedDate date DEFAULT NULL,  
  status varchar(15) NOT NULL,  
  comments text,  
  customerNumber int(11) NOT NULL,  
  PRIMARY KEY (orderNumber),  
  CONSTRAINT orders_fk_1 FOREIGN KEY (customerNumber) REFERENCES customers (customerNumber)  
);
```

Q3

```
SELECT *  
FROM orders;
```

Q4

```
SELECT comments  
FROM orders;
```

Q5

```
SELECT orderDate, COUNT(*) AS total_orders  
FROM orders  
GROUP BY orderDate;
```

Q6

```
SELECT employeeNumber, lastName, firstName
FROM employees;
```

Q7

```
SELECT orders.orderNumber, customers.customerName
FROM orders
JOIN customers ON orders.customerNumber=customers.customerNumber;
```

Q8

```
SELECT CONCAT(employees.firstName, ' ', employees.lastName) AS employeeName, customers.customerName
FROM employees
JOIN customers ON employees.employeeNumber=customers.salesRepEmployeeNumber;
```

Q9

```
SELECT paymentDate, sum(amount) AS total_amount
FROM payments
GROUP BY paymentDate;
```

Q10

```
SELECT productName, MSRP, productDescription
FROM products;
```

Q11

```
SELECT
    products.productName, products.productDescription
FROM
    products
WHERE
    products.productCode = (SELECT
        productCode
    FROM
        orderdetails
    GROUP BY productCode
    ORDER BY SUM(quantityOrdered) DESC
    LIMIT 1);
```

Q12

```
SELECT city, SUM(quantityOrdered)
FROM
    orderdetails
    JOIN
        orders ON orderdetails.orderNumber = orders.orderNumber
    JOIN
        customers ON orders.customerNumber = customers.customerNumber
GROUP BY city
ORDER BY SUM(quantityOrdered) DESC
LIMIT 1;
```

Q13

```
SELECT state, COUNT(*) AS total_customers
FROM customers
WHERE state IS NOT NULL
GROUP BY state
ORDER BY total_customers DESC
LIMIT 1;
```

Q14

```
SELECT employeeNumber, CONCAT(firstName, ' ', lastName) AS employeeName
FROM employees;
```

Q15

```
SELECT orderdetails.orderNumber, customers.customerName, (orderdetails.quantityOrdered *
orderdetails.priceEach) AS total_amount_paid
FROM
    orderdetails
    JOIN
    orders ON orderdetails.orderNumber = orders.orderNumber
    JOIN
    customers ON orders.customerNumber = customers.customerNumber;
```