**Question 01:** Create a non-unique index named **idx\_ProductName** on the "ProductName" column in the "Products" table.

**Answer:**

CREATE INDEX idx\_ProductName

ON Products (ProductName);

**Exercise 02: Identify the indexes on the "Orders" table.**

**Question:** List all the indexes on the "Orders" table.

**Answer:**

SHOW INDEXES FROM Orders;

**Exercise 03: Drop an index.**

**Question:** Drop the index named **idx\_ProductName** from the "Products" table.

**Answer:**

DROP INDEX idx\_ProductName

ON Products;

**Exercise 04: Create a composite index.**

**Question:** Create a composite index named **idx\_OrderCustomer** on the "CustomerID" and "OrderDate" columns in the "Orders" table.

**Answer:**

CREATE INDEX idx\_OrderCustomer

ON Orders (CustomerID, OrderDate);

**Exercise 05: Identify the index type.**

**Question:** Identify the type of index (unique, non-unique) on the "EmployeeID" column in the "Employees" table.

**Answer:**

SHOW INDEX FROM Employees WHERE Column\_name = 'EmployeeID';

**Exercise 06: Create a unique index.**

**Question:** Create a unique index named **idx\_UniqueProductName** on the "ProductName" column in the "Products" table.

**Answer:**

CREATE UNIQUE INDEX idx\_UniqueProductName

ON Products (ProductName);

**Exercise 07: Identify the size of an index.**

**Question:** Determine the size of the index named **idx\_OrderCustomer** in the "Orders" table.

(Look for the **Data\_length** and **Index\_length** columns. The **Index\_length** represents the size of the index.)

**Answer:**

SHOW TABLE STATUS LIKE 'Orders';

**Exercise 9: Drop a unique index.**

**Question:** Drop the unique index named **idx\_UniqueProductName** from the "Products" table.

**Answer:**

DROP INDEX idx\_UniqueProductName

ON Products;

**Exercise 10: Create an index on multiple columns.**

**Question:** Create a non-unique index named **idx\_OrderEmployee** on the "EmployeeID" and "ShipVia" columns in the "Orders" table.

**Answer:**

CREATE INDEX idx\_OrderEmployee

ON Orders (EmployeeID, ShipVia);

**Exercise 11: Drop an index on multiple columns.**

**Question:** Drop the index named **idx\_OrderEmployee** from the "Orders" table.

**Answer:**

DROP INDEX idx\_OrderEmployee

ON Orders;

**Exercise 12: Create an index with a specific name length.**

**Question:** Create a non-unique index named **idx\_ShipPostalCode** on the "ShipPostalCode" column in the "Orders" table, limiting the name length to 10 characters.

**Answer:**

CREATE INDEX idx\_ShipPostalCode

ON Orders (ShipPostalCode(10));

**Exercise 13: Create an index on a unique constraint.**

**Question:** Create a unique index named **idx\_UniqueCustomerEmail** on the "Email" column in the "Customers" table.

**Answer:**

CREATE UNIQUE INDEX idx\_UniqueCustomerEmail

ON Customers (Email);

**Exercise 14: Identify the primary key index.**

**Question:** Identify the primary key index on the "Employees" table.

**Answer:**

SHOW INDEX FROM Employees WHERE Key\_name = 'PRIMARY';

**Exercise 15: Create an index on a date column.**

**Question:** Create a non-unique index named **idx\_OrderDate** on the "OrderDate" column in the "Orders" table.

**Answer:**

CREATE INDEX idx\_OrderDate

ON Orders (OrderDate);

**Exercise 16: Create an index on a concatenated column.**

**Question:** Create a non-unique index named **idx\_FullAddress** on the concatenated columns "Address" and "City" in the "Customers" table.

**Answer:**

CREATE INDEX idx\_FullAddress

ON Customers (CONCAT(Address, ' ', City));

**Exercise 17: Create a unique index on multiple columns.**

**Question:** Create a unique index named **idx\_UniqueEmployeeRegion** on the "EmployeeID" and "Region" columns in the "EmployeeTerritories" table.

**Answer:**

CREATE UNIQUE INDEX idx\_UniqueEmployeeRegion

ON EmployeeTerritories (EmployeeID, Region);

**Exercise 18: Create an index on a table.**

**Question:** Create a non-clustered index named **idx\_OrderDetailsProduct** on the "ProductID" column in the "OrderDetails" table.

**Answer:**

CREATE INDEX idx\_OrderDetailsProduct

ON OrderDetails (ProductID);

**Exercise 19: Create an index on a computed column.**

**Question:** Create a non-unique index named **idx\_ComputedTotalPrice** on the computed column "TotalPrice" in the "OrderDetails" table, which is the product of "Quantity" and "UnitPrice".

**Answer:**

CREATE INDEX idx\_ComputedTotalPrice

ON OrderDetails ((Quantity \* UnitPrice));

**Exercise 20: Create a filtered index.**

**Question:** Create a non-unique filtered index named **idx\_FastMovingProducts** on the "UnitsInStock" column in the "Products" table for products with more than 50 units in stock.

**Answer:**

CREATE INDEX idx\_FastMovingProducts

ON Products (UnitsInStock)

WHERE UnitsInStock > 50;