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| **Cognizant Digital Nurture 4.0: Deep Skilling** | |
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| Week: 02 | Advanced SQL (Exercise 2-Index) |

**Exercise 1:** Creating a Non-Clustered Index

Goal: Create a non-clustered index on the ProductName column in the Products table and compare query execution time before and after index creation.

**Code:**

CREATE NONCLUSTERED INDEX IX\_Products\_ProductName

ON Products (ProductName);

SELECT \* FROM Products WHERE ProductName = 'Laptop';

**Output:**



**Exercise 2:** Creating a Clustered Index

Goal: Create a clustered index on the OrderDate column in the Orders table and compare query execution time before and after index creation.

**Code:**

SELECT \* FROM Orders WHERE OrderDate = '2023-01-15';

CREATE NONCLUSTERED INDEX IX\_Orders\_OrderDate ON Orders (OrderDate);

SELECT \* FROM Orders WHERE OrderDate = '2023-01-15';

**Output:**

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**Exercise 3:** Creating a Composite Index

Goal: Create a composite index on the CustomerID and OrderDate columns in the Orders table and compare query execution time before and after index creation.

**Code:**

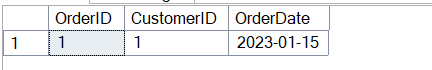
SELECT \* FROM Orders WHERE CustomerID = 1 AND OrderDate = '2023-01-15';

CREATE NONCLUSTERED INDEX IX\_Orders\_CustomerID\_OrderDate

ON Orders (CustomerID, OrderDate);

SELECT \* FROM Orders WHERE CustomerID = 1 AND OrderDate = '2023-01-15';

**Output:**

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