Sample Queries

Safertek assessment

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1. List all customers.

2. Find all orders placed in January 2023.

3. Get the details of each order, including the customer name and email.

4. List the products purchased in a specific order (e.g., OrderID = 1).

5. Calculate the total amount spent by each customer.

6. Find the most popular product (the one that has been ordered the most).

7. Get the total number of orders and the total sales amount for each month in 2023.

8.Find customers who have spent more than $1000.

ANSWERS  
1)SELECT \* FROM Customers;

2)SELECT \* FROM Orders

WHERE OrderDate BETWEEN '2023-01-01' AND '2023-01-31';

3)SELECT Orders.OrderID, Customers.FirstName, Customers.LastName, Customers.Email, Orders.OrderDate

FROM Orders

JOIN Customers ON Orders.CustomerID = Customers.CustomerID;

4)SELECT Products.ProductName, OrderItems.Quantity

FROM OrderItems

JOIN Products ON OrderItems.ProductID = Products.ProductID

WHERE OrderItems.OrderID = 1;

5) SELECT Customers.CustomerID, Customers.FirstName, Customers.LastName, SUM(Products.Price \* OrderItems.Quantity) AS TotalAmountSpent

FROM Customers

JOIN Orders ON Customers.CustomerID = Orders.CustomerID

JOIN OrderItems ON Orders.OrderID = OrderItems.OrderID

JOIN Products ON OrderItems.ProductID = Products.ProductID

GROUP BY Customers.CustomerID, Customers.FirstName, Customers.LastName;

6) SELECT Products.ProductID, Products.ProductName, SUM(OrderItems.Quantity) AS TotalQuantityOrdered

FROM Products

JOIN OrderItems ON Products.ProductID = OrderItems.ProductID

GROUP BY Products.ProductID, Products.ProductName

ORDER BY TotalQuantityOrdered DESC

LIMIT 1;

7) SELECT DATE\_FORMAT(OrderDate, '%Y-%m') AS Month, COUNT(OrderID) AS TotalOrders, SUM(Products.Price \* OrderItems.Quantity) AS TotalSales

FROM Orders

JOIN OrderItems ON Orders.OrderID = OrderItems.OrderID

JOIN Products ON OrderItems.ProductID = Products.ProductID

WHERE YEAR(OrderDate) = 2023

GROUP BY DATE\_FORMAT(OrderDate, '%Y-%m');

8) SELECT Customers.CustomerID, Customers.FirstName, Customers.LastName, SUM(Products.Price \* OrderItems.Quantity) AS TotalAmountSpent

FROM Customers

JOIN Orders ON Customers.CustomerID = Orders.CustomerID

JOIN OrderItems ON Orders.OrderID = OrderItems.OrderID

JOIN Products ON OrderItems.ProductID = Products.ProductID

GROUP BY Customers.CustomerID, Customers.FirstName, Customers.LastName

HAVING TotalAmountSpent > 1000;

OUTPUT

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PYTHON CODE

import mysql.connector

# Connect to MySQL database

db\_connection = mysql.connector.connect(

host="localhost",

user="root",

password="Gokusolos$1",

database="safertek"

)

# Create cursor

cursor = db\_connection.cursor()

# Sample Queries

queries = [

"SELECT \* FROM Customers;",

"SELECT \* FROM Orders WHERE OrderDate BETWEEN '2023-01-01' AND '2023-01-31';",

"SELECT Orders.OrderID, Customers.FirstName, Customers.LastName, Customers.Email FROM Orders JOIN Customers ON Orders.CustomerID = Customers.CustomerID;",

"SELECT Products.ProductName FROM OrderItems JOIN Products ON OrderItems.ProductID = Products.ProductID WHERE OrderItems.OrderID = 1;",

"SELECT Customers.FirstName, Customers.LastName, SUM(Products.Price \* OrderItems.Quantity) AS TotalSpent FROM Customers JOIN Orders ON Customers.CustomerID = Orders.CustomerID JOIN OrderItems ON Orders.OrderID = OrderItems.OrderID JOIN Products ON OrderItems.ProductID = Products.ProductID GROUP BY Customers.CustomerID;",

"SELECT Products.ProductName, SUM(OrderItems.Quantity) AS TotalOrdered FROM OrderItems JOIN Products ON OrderItems.ProductID = Products.ProductID GROUP BY Products.ProductID ORDER BY TotalOrdered DESC LIMIT 1;",

"SELECT DATE\_FORMAT(Orders.OrderDate, '%Y-%m') AS Month, COUNT(Orders.OrderID) AS TotalOrders, SUM(Products.Price \* OrderItems.Quantity) AS TotalSales FROM Orders JOIN OrderItems ON Orders.OrderID = OrderItems.OrderID JOIN Products ON OrderItems.ProductID = Products.ProductID WHERE YEAR(Orders.OrderDate) = 2023 GROUP BY DATE\_FORMAT(Orders.OrderDate, '%Y-%m');",

"SELECT Customers.FirstName, Customers.LastName FROM Customers JOIN Orders ON Customers.CustomerID = Orders.CustomerID JOIN OrderItems ON Orders.OrderID = OrderItems.OrderID JOIN Products ON OrderItems.ProductID = Products.ProductID GROUP BY Customers.CustomerID HAVING SUM(Products.Price \* OrderItems.Quantity) > 1000;"

]

try:

# Execute each query

for index, query in enumerate(queries, start=1):

cursor.execute(query)

results = cursor.fetchall()

print(f"Query {index}:")

for row in results:

print(row)

print()

except mysql.connector.Error as err:

print("Error executing query:", err)

finally:

# Close cursor and database connection

if cursor:

cursor.close()

if db\_connection:

db\_connection.close()

OUTPUT

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