**ASSIGNMENT -2**

**1.**

SELECT

CONCAT(c.FirstName, ' ', c.LastName) AS FullName,

a.City,

s.Amount

FROM

Sales s

JOIN

Customer c ON s.CustomerID = c.Id

JOIN

Address a ON s.CityID = a.ID

JOIN

Customer m ON c.MotherIDNumber = m.IDNumber

WHERE

m.EyeColor = 'Brown';

**2.**

SELECT u.FirstName, u.LastName

FROM User u

JOIN `Order` o ON u.ID = o.UserID

GROUP BY u.ID, u.FirstName, u.LastName

HAVING COUNT(o.CourseID) >= 3;

**3**.

SELECT SUM(p.Amount) AS Amount

FROM Payments p

INNER JOIN Clients c ON p.ClientId = c.Id

INNER JOIN Address a ON c.Id = a.ClientId

WHERE c.Name LIKE '%iro';

**PYTHON QUESTION**

**1. Tuple:** A tuple is an immutable, ordered collection in Python, typically used to store a sequence of elements that should not change.

**Differences between List and Tuple:**

* Mutability: Lists are mutable (elements can be modified), while tuples are immutable.
* Syntax: Lists use square brackets [], and tuples use parentheses ().
* Performance: Tuples are faster for iteration due to their immutability.
* Usage: Tuples are used for fixed data, while lists are used for data that may change.

**2**. **Local Variables:**

* Declared inside a function and accessible only within that function.
* Created when the function is called and destroyed when the function exits.

**Global Variables:**

* Declared outside all functions and accessible throughout the program.
* To modify a global variable inside a function, use the global keyword.

**Rules:**

* Variables assigned within a function are local by default.
* Local variables with the same name as global variables shadow the global ones within the function.

3. Python uses "Pass by Assignment"

Mutable Objects: Changes inside the function affect the original object.

Immutable Objects: Changes create a new object, leaving the original unchanged

4

def display\_file\_content(file\_path):

try:

with open(file\_path) as file:

print(file.read())

except Exception as e:

print(f"Error: {e}")

display\_file\_content('example.txt')

5.

1.

strList = ["Vishesh", "For", "Python"]

valList = [1, 2]

result = {'key2': strList, 'key1': valList}

print(result)

**Output: {'key2': ['Vishesh', 'For', 'Python'], 'key1': [1, 2]}**

2.

strList = ["Vishesh", "For", "Python"]

valList = [1, 2]

result = {'key1': valList + [strList]}

print(result)

**Output: {'key1': [1, 2, ['Vishesh', 'For', 'Python']]}**

3.

valList = [1, 2, 3]

result = {str(i): [i, i + 1] for i in valList}

print(result)

**Output: {'1': [1, 2], '3': [3, 4], '2': [2, 3]}**