
Day 2 Recap Quiz

Questions:

- 1. Python Functions:**
 - How do you define a function in Python?
 - Write a function called `greet` that takes a name as an argument and prints "Hello, [name]!".
- 2. Python Lists and Loops:**
 - What is the difference between a list and a tuple in Python?
 - How would you iterate through the following list and print each item:
`fruits = ["apple", "banana", "cherry"]`
- 3. Python Conditionals:**
 - How would you write a Python program to check if a number is positive, negative, or zero?
- 4. SQL – SELECT and WHERE:**
 - What is the purpose of the `WHERE` clause in SQL? Can you write a query to retrieve all records from a table called `students` where the age is greater than 18?
- 5. SQL Logical Operators:**
 - Explain the difference between the `AND` and `OR` operators in SQL.
 - Write a SQL query using both `AND` and `OR` to select employees whose salary is above 50000 and who have more than 5 years of experience.

Solutions:

- 1. Python Functions:**
 - Functions are pre-written blocks of code that can be reused. You define a function using the `def` keyword in Python.
 - ```
def greet(name):
 A = name
 return A
```
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  - ```
name = input("Enter your name: ")  
greet(name)  
print(f"Hello, {name}!")
```
- 2. Python Lists and Loops:**
 - A **list** is mutable (can be changed), whereas a **tuple** is immutable (cannot be changed).
 - Example:

```
fruits = ("apple", "banana", "cherry")  
for fruit in fruits:  
    print(fruit)
```
- 3. Python Conditionals:**
 - This program checks if a number is positive, negative, or zero:

```
num = int(input("Enter your number: "))  
if num < 0:  
    print("Number is negative")  
elif num > 0:
```

- `print("Number is positive")`
- `else:`
- `print("Number is zero")`

4. SQL – SELECT and WHERE:

- The WHERE clause is used to filter records in SQL. It specifies the condition for the selection of rows.
 - Example query:
 - `SELECT * FROM students WHERE age > 18;`

5. SQL Logical Operators:

- The AND operator is used to combine multiple conditions where all conditions must be true. The OR operator is used when only one condition needs to be true.
 - Example SQL query using AND and OR:
 - `SELECT * FROM employees WHERE salary > 50000 AND experience > 5;`
 - -- This selects employees whose salary is above 50000 and have more than 5 years of experience.
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 - `SELECT * FROM employees WHERE salary > 50000 OR experience > 5;`
 - -- This selects employees whose salary is above 50000 or have more than 5 years of experience, not necessarily both.
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