
Day 3 – Recap Quiz + Solutions

Topics Covered:

✓ Python Functions, While Loops (Karel)

✓ SQL – SELECT, WHERE, AND/OR, LIKE

Questions & Answers

Python Section

1. What is the purpose of a function? Give an example using a loop.

Answer:

Functions help reuse code, improve structure, and save time.

```
def counter(a):
```

```
    a += 1
```

```
    return a
```

```
a = 0
```

```
while a < 10:
```

```
    a = counter(a)
```

```
    print(a)
```

2. Difference between while and for loops?

Answer:

- for loops are used when the number of iterations is known.
- while loops run as long as a condition is true — suitable for unknown or infinite iterations.

3. Karel-style logic in Python – Move forward while path is clear and steps < 5

```
steps = 0

while front_is_clear() and steps < 5:

    move()

    steps += 1
```

4. Define a function is_even(num)

```
def is_even(num):

    if num % 2 == 0:

        print("Number is even")

    else:

        print("Number is odd")

num = int(input("Enter a number: "))

is_even(num)
```

SQL Section

5. What is the LIKE operator in SQL?

Answer:

LIKE is used for pattern matching.

- _ matches a single character

- % matches multiple characters

Example: `SELECT * FROM sales WHERE product_name LIKE '_an%';`

6. SQL Query – Customers from USA and age > 25

`SELECT * FROM customers WHERE country = 'USA' AND age > 25;`

7. SQL Query – Product names starting with 'A'

`SELECT * FROM products WHERE product_name LIKE 'A%';`
