**Loops in python**

**Loops in Python**

Loops are used to repeat a block of code multiple times. Instead of writing the same code over and over, loops makes programs concise and efficient. In Python, there are two main types of loops:

1. for Loop
2. while Loop

**1. for Loop**

The for loop is used to iterate over a sequence (like a list, tuple, string, or range).

**Syntax:**

for variable in sequence:

# Code to execute for each item in the sequence

**Ex 1: Iterating Through a List**

fruits = ["apple", "banana", "mango"]

for fruit in fruits:

print(fruit)

# **Output:**

# apple

# banana

# mango

**Ex 2: Using range()**

for number in range(1, 6): # Numbers from 1 to 5

print(number)

# **Output:**

# 1

# 2

# 3

# 4

# 5

**Ex 3: Iterating Through a String**

word = "hello"

for letter in word:

print(letter)

# **Output:**

# h

# e

# l

# l

# o

**2. while Loop**

The while loop runs as long as the given condition is True.

**Syntax:**

while condition:

# Code to execute while the condition is true

**Ex:**

count = 1

while count <= 5:

print(count)

count += 1

# **Output:**

# 1

# 2

# 3

# 4

# 5