

# Loops in Python

UNDERSTANDING OF LOOPS

# What is a Loop?

- A loop in Python allows for the execution of a block of code multiple times.
- Useful for automating repetitive tasks.
- Types of loops: for loop and while loop.

# The for Loop

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

Syntax:

python

```
for variable in sequence:  
    # Code block to execute
```

```
fruits = ["apple", "banana", "cherry"]  
for fruit in fruits:  
    print(fruit)
```

# Range() function

- The range() function in Python is used to generate a sequence of numbers. It is commonly used in loops to iterate over a sequence of numbers.

```
range(start, stop, step)
```

# The while Loop

The while loop continues to execute as long as the condition is True.

## Syntax:

python

```
while condition:  
    # Code block to execute
```

## Example:

python

```
count = 1  
while count <= 5:  
    print(count)  
    count += 1
```

# break Statement

- The break statement is used to exit the loop even if the loop condition has not been met.

```
for number in range(10):  
    if number == 5:  
        break  
    print(number)
```

# continue Statement

- The continue statement skips the current iteration and moves to the next.

```
for number in range(10):  
    if number % 2 == 0:  
        continue  
    print(number)
```



Thank You

HAPPY LEARNING!