

# loops in python

## PYTHON KA CI

In Python, **loops are control flow statements** that allow you to execute a block of code repeatedly. Loops are useful for performing repetitive tasks, iterating over data structures (like lists or strings), and automating operations that require repeated execution.

### Types of Loops in Python:

1. **for loop**: Used to iterate over a sequence (such as a list, tuple, dictionary, string, or range) and execute a block of code for each item in the sequence.
2. **while loop**: Repeats a block of code as long as a specified condition is **True**. It's useful when you don't know in advance how many times to repeat the loop.

# loops in python for loop

## PYTHON K

Example:

```
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# Iterating through a list of dishes at a Pakistani dhaba
dishes = ["Biryani", "Kebab", "Nihari", "Karahi"]

for dish in dishes:
    print(f"{dish} is available at the dhaba.")
```

Output:

```
arduino Copy code

Biryani is available at the dhaba.
Kebab is available at the dhaba.
Nihari is available at the dhaba.
Karahi is available at the dhaba.
```

```
list = ["Aammar", "Bilal", "Qasim", "Shahid", "Tariq", "Umer"]

for name in list:
    print(name)
```

✓ 0.0s

Aammar  
Bilal  
Qasim  
Shahid  
Tariq  
Umer

## while loop

### 2. while Loop

The `while` loop repeats as long as a certain condition remains `True`.

Syntax:

```
python Copy code

while condition:
    # code to execute
```

# while loop

Example:

python

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```
# Counting how many cups of chai you can have until you're full
cups_of_chai = 0

while cups_of_chai < 3:
    cups_of_chai += 1
    print(f"Chai cup {cups_of_chai} is served!")

print("I'm full now, no more chai!")
```

Output:

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```
Chai cup 1 is served!
Chai cup 2 is served!
Chai cup 3 is served!
I'm full now, no more chai!
```

# While loop

```
▶ cups_of_chai = 0

while cups_of_chai < 5:
    print("I want more chai.")
    cups_of_chai += 1

print("I have had enough chai.")
```

[32] ✓ 0.0s

```
... I want more chai.
    I want more chai.
    I want more chai.
    I want more chai.
    I want more chai.
    I have had enough chai.
```