

COMP110: Loops in Python

Loops allow you to repeat a block of code multiple times.

1. for Loop with range()

```
for i in range(5):  
    print(i) # 0 to 4
```

2. for Loop over a List

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

3. while Loop

```
count = 0  
  
while count < 5:  
    print(count)  
    count += 1
```

4. Nested Loops

```
for i in range(3):  
    for j in range(2):  
        print(f"i={i}, j={j}")
```

5. Loop Control: break and continue

```
for i in range(10):
```

```
if i == 5:
```

```
    break # exit the loop
```

```
if i % 2 == 0:
```

```
    continue # skip even numbers
```

```
print(i)
```

Loops are essential for iteration and repeated operations.