

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

```
coords = (10, 20, 30)
for c in coords:
    print(c)
```

```
colors = {"red", "green", "blue"}
for color in colors:
    print(color)
```

```
person = {"name": "Alice", "age": 30}
for key in person:
    print(key, person[key])
# or, more explicitly:
for key, val in person.items():
    print(key, val)
```

```
word = "loop"
for ch in word:
    print(ch)
```

```
for i in range(1, 4):
    print(i)
```

```
i = 0
```

```
while i < 3:  
    print(i)  
    i += 1
```

```
matrix = [[1, 2], [3, 4], [5, 6]]  
for row in matrix:  
    for val in row:  
        print(val)
```

```
# squares of 0–4  
squares = [x*x for x in range(5)]
```

```
# map numbers to their cubes  
cubes = {x: x**3 for x in range(5)}
```

```
# unique remainders mod 3  
remainders = {x % 3 for x in range(10)}
```

```
# flatten a matrix  
flat = [val for row in matrix for val in row]
```