# Pass vs. Continue in Python: Skip or Chill?

Hey Python loop masters! Today, we're diving into **pass** and **continue**—two ways to control loops:

- **Pass**: Does nothing—like a placeholder.
- **Continue**: Skips to the next loop round.

We'll explore when to use each with fun scenarios. Run the cells, tweak the code, and try the challenges—let's loop smart!

## What's Pass?

`pass` is a "do nothing" statement. It's a placeholder when Python expects code (e.g., in loops, functions), but you don't want action yet. Think of it as "I'll fill this later!"

```
# Example 1: Empty Loop
for num in range(5):
    if num == 3:
        pass
    else:
        print(f"Number: {num}")

```

```
Number: 0
Number: 1
Number: 2
Number: 4
```

```
# Example 2: Future Function
def plan_party():
    pass  # To be written later
print("Party planned? Not yet!")
```

```
Party planned? Not yet!
```

```
# Challenge: Use pass!
for i in range(4):
    if i % 2 == 0:
        pass  # Leave this blank for now
    else:
        print(f"Odd number: {i}")
```

## What's Continue?

`continue` skips the rest of the current loop iteration and jumps to the next one. It's like saying, "Nah, skip this round—next!"

```
# Example 3: Skip a Number
for num in range(15):
    if num == 7:
        continue  # Skip 2, move to next
    print(f"Number: {num}")
```

```
Number: 0
Number: 1
Number: 2
Number: 3
Number: 4
Number: 5
Number: 6
Number: 8
Number: 9
Number: 10
Number: 11
Number: 12
Number: 13
Number: 14
```

```
# Example 4: Skip Negatives
numbers = [1, -2, 3, -4, 5]
for n in numbers:
    if n < 0:
        continue  # Skip negatives
    print(f"Positive: {n}")
```

```
# Challenge: Skip your pick!
limit = int(input("Enter a number to skip (0-4): "))
for i in range(5):
    if i == limit:
        continue
    print(f"Kept: {i}")
# Try skipping 1 or 3—what's printed?

```

## Pass vs. Continue: The Showdown

- **Pass**: Stays in the loop, does nothing extra—just chills.
- **Continue**: Jumps out of this round, skips to the next.

Let's compare!

```
# Scenario: Loop with a condition
print("With pass:")
for num in range(5):
    if num == 3:
        pass  # Does nothing, keeps going
    print(num, end=" ")
print("\nWith continue:")
for num in range(5):
    if num == 3:
        continue  # Skips 3
    print(num, end=" ")
```

```
# Challenge: Spot the difference!
print("\nYour turn with pass:")
for x in range(6):
    if x % 2 == 0:
        pass
    print(x, end=" ")
print("\nYour turn with continue:")
for x in range(6):
    if x % 2 == 0:
        continue
    print(x, end=" ")

```

## Real Scenarios: When to Use Each

- **Pass**: Placeholder for unfinished code (e.g., empty `if`, function stub).
- **Continue**: Skip unwanted cases (e.g., ignore bad data, filter in loops).

```
# Scenario 1: Pass as Placeholder
def check_grade(score):
    if score > 90:
        pass  # TODO: Add "A" logic later
    else:
        print("Not an A yet!")
check_grade(85)
```

```
# Scenario 2: Continue to Filter
words = ["cat", "", "dog", "bird", ""]
for word in words:
    if word == "":
        continue  # Skip empty strings
    print(f"Word: {word}")
```

```
# Challenge: Filter with continue!
colors = ["red", "blue", "", "green", "pink", ""]
for color in colors:
    if color == "":
        continue
    print(f"Color: {color}")
```

## Interactive Challenges: Test Your Loop Fu!

Predict, run, and tweak these scenarios!

```
# Challenge 1: Numbers Game
nums = [0, 1, 2, 3, 4, 5]
for n in nums:
    if n < 3:
        continue
    elif n == 4:
        pass
    print(f"Number: {n}")
# What's printed? Why?
```

```
# Challenge 2: Word Filter
text = input("Enter words (space-separated): ").split()
for word in text:
    if len(word) < 4:
        continue
    elif word.startswith("a"):
        pass
    print(f"Long word: {word}")
# Try "cat apple dog banana ant"—what's the output?
```

## Wrap-Up: Pass and Continue Pros!

You've mastered:

- **Pass**: Placeholder for "later" (does nothing).
- **Continue**: Skips to the next loop round.

Keep looping! Use `pass` for a to-do, `continue` to skip junk. What's your favorite scenario? Share it in class!