Python Interview Coding Questions (With Answers)

📅 Number-Based Questions

1. Reverse a Number

Q: Reverse the number `1234` → **Output:** `4321`

```
num = 1234
reverse = 0
while num > 0:
    digit = num % 10
    reverse = reverse * 10 + digit
    num //= 10
print("Reversed number:", reverse)
```

2. Check Even or Odd Without Using `%`

```
num = 7
if num & 1 == 0:
    print("Even")
else:
    print("Odd")
```

3. Swap Two Numbers Without Temp

```
a = 10
b = 5
a = a + b
b = a - b
a = a - b
print("a:", a, "b:", b)
```

4. Count Digits in a Number

```
num = 12345
count = 0
while num > 0:
    num //= 10
```

```
    count += 1
print("Digit count:", count)
```

5. Sum of Digits

```
num = 123
sum = 0
while num > 0:
    sum += num % 10
    num //= 10
print("Sum of digits:", sum)
```

6. Check if Number is Prime

```
num = 17
is_prime = True
for i in range(2, num):
    if num % i == 0:
        is_prime = False
        break
print("Prime" if is_prime else "Not Prime")
```

🩲String-Based Questions

7. Check Palindrome String

```
s = "madam"
print("Palindrome" if s == s[::-1] else "Not Palindrome")
```

8. Count Vowels and Consonants

```
s = "Hello World"
vowels = "aeiouAEIOU"
v = c = 0
for ch in s:
    if ch.isalpha():
        if ch in vowels:
            v += 1
        else:
```

```
            c += 1
print("Vowels:", v, "Consonants:", c)
```

9. Remove Duplicate Characters

```
s = "programming"
output = ""
for ch in s:
    if ch not in output:
        output += ch
print(output)
```

10. Count Words in a Sentence

```
sentence = "Python is easy to learn"
words = sentence.split()
print("Word count:", len(words))
```

📈List & Logic Questions

11. Find Maximum and Minimum in List

```
numbers = [5, 2, 8, 1, 9]
print("Max:", max(numbers))
print("Min:", min(numbers))
```

12. Second Largest Number

```
lst = [10, 20, 4, 45, 99]
lst.sort()
print("Second Largest:", lst[-2])
```

13. Find Duplicates in List

```
l = [1, 2, 3, 2, 4, 5, 1]
duplicates = []
for i in l:
    if l.count(i) > 1 and i not in duplicates:
```

```
        duplicates.append(i)
print("Duplicates:", duplicates)
```

🕐 Pattern Printing

14. Right-Angle Triangle

```
n = 4
for i in range(1, n+1):
    print("* " * i)
```

15. Number Triangle

```
n = 3
for i in range(1, n+1):
    for j in range(1, i+1):
        print(j, end=' ')
    print()
```

💡 Special Number Programs

16. Palindrome Number

```
num = 121
original = num
reverse = 0
while num > 0:
    digit = num % 10
    reverse = reverse * 10 + digit
    num = num // 10
print("Palindrome" if original == reverse else "Not Palindrome")
```

17. Armstrong Number (3-digit)

```
num = 153
original = num
result = 0
while num > 0:
    digit = num % 10
```

```
    result += digit ** 3
    num = num // 10
print("Armstrong" if result == original else "Not Armstrong")
```

18. Fibonacci Series

```
n = 7
a, b = 0, 1
print(a, b, end=' ')
for i in range(2, n):
    c = a + b
    print(c, end=' ')
    a, b = b, c
```

19. Perfect Number

```
num = 28
sum = 0
for i in range(1, num):
    if num % i == 0:
        sum += i
print("Perfect" if sum == num else "Not Perfect")
```

20. Strong Number

```
num = 145
original = num
sum = 0
for digit in str(num):
    fact = 1
    for i in range(1, int(digit)+1):
        fact *= i
    sum += fact
print("Strong Number" if sum == original else "Not Strong Number")
```

21. Harshad Number

```
num = 18
sum_digits = sum(int(d) for d in str(num))
print("Harshad Number" if num % sum_digits == 0 else "Not Harshad Number")
```

22. Spy Number

```
num = 1124
sum_digits = 0
product_digits = 1
for digit in str(num):
    sum_digits += int(digit)
    product_digits *= int(digit)
print("Spy Number" if sum_digits == product_digits else "Not Spy Number")
```

23. Automorphic Number

```
num = 76
square = num * num
if str(square).endswith(str(num)):
    print("Automorphic Number")
else:
    print("Not Automorphic Number")
```

24. Neon Number

```
num = 9
square = num * num
digit_sum = sum(int(d) for d in str(square))
print("Neon Number" if digit_sum == num else "Not Neon Number")
```

25. Prime Number Pattern (Right-Angled)

```
count = 0
num = 2
while count < 5:
    for i in range(2, num):
        if num % i == 0:
            break
    else:
        print("* " * (count+1))
        count += 1
    num += 1
```

26. Prime Numbers in Range (List)

```
start, end = 10, 30
for num in range(start, end+1):
    for i in range(2, num):
        if num % i == 0:
            break
    else:
        print(num, end=" ")
```

🕐Miscellaneous / Bonus Questions

27. Leap Year Check

```
year = 2024
if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    print("Leap Year")
else:
    print("Not Leap Year")
```

28. Factorial

```
num = 5
fact = 1
for i in range(1, num+1):
    fact *= i
print("Factorial:", fact)
```

29. Power of 2 Check

```
num = 8
print("Yes" if (num & (num - 1)) == 0 else "No")
```