Python Practice Questions and Answers

1. Write a Python program to check if a number is even or odd.

```
number = int(input("Enter a number: "))
if number % 2 == 0:
    print(f"{number} is even.")
else:
    print(f"{number} is odd.")
```

2. Write a Python program to find the factorial of a number.

```
def factorial(n):
    if n == 0 or n == 1:
        return 1
    return n * factorial(n - 1)


num = int(input("Enter a number: "))
print(f"The factorial of {num} is {factorial(num)}.")
```

3. Write a Python program to reverse a string.

```
string = input("Enter a string: ")
reversed_string = string[::-1]
print(f"The reversed string is: {reversed_string}")
```

4. Write a Python program to check if a string is a palindrome.

```
string = input("Enter a string: ")
if string == string[::-1]:
    print("The string is a palindrome.")
else:
```

```
    print("The string is not a palindrome.")
```

5. Write a Python program to generate the Fibonacci sequence up to n terms.

```
n = int(input("Enter the number of terms: "))
a, b = 0, 1
print("Fibonacci sequence:")
for _ in range(n):
    print(a, end=" ")
    a, b = b, a + b
```

6. Write a Python program to find the largest element in a list.

```
numbers = [int(x) for x in input("Enter numbers separated by spaces: ").split()]
largest = max(numbers)
print(f"The largest number is: {largest}")
```

7. Write a Python program to find the sum of digits of a number.

```
number = int(input("Enter a number: "))
sum_of_digits = sum(int(digit) for digit in str(number))
print(f"The sum of digits is: {sum_of_digits}")
```

8. Write a Python program to count the occurrences of each element in a list.

```
from collections import Counter

elements = input("Enter elements separated by spaces: ").split()
count = Counter(elements)
print("Element counts:")
for element, freq in count.items():
    print(f"{element}: {freq}")
```

9. Write a Python program to find the GCD of two numbers.

```
import math


a = int(input("Enter the first number: "))

b = int(input("Enter the second number: "))

gcd = math.gcd(a, b)

print(f"The GCD of {a} and {b} is {gcd}")
```

10. Write a Python program to sort a list of tuples by the second element.

```
tuples = eval(input("Enter a list of tuples: "))

sorted_tuples = sorted(tuples, key=lambda x: x[1])

print(f"Sorted list of tuples: {sorted_tuples}")
```