Sanket Mahajan

In [ ]:
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# Python 50 Questions with Solutions
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In [ ]:
```
# 1. What is the input() function in Python used for?
# Ans- The input() function is use to take value from the user.
```

In [1]:
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# 2. How can you accept an integer as input from the user using input()?
num = int(input("Enter the Number:"))
```

In [2]:
```
# 3. How do you accept a float input from the user?
num1 = float(input("Enter a Number: "))
```

In [3]:
```
# 4. How can you take multiple space-separated values as input?
val = input("Enter values: ").split()
print(val)
```

```
['Sanket', 'Dipak', 'Mahajan']
```

In [4]:
```
# 5. How do you check if a number entered by the user is positive, negative, or zero?
num = int(input("Enter the Number :"))
if num > 0:
    print("Positive")
elif num < 0:
    print("Negative")
else:
    print("Zero")
```

```
Negative
```

In [6]:
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# 6. How do you convert user input to a list of integers?
num3 = input("Enter the Numbers :").split()
list1= []
for x in num3:
    list1.append(int(x))
print(list1)
```

```
[10, 20, 30, 40, 50]
```

In [8]:
```python
# 7. How do you accept a string input and print it in uppercase?
str = input("Enter a String")
print(str.upper())
```

```
SANKET
```

In [10]:
```python
# 8. Write a Python program that accepts a string and prints the number of vowels in it.
text = input("Enter a String")
vowels = "aeiouAEIOU"
count = 0
for char in text:
    if char in vowels:
        count += 1
print("The numbers of vowels in string is :", count)
```

```
The numbers of vowels in string is : 2
```

In [11]:
```python
# 9. Write a program that takes a number as input and checks if it is even or odd.
num2 = int(input("Enter the Number :"))
if num2 % 2 == 0:
    print("Even")
else:
    print("Odd")
```

```
Even
```

In [15]:
```python
# 10. How would you check if a string is a palindrome using input()?
text = input("Enter a string: ")
if text == text[::-1]:
    print("The string is a Palindrome")
else:
    print("The string is Not a Palindrome")
```

```
The string is a Palindrome
```

In [17]:
```python
# 11. Write a program that takes a number as input and prints its square.
num4 = int(input("Enter a Number"))
result = num4 ** 2
print(f"The Square of {num4} is {result}")
```

```
The Square of 3 is 9
```

In [18]:
```python
# 12. Write a program that asks for a number and prints whether it is divisible by 3
num5 = int(input("Enter the number :"))
if num5 % 3 == 0:
    print("The number is divisible by 3")
else:
    print("The number is not divisible by 3")
```

```
The number is divisible by 3
```

In [19]:
```python
# 13. How would you check if a number is divisible by both 3 and 7?
num6 = int(input("Enter the number :"))
if num6 % 3 == 0 and num6 % 7 ==0:
    print("The number is divisible by both 3 and 7")
else:
    print("The number is not divisible by 3 and 7")
```

```
The number is divisible by both 3 and 7
```

In [ ]:
```python
# 14. How do you accept a list of comma-separated values as input?
value = input("Enter a comma separated values: ").split(',')
```

In [20]:
```python
# 15. Write a Python program that takes two numbers as input and prints their product
num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
print("Product:", num1 * num2)
```

```
Product: 200
```

In [26]:
```python
# 16. Write a program that checks if the input number is a prime number
num = int(input("Enter a number: "))
if num > 1:
    for i in range(2, num):
        if num % i == 0:
            print("Not a prime number")
            break
    else:
        print("Prime number")
else:
    print("Not a prime number")
```

```
Prime number
```

In [27]:
```python
# 17. How can you accept a boolean value (True/False) from the user?
val = input("Enter True or False: ")
boolean_val = val == "True"
print("Boolean value:", boolean_val)
```

```
Boolean value: True
```

In [28]:
```python
# 18. Write a program that accepts a string and prints the reverse of that string.
str = input("Enter The String: ")
print(str[::-1])
```

```
teknas
```

In [29]:
```python
# 19. Write a program that asks for a user's name and age and prints a message.
name = input("Enter your name: ")
age = int(input("Enter your age: "))
print(f"Hello, {name}. You are {age} years old.")
```

```
Hello, Sanket. You are 21 years old.
```

In [30]:
```python
# 20. Write a program to calculate the factorial of a number using input().
num = int(input("Enter a number: "))
factorial = 1
for i in range(1, num + 1):
    factorial *= i
print("Factorial:", factorial)
```

```
Factorial: 120
```

In [31]:
```python
# 21. How do you prevent a user from entering an empty string?
user_input = input("Enter something: ").strip()
if not user_input:
    print("Input cannot be empty.")
else:
    print(f"You entered: {user_input}")
```

```
Input cannot be empty.
```

In [33]:
```python
# 22. Write a program to check if the entered number is a perfect square
import math
num = int(input("Enter a number: "))
if math.isqrt(num) ** 2 == num:
    print("Perfect square")
```

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else:
    print("Not a perfect square")
```

```
Not a perfect square
```

In [34]:
```
# 23. Write a program that asks for a year and determines if it's a leap year
year = int(input("Enter a year: "))
if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    print(f"{year} is a leap year.")
else:
    print(f"{year} is not a leap year.")
```

```
2004 is a leap year.
```

In [ ]:
```
# 24. How can you remove leading and trailing spaces from a string input?
user_input = input("Enter something: ").strip()
```

In [ ]:
```
# 25. How do you handle incorrect inputs when you expect an integer using input()?
try:
    num = int(input("Enter an integer: "))
    print(f"You entered: {num}")
except ValueError:
    print("Invalid input! Please enter a valid integer.")
```

In [1]:
```
# 26. Write a program that accepts a string and counts the occurrence of a particular character
user_input = input("Enter a string: ")
count = 0
for char in user_input:
    count += 1
print(f"The count of character in string is {count}")
```

```
The count of character in string is 6
```

In [2]:
```
# 27. How would you convert user input to lowercase using input()?
str = input("Enter a String")
print(str.lower())
```

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sanket
```

In [3]:
```
# 28. Write a program that accepts a number and prints whether it is a multiple of 10.
num = int(input("Enter a number: "))
if num % 10 == 0:
    print("Multiple of 10")
```

```
else:
    print("Not a multiple of 10")
```

```
Multiple of 10
```

In [4]:
```
# 29. How would you check if a string entered by the user contains only alphabets using input()?
user_input = input("Enter a string: ")
if user_input.isalpha():
    print("Only alphabets")
else:
    print("Contains non-alphabet characters")
```

```
Contains non-alphabet characters
```

In [5]:
```
# 30. Write a program to count the number of words in a sentence entered by the user.
text = input("Enter a sentence: ")
print("Number of words:", len(text.split()))
```

```
Number of words: 1
```

In [6]:
```
# 31. How would you accept a date input from the user in Python?
from datetime import datetime
date_str = input("Enter a date (YYYY-MM-DD): ")
date = datetime.strptime(date_str, "%Y-%m-%d")
print("Entered date:", date)
```

```
Entered date: 2025-08-21 00:00:00
```

In [7]:
```
# 32. Write a program that checks if the entered number is divisible by both 3 and 5.
num = int(input("Enter the number :"))
if num % 3 == 0 and num % 5 ==0:
    print("The number is divisible by both 3 and 5")
else:
    print("The number is not divisible by 3 and 5")
```

```
The number is divisible by both 3 and 5
```

In [8]:
```
# 33. Write a program to swap the values of two variables using input().
a = input("Enter first value: ")
b = input("Enter second value: ")
a, b = b, a
print(f"Swapped values: a = {a}, b = {b}")
```

```
Swapped values: a = 20, b = 10
```

In [10]:
```python
# 34. Write a program to take user input and print it without spaces between words.
user_input = input("Enter a string: ")
print(user_input.replace(" ", ""))
```

```
sanketmahajan
```

In [12]:
```python
# 35. How do you validate if an entered input is a valid email address?
import re
email = input("Enter email: ")
if re.match(r"[^@]+@[^@]+\.[^@]+", email):
    print("Valid email")
else:
    print("Invalid email")
```

```
Valid email
```

In [14]:
```python
# 36. Write a program that accepts a number and prints its cube.
num = int(input("Enter a number: "))
print("Cube:", num ** 3)
```

```
Cube: 8
```

In [15]:
```python
# 37. How would you accept and store multiple names from the user?
names = input("Enter names separated by commas: ").split(',')
print("Names:", names)
```

```
Names: ['sanket rohan lokesh vaibhav']
```

In [16]:
```python
# 38. How would you extract numbers from a string entered by the user?
import re
text = input("Enter a string: ")
numbers = re.findall(r'\d+', text)
print("Extracted numbers:", numbers)
```

```
Extracted numbers: ['75']
```

In [17]:
```python
# 39. How do you find the maximum number from a list of integers entered by the user?
numbers = list(map(int, input("Enter numbers separated by spaces: ").split()))
print("Maximum number:", max(numbers))
```

```
Maximum number: 65
```

In [18]:
```python
# 40. How would you prompt the user for input until they enter a valid number?
while True:
```

```
try:
    num = int(input("Enter a valid number: "))
    break
except ValueError:
    print("Invalid input, please enter a number.")
```

```
Invalid input, please enter a number.
Invalid input, please enter a number.
```

In [19]:
```
# 41. Write a program to check if the entered string has digits.
string = input("Enter a string: ")

if any(char.isdigit() for char in string):
    print("The string has digits ")
else:
    print("The string does not have digits ")
```

```
The string has digits
```

In [20]:
```
# 42. Write a program to check if the entered string has only whitespace characters.
string = input("Enter a string: ")

if string.isspace():
    print("The string has only whitespace characters")
else:
    print("The string does not have only whitespace characters")
```

```
The string does not have only whitespace characters
```

In [1]:
```
# 43. Write a program to find the sum of all digits in a string entered by the user.
text = input("Enter a string: ")
digit_sum = sum(int(digit) for digit in text if digit.isdigit())
print("Sum of digits:", digit_sum)
```

```
Sum of digits: 6
```

In [3]:
```
# 44. Write a program that accepts a number and prints its absolute value.
num = int(input("Enter a number: "))
print("Absolute value:", abs(num))
```

```
Absolute value: 5
```

In [4]:
```
# 45. How would you check if a string entered by the user contains any uppercase letters?
text = input("Enter a string: ")
```

```
if any(ch.isupper() for ch in text):
    print("The string contains uppercase letters.")
else:
    print("The string does not contain uppercase letters.")
```

```
The string contains uppercase letters.
```

In [5]:
```
# 46. Write a program that converts Celsius to Fahrenheit.
celsius = float(input("Enter temperature in Celsius: "))
fahrenheit = (celsius * 9/5) + 32
print(f"Temperature in Fahrenheit: {fahrenheit}")
```

```
Temperature in Fahrenheit: 113.36
```

In [6]:
```
# 47. Write a program to find the average of a list of numbers entered by the user.
numbers = list(map(int, input("Enter numbers separated by space: ").split()))
print("Average:", sum(numbers) / len(numbers))
```

```
Average: 30.0
```

In [7]:
```
# 48. Write a program to count the number of consonants in a string entered by the user.
text = input("Enter a string: ")
consonants = "bcdfghjklmnpqrstvwxyz"
count = sum(1 for char in text.lower() if char in consonants)
print("Number of consonants:", count)
```

```
Number of consonants: 4
```

In [8]:
```
# 49. How do you check if a string entered by the user contains any punctuation?
import string
text = input("Enter a string: ")
if any(ch in string.punctuation for ch in text):
    print("The string contains punctuation.")
else:
    print("The string does not contain punctuation.")
```

```
The string contains punctuation.
```

In [11]:
```
# 50. Write a program that accepts a sentence and prints the longest word.
sentence = input("Enter a sentence: ").split()
longest_word = max(sentence, key=len)
print("The longest word is:", longest_word)
```

```
The longest word is: Mahajan
```