

PYTHON INPUT()

1. **Question:** What is the `input()` function in Python used for?

Answer: The `input()` function is used to read input from the user as a string.

2. **Question:** How can you accept an integer as input from the user using `input()`?

Answer: You can convert the string returned by `input()` into an integer using the `int()` function:

```
python
num = int(input("Enter an integer: "))
```

3. **Question:** How do you accept a float input from the user?

Answer: Use `float()` to convert the string input into a floating-point number:

```
python
num = float(input("Enter a float: "))
```

4. **Question:** How can you take multiple space-separated values as input?

Answer: You can use `split()` to split the input string into a list of values:

```
python
values = input("Enter values: ").split()
```

5. **Question:** How do you check if a number entered by the user is positive, negative, or zero?

Answer: Use an `if-elif-else` block to check the condition:

```
python
num = int(input("Enter a number: "))
if num > 0:
    print("Positive")
elif num < 0:
    print("Negative")
else:
    print("Zero")
```

6. **Question:** How do you convert user input to a list of integers?

Answer: After using `split()`, you can convert each element to an integer using a list comprehension:

```
python
nums = [int(x) for x in input("Enter numbers: ").split()]
---
```

7. **Question:** How do you accept a string input and print it in uppercase?

Answer: You can use the `upper()` method:

```
python
user_input = input("Enter a string: ")
print(user_input.upper())
---
```

8. **Question:** Write a Python program that accepts a string and prints the number of vowels in it.

Answer:

```
python
text = input("Enter a string: ")
vowels = "aeiou"
count = sum(1 for char in text if char.lower() in vowels)
print("Number of vowels:", count)
---
```

9. **Question:** Write a program that takes a number as input and checks if it is even or odd.

Answer:

```
python
num = int(input("Enter a number: "))
if num % 2 == 0:
    print("Even")
else:
    print("Odd")
---
```

10. **Question:** How would you check if a string is a palindrome using `input()`?

Answer:

```
python
text = input("Enter a string: ")
if text == text[::-1]:
    print("Palindrome")
else:
    print("Not a Palindrome")
---
```

```
    print("Not a palindrome")
    ...
```

11. ****Question:**** Write a program that takes a number as input and prints its square.

```
**Answer:**
```python
num = int(input("Enter a number: "))
print("Square:", num ** 2)
```
```

12. ****Question:**** Write a program that asks for a number and prints whether it is divisible by 3.

```
**Answer:**
```python
num = int(input("Enter a number: "))
if num % 3 == 0:
 print("Divisible by 3")
else:
 print("Not divisible by 3")
```
```

13. ****Question:**** How would you check if a number is divisible by both 3 and 7?

```
**Answer:**
```python
num = int(input("Enter a number: "))
if num % 3 == 0 and num % 7 == 0:
 print("Divisible by both 3 and 7")
else:
 print("Not divisible by both 3 and 7")
```
```

14. ****Question:**** How do you accept a list of comma-separated values as input?

```
**Answer:**
```python
values = input("Enter comma-separated values: ").split(',')
```
```

15. ****Question:**** Write a Python program that takes two numbers as input and prints their product.

```
**Answer:**
```

```

python
num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
print("Product:", num1 * num2)

```

16. **Question: Write a program that checks if the input number is a prime number.**

****Answer:****

```

python
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")

```

17. **Question: How can you accept a boolean value (True/False) from the user?**

****Answer:****

```

python
user_input = input("Enter True or False: ").lower() == "true"

```

18. **Question: Write a program that accepts a string and prints the reverse of that string.**

****Answer:****

```

python
user_input = input("Enter a string: ")
print("Reversed string:", user_input[::-1])

```

19. **Question: Write a program that asks for a user's name and age and prints a message.**

****Answer:****

```

python
name = input("Enter your name: ")
age = int(input("Enter your age: "))
print(f"Hello, {name}. You are {age} years old.")

```

```

...

---

### 20. **Question:** Write a program to calculate the factorial of a number using
`input()`.
**Answer:**

```
python
num = int(input("Enter a number: "))
factorial = 1
for i in range(1, num + 1):
 factorial *= i
print("Factorial:", factorial)

```


```

```

---

### 21. **Question:** How do you prevent a user from entering an empty string?
**Answer:**

```
python
user_input = input("Enter something: ").strip()
if not user_input:
 print("Input cannot be empty.")
else:
 print(f"You entered: {user_input}")

```


```

```

---

### 22. **Question:** Write a program to check if an entered number is a perfect
square.
**Answer:**

```
python
import math
num = int(input("Enter a number: "))
if math.isqrt(num) ** 2 == num:
 print("Perfect square")
else:
 print("Not a perfect square")

```


```

```

---

### 23. **Question:** Write a program that asks the user for a year and determines if
it's a leap year.
**Answer:**

```
python
year = int(input("Enter a year: "))
if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
 print("Leap year")
else:

```


```

```
    print("Not a leap year")
    ...
```

24. **Question: How can you remove leading and trailing spaces from a string input?**

```
**Answer:**
```python
user_input = input("Enter something: ").strip()
```
```

25. **Question: How do you handle incorrect inputs when you expect an integer using `input()`?**

```
**Answer:**
```python
try:
 num = int(input("Enter a number: "))
except ValueError:
 print("Invalid input! Please enter a valid integer.")
```
```

26. **Question: Write a program that accepts a string and counts the occurrence of a particular character.**

```
**Answer:**
```python
text = input("Enter a string: ")
char = input("Enter a character to count: ")
print(f"Occurrence of {char}: {text.count(char)}")
```
```

27. **Question: How would you convert user input to lowercase using `input()`?**

```
**Answer:**
```python
user_input = input("Enter a string: ").lower()
```
```

28. **Question: Write a program that accepts a number and prints whether it is a multiple of 10.**

```
**Answer:**
```python
num = int(input("Enter a number: "))
if num % 10 == 0:
```

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

```

**### 29. \*\*Question:\*\* How would you check if a string contains only alphabets using `input()`?**

```
Answer:
```python
user_input = input("Enter a string: ")
if user_input.isalpha():
    print("Only alphabets")
else:
    print("Contains non-alphabet characters")
...

---
```

30. **Question: Write a program to count the number of words in a sentence entered by the user.**

```
**Answer:**
```python
text = input("Enter a sentence: ")
print("Number of words:", len(text.split()))
...

```

**### 31. \*\*Question:\*\* How would you accept a date input from the user in Python?**

```
Answer:
```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)
...

---
```

32. **Question: Write a program that checks if the entered number is divisible by both 3 and 5.**

```
**Answer:**
```python
num = int(input("Enter a number: "))
if num % 3 == 0 and num % 5 == 0:
 print("Divisible by both 3 and 5")
else:
 print("Not divisible by both 3 and 5")
...

```

---

**### 33. \*\*Question:\*\*** Write a program to swap the values of two variables using `input()`.

**\*\*Answer:\*\***

```
```python
a = input("Enter first value: ")
b = input("Enter second value: ")
a, b = b, a
print(f"Swapped values: a = {a}, b = {b}")
```
```

---

**### 34. \*\*Question:\*\*** Write a program to take user input and print it without spaces between words.

**\*\*Answer:\*\***

```
```python
user_input = input("Enter a string: ")
print(user_input.replace(" ", ""))
```
```

---

**### 35. \*\*Question:\*\*** How do you validate if an entered input is a valid email address?

**\*\*Answer:\*\***

```
```python
import re
email = input("Enter email: ")
if re.match(r"^[^@]+@^[^@]+\.[^@]+$", email):
    print("Valid email")
else:
    print("Invalid email")
```
```

---

**### 36. \*\*Question:\*\*** Write a program that accepts a number and prints its cube.

**\*\*Answer:\*\***

```
```python
num = int(input("Enter a number: "))
print("Cube:", num ** 3)
```
```

---

**### 37. \*\*Question:\*\*** How would you accept and store multiple names from the user?

**\*\*Answer:\*\***

```
```python
names = input("Enter names separated by commas: ").split(',')
```
```



```
print("Names:", names)
'''
```

---

### 38. **\*\*Question:\*\*** How would you extract numbers from a string entered by the user?

```
Answer:
'''python
import re
text = input("Enter a string: ")
numbers = re.findall(r'\d+', text)
print("Extracted numbers:", numbers)
'''
```

---

### 39. **\*\*Question:\*\*** How do you find the maximum number from a list of integers entered by the user?

```
Answer:
'''python
numbers = list(map(int, input("Enter numbers separated by spaces: ").split()))
print("Maximum number:", max(numbers))
'''
```

---

### 40. **\*\*Question:\*\*** How would you prompt the user for input until they enter a valid number?

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

---

### 41. **\*\*Question:\*\*** Write a program to check if the entered string has digits.

```
Answer:
'''python
user_input = input("Enter a string: ")
if any(char.isdigit() for char in user_input):
 print("Contains digits")
else:
 print("No digits")
'''
```

---

### 42. **\*\*Question:\*\*** Write a program to check if the entered string has only whitespace characters.

**\*\*Answer:\*\***

```
```python
user_input = input("Enter a string: ")
if user_input.isspace():
    print("Only whitespace")
else:
    print("Contains non-whitespace characters")
```
```

---

### 43. **\*\*Question:\*\*** Write a program to find the sum of all digits in a string entered by the user.

**\*\*Answer:\*\***

```
```python
text = input("Enter a string: ")
digit_sum = sum(int(digit) for digit in text if digit.isdigit())
print("Sum of digits:", digit_sum)
```
```

---

### 44. **\*\*Question:\*\*** Write a program that accepts a number and prints its absolute value.

**\*\*Answer:\*\***

```
```python
num = int(input("Enter a number: "))
print("Absolute value:", abs(num))
```
```

---

### 45. **\*\*Question:\*\*** How would you check if a string entered by the user contains any uppercase letters?

**\*\*Answer:\*\***

```
```python
user_input = input("Enter a string: ")
if any(char.isupper() for char in user_input):
    print("Contains uppercase letters")
else:
    print("No uppercase letters")
```
```

---

### 46. **\*\*Question:\*\*** Write a program that converts Celsius to Fahrenheit.

```

Answer:
```python
celsius = float(input("Enter temperature in Celsius: "))
fahrenheit = (celsius * 9/5) + 32
print(f"Temperature in Fahrenheit: {fahrenheit}")
```

```

---

**### 47. \*\*Question:\*\*** Write a program to find the average of a list of numbers entered by the user.

```

Answer:
```python
numbers = list(map(int, input("Enter numbers separated by space: ").split()))
print("Average:", sum(numbers) / len(numbers))
```

```

---

**### 48. \*\*Question:\*\*** Write a program to count the number of consonants in a string entered by the user.

```

Answer:
```python
text = input("Enter a string: ")
consonants = "bcdghjklmnpqrstvwxyz"
count = sum(1 for char in text.lower() if char in consonants)
print("Number of consonants:", count)
```

```

---

**### 49. \*\*Question:\*\*** How do you check if a string entered by the user contains any punctuation?

```

Answer:
```python
import string
text = input("Enter a string: ")
if any(char in string.punctuation for char in text):
    print("Contains punctuation")
else:
    print("No punctuation")
```

```

---

**### 50. \*\*Question:\*\*** Write a program that accepts a sentence and prints the longest word.

```

Answer:
```python
text = input("Enter a sentence: ")

```

```
words = text.split()
longest_word = max(words, key=len)
print("Longest word:", longest_word)
'''
```

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