

1. What is the input() function in Python used for?

The input() function in Python is used to take input from the user,during the program execution

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

```
In [7]: # by using the type casting method int()
x = int(input('enter any value'))
```

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

```
In [2]: # by using the type casting method
x = float(input("enter the float value "))
```

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

```
In [11]: x = input().split()
print(x)
['5', '67', '8', '90', '34', 'gh', 'uk']
```

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

```
In [14]: val = int(input('enter the value :'))
if val > 0:
    print(val, "is an positive number")
elif val < 0:
    print(val, "is an negative number")
else :
    print(val,'is an zero')
```

-1 is an negative number

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

```
In [48]: x = map(int,input('values').split())
print(list(x))
```

```
[2, 34, 5, 678, 89, 78, 66]
```

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

```
In [49]: x = input('enter the string').upper()
print(x)
```

```
HDHUD
```

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

```
In [63]: x = input('enter the words').lower()
count = 0
for ch in x:
    if ch in 'aeiou':
        count+=1
print(count)
```

```
9
```

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

```
In [67]: x = int(input('enter the number :'))
if x%2==0: print(x,'is an even number')
else: print(x,'is an odd number')
```

```
35 is an odd number
```

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

```
In [72]: x = input('enter a string').lower()
if x==x[::-1]:
    print(x,'is a palindrome')
else:
    print(x,'not a palindrome')
```

mammam is a palindrome

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

```
In [76]: x = int(input('enter the value:'))
print('Squared of',x,'is :',x**2)
```

Squared of 8 is : 64

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

```
In [82]: num = int(input('enter the num'))
if num%3 ==0:
    print(num,'is divisible by 3')
else:
    print(num,'not divisible by 3')
```

18 is divisible by 3

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

```
In [85]: num = int(input('enter the number :'))
if num%3 ==0 & num%7==0:
    print(num,'both are divisible by 3 & 7')
else:
    print(num,'not divisible by 3 & 7 ')
```

21 both are divisible by 3 & 7

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

```
In [92]: x = input('enter the values separated by commas').split(',')
print(list(x))

['3', '4', '56', '55', '789']
```

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

```
In [94]: x =int(input('enter first numbers :'))
y =int(input('enter second numbers :'))
print(x*y)
```

6

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

```
In [8]: x = int(input('enter the number: '))

if x > 1:
    for i in range(2, x):
        if x % i == 0:
            print(x, 'is NOT a prime number')
            break
        else:
            print(x, 'is a prime number')
else:
    print(x, 'is NOT a prime number')
```

2 is a prime number

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

```
In [14]: x = input('enter TRUE OR FALSE').lower()
if x =='true':
    print('user entered TRUE value')
else:
    print('user entered FALSE value')
```

user entered FALSE value

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

```
In [17]: x = input('enter string ')[::-1]
print(x)
```

AHTIHSKA

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

```
In [20]: x = input('enter valid name: ').capitalize()
y = int(input('enter the valid age: '))
print('Your Name is {} & Age is {}'.format(x,y))
```

Your Name is Akshitha & Age is 22

20. Write a program to calculate the factorial of a number using input().

```
In [25]: x = int(input('enter a Number: '))
fact = 1
for i in range(1, x+1):
    fact = fact*i
print('factorial of {} is {}'.format(x,fact))
```

factorial of 4 is 24

21. How do you prevent a user from entering an empty string?

```
In [34]: x = input('enter string value')
if x == '':
    print('Please enter a string')
else:
    print('your string is {}'.format(x))
```

Please enter a string

22. Write a program to check if the entered number is a perfect square.

```
In [39]: import math
x = int(input('enter the number you want: '))
if math.isqrt(x) ** 2 == x:
    print('Is a perfect square')
else:
    print('Not a perfect square')
```

Is a perfect square

23. Write a program that asks for a year and determines if it's a leap year.

```
In [43]: x = int(input('enter the year: '))
if (x % 400 == 0) or (x % 4 == 0 and x % 100 != 0):
    print('Is a leap year')
else:
    print('not a leap year')
```

Is a leap year

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

```
In [46]: x = input('enter the string').strip()
print(x)
```

akshitha

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

In [131]:

```
try:  
    x = int(input('enter any number: '))  
except ValueError:  
    print('enter only integer values not string')
```

enter only integer values not string

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

In [52]:

```
text = input('enter a string')  
word = input('enter a word to count')  
count = text.count(word)  
print(count)
```

3

27. How would you convert user input to lowercase using input()?

In [54]:

```
x = input('enter a string: ').lower()  
print(x)
```

akshitha

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

In [56]:

```
x = int(input('enter a number: '))  
if x%10 == 0:  
    print(x,'Is multiple of 10')  
else:  
    print(x,'Is not multiple of 10')
```

13 Is not multiple of 10

29. How would you check if a string entered by the user contains only alphabets using input()?

```
In [58]: x = input('enter only alphabets: ')
if x.isalpha():
    print(x,'It contains only alphabets')
else:
    print(x,'not contains only alphabets')
```

akshitha12 not contains only alphabets

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

```
In [62]: text =input('enter a text')
print('Number of words:',len(text.split()))
```

Number of words: 4

31. How would you accept a date input from the user in Python?

```
In [132...]: day = int(input("Enter day: "))
month = int(input("Enter month: "))
year = int(input("Enter year: "))
print("Date entered:", day, "/", month, "/", year)
```

Date entered: 18 / 1 / 2003

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

```
In [69]: x = int(input('enter a number: '))
if x%3 ==0 & x%5 ==0:
    print(x,'is divisible by both 3 and 5')
```

```
else:  
    print('not divisible by both 3 and 5')
```

15 is divisible by both 3 and 5

33. Write a program to swap the values of two variables using input().

```
In [71]: a = int(input('enter A value'))  
b = int(input('enter B value'))  
a , b = b,a  
print('Swapped A value {} & B value {}'.format(a,b))
```

Swapped A value 45 & B value 12

34. Write a program to take user input and print it without spaces between words.

```
In [79]: x = input('enter the words')  
print(x.replace(' ', ''))
```

heloopythonworld

35. How do you validate if an entered input is a valid email address?

```
In [81]: import re  
email = input("Enter email: ")  
if re.match(r"^[^@]+@[^@]+\.[^@]+", email):  
    print("Valid email")  
else:  
    print("Invalid email")
```

Valid email

36. Write a program that accepts a number and prints its cube.

```
In [83]: x = int(input('enter a number: '))  
print('cube root of {} is {}'.format(x,x**3))
```

```
cube root of 2 is 8
```

37. How would you accept and store multiple names from the user?

```
In [85]: names = input('enter multiple names').split(' ')
print(names)

['ag', 'hdd', 'hdh', 'dh']
```

38. How would you extract numbers from a string entered by the user?

```
In [88]: x = input('enter string')
for i in x:
    if i.isdigit():
        print(i,end = '')
```

```
1231243556878
```

39. How do you find the maximum number from a list of integers entered by the user?

```
In [92]: x = list(map(int,input('enter the values: ').split()))
print('Maximum value ',max(x))
```

```
Maximum value 88
```

40. How would you prompt the user for input until they enter a valid number?

```
In [95]: while True:
    try:
        x = int(input('enter the valid number'))
        break
    except ValueError:
        print('Dont enter a string only numbers allowed')
```

```
Dont enter a string only numbers allowed
```

Dont enter a string only numbers allowed

41. Write a program to check if the entered string has digits.

```
In [97]: x = input('enter the string with digits')
if x.isalnum():
    print('string contains digits ')
else:
    print('string dont have digits')
```

string contains digits

42. Write a program to check if the entered string has only whitespace characters.

```
In [98]: x = input('enter the string')
if x.isspace():
    print('string contains only whitespaces')
else:
    print('string dont have whitespaces')
```

string contains only whitespaces

43. Write a program to find the sum of all digits in a string entered by the user.

```
In [134...]: x = input("Enter a string: ")
y = 0

for i in x:
    if i.isdigit():
        y += int(i)
print("Sum of digits =", y)
```

Sum of digits = 21

44. Write a program that accepts a number and prints its absolute value.

```
In [108...]: num = int(input('enter a number: '))
print('Absolute Value of {} is {}'.format(num,abs(num)))
```

```
Absolute Value of -10 is 10
```

45. How would you check if a string entered by the user contains any uppercase letters?

```
In [109...]: x = input('enter the string: ')
if x.upper():
    print('the string contains uppercase letters')
else:
    print('the string dont have uppercase letters')
```

```
the string contains uppercase letters
```

46. Write a program that converts Celsius to Fahrenheit.

```
In [110...]: c = float(input("Enter temperature in Celsius: "))
f = (c * 9/5) + 32
print("Temperature in Fahrenheit:{}".format(f))
```

```
Temperature in Fahrenheit:8252.6
```

47. Write a program to find the average of a list of numbers entered by the user.

```
In [113...]: x = list(map(int,input('enter the values').split()))
print('Average',sum(x)/len(x))
```

```
Average 39.5
```

48. Write a program to count the number of consonants in a string entered by the user.

```
In [122...]  
x = input('enter a string: ')  
count = 0  
for ch in x:  
    if ch.isalpha() and ch.lower() not in 'aeiou':  
        count +=1  
print('consonants is {}'.format(count))  
  
consonants is 5
```

49. How do you check if a string entered by the user contains any punctuation?

```
In [126...]  
x = input('enter the string: ')  
punct = "!@#$%^&*()_-=+{}[]:;\"'<>,.?/\\"|"  
for ch in x:  
    if ch in punct:  
        print('string contains punctuations')  
        break  
else:  
    print('string dont have punctuations')  
  
string contains punctuations
```

50. Write a program that accepts a sentence and prints the longest word.

```
In [127...]  
x = input('enter the string: ').split()  
longest_word = max(x, key=len)  
print(longest_word)  
  
nsjfnnsdf
```