```python
# 1) Write a Python Program to Check Common Letters in Two Input
Strings?

s1=input("Enter first string:")
s2=input("Enter second string:")
a=list(set(s1)&set(s2))
print("The common letters are:")
for i in a:
    print(i)

Enter first string:hello
Enter second string:how are you
The common letters are:
e
o
h
```

```python
# 2) Write a Python Program to Count the Number of Vowels in a String?

string=input("Enter string:")
vowels=0
for i in string:
    if(i=='a' or i=='e' or i=='i' or i=='o' or i=='u' or i=='A' or
i=='E' or i=='I' or i=='O' or i=='U'):
        vowels=vowels+1
print("Number of vowels are:")
print(vowels)

Enter string:hello world
Number of vowels are:
3
```

```python
# 3) Write a Python Program to Check if a String is a Palindrome or
Not?

string=input("Enter string:")
if(string==string[::-1]):
    print("The string is a palindrome")
else:
    print("The string isn't a palindrome")

Enter string:malayalam
The string is a palindrome
```

```python
# 4) Write a Python Program to Swap the First and Last Value of a
List?

a=[]
n= int(input("Enter the number of elements in list:"))
for x in range(0,n):
    element=int(input("Enter element" + str(x+1) + ":"))
```

```python
    a.append(element)
temp=a[0]
a[0]=a[n-1]
a[n-1]=temp
print("New list is:")
print(a)
```

```
Enter the number of elements in list:4
Enter element1:23
Enter element2:45
Enter element3:67
Enter element4:89
```

```
------------------------------------------------------------------------
-----
IndexError                                  Traceback (most recent call
last)
<ipython-input-5-e63ff889cebc> in <module>
      7 a.append(element)
      8 temp=a[0]
----> 9 a[0]=a[n-1]
     10 a[n-1]=temp
     11 print("New list is:")

IndexError: list index out of range
```

5) Write a Python Program to Find the Second Largest Number in a List?

```python
a=[]
n=int(input("Enter number of elements:"))
for i in range(1,n+1):
    b=int(input("Enter element:"))
    a.append(b)
    a.sort()
print("Second largest element is:",a[n-2])
```

```
Enter number of elements:4
Enter element:23
Enter element:56
Enter element:39
Enter element:11
Second largest element is: 39
```

6) Write a Python Program to Check if a Number is a Perfect Number?

```python
n = int(input("Enter any number: "))
sum1 = 0
for i in range(1, n):
    if(n % i == 0):
        sum1 = sum1 + i
```

```python
if (sum1 == n):
    print("The number is a Perfect number!")
else:
    print("The number is not a Perfect number!")
```

Enter any number: 6
The number is a Perfect number!

```python
# 7) Write a Python Program to Check if a Number is an Armstrong
Number?
n=int(input("Enter any number: "))
a=list(map(int,str(n)))
b=list(map(lambda x:x**3,a))
if(sum(b)==n):
    print("The number is an armstrong number. ")
else:
    print("The number isn't an arsmtrong number. ")
```

Enter any number: 371
The number is an armstrong number.

```python
# 8) Write a Python Program to Check if a Number is a Prime Number?

a=int(input("Enter number: "))
k=0
for i in range(2,a//2+1):
    if(a%i==0):
        k=k+1
if(k<=0):
    print("Number is prime")
else:
    print("Number isn't prime")
```

Enter number: 7
Number is prime

```python
# 9)  Write a Python Program to Print Table of a Given Number?

n=int(input("Enter the number to print the tables for:"))
for i in range(1,11):
    print(n,"x",i,"=",n*i)
```

Enter the number to print the tables for:7
7 x 1 = 7
7 x 2 = 14
7 x 3 = 21
7 x 4 = 28
7 x 5 = 35
7 x 6 = 42
7 x 7 = 49
7 x 8 = 56

```
7 x 9 = 63
7 x 10 = 70
```

10) Write a Python Program to Count the Number of Digits in a Number?

```python
n=int(input("Enter number:"))
count=0
while(n>0):
    count=count+1
    n=n//10
print("The number of digits in the number is:",count)
```

```
Enter number:14325
The number of digits in the number is: 5
```

11) Write a Python Program to Check if a Number is a Palindrome or not?

```python
n=int(input("Enter number:"))
temp=n
rev=0
while(n>0):
    dig=n%10
    rev=rev*10+dig
    n=n//10
if(temp==rev):
    print("The number is a palindrome!")
else:
    print("The number isn't a palindrome!")
```

```
Enter number:151
The number is a palindrome!
```

12) Write a program to find the sum of the digits of a number in Python?

```python
n=int(input("Enter a number:"))
tot=0
while(n>0):
    dig=n%10
    tot=tot+dig
    n=n//10
print("The total sum of digits is:",tot)
```

```
Enter a number:1928
The total sum of digits is: 20
```

13) Write a program to reverse a number in Python?

```python
n=int(input("Enter number: "))
```

```python
rev=0
while(n>0):
    dig=n%10
    rev=rev*10+dig
    n=n//10
print("The reverse of the number:",rev)
```

```
Enter number: 143
The reverse of the number: 341
```

14) Can you write a program to find the average of numbers in a list in Python?

```python
n=int(input("Enter the number of elements to be inserted: "))
a=[]
for i in range(0,n):
    elem=int(input("Enter element: "))
    a.append(elem)
    avg=sum(a)/n
print("Average of elements in the list",round(avg,2))
```

```
Enter the number of elements to be inserted: 3
Enter element: 23
Enter element: 45
Enter element: 56
Average of elements in the list 41.33
```

15) What is the output when we execute list("hello")?

```python
list("hello")
```

```
['h', 'e', 'l', 'l', 'o']
```

16) What is the output, Suppose list1 is [1, 3, 2], What is list1 * 2?

```python
list1=[1, 3, 2]
list1 * 2
```

```
[1, 3, 2, 1, 3, 2]
```

17) How do you set a global variable inside a function?

```python
globvar = 0
def set_globvar_to_one():
    global globvar # Needed to modify global copy of globvar
    globvar = 1
def print_globvar():
    print (globvar) # No need for global declaration to read value of
globvar
```

```
    set_globvar_to_one()
print_globvar() # Prints 1
```

0

18) How to print the sum of the numbers starting from 1 to 100?

```
print (sum(range(1,101)))
```

5050

19) What is Enumerate() Function in Python?

```python
subjects = ('Python', 'Interview', 'Questions')
for i, subject in enumerate(subjects):
    print(i, subject)
```

0 Python
1 Interview
2 Questions

20) What is the output of the below program?

```python
names = ['Chris', 'Jack', 'John', 'Daman']
print(names[-1][-1])
```

n

21) What is the output of the below code?

```python
import array
a = [1, 2, 3]
print(a[-3])
print(a[-2])
print(a[-1])
```

1
2
3

22) How to count the occurrences of a particular element in the list?

```python
weekdays = ['sun','mon','tue','wed','thu','fri','sun','mon','mon']
print(weekdays.count('mon'))
```

3

23) How to convert a list into a set?

```python
weekdays = ['sun','mon','tue','wed','thu','fri','sat','sun','tue']
```

```
listAsSet = set(weekdays)
print(listAsSet)

{'mon', 'wed', 'fri', 'thu', 'sun', 'tue', 'sat'}
```

24) How to convert a list into a tuple?

```
weekdays = ['sun','mon','tue','wed','thu','fri','sat']
listAsTuple = tuple(weekdays)
print(listAsTuple)

('sun', 'mon', 'tue', 'wed', 'thu', 'fri', 'sat')
```

25) How to convert a list into a string?

```
weekdays = ['sun','mon','tue','wed','thu','fri','sat']
listAsString = ' '.join(weekdays)
print(listAsString)

sun mon tue wed thu fri sat
```

26) What is <Yield> Keyword in Python?

```
def testgen(index):
    weekdays = ['sun','mon','tue','wed','thu','fri','sat']
    yield weekdays[index]
    yield weekdays[index+1]
day = testgen(0)
print (next(day), next(day))

sun mon
```

27) Python program to remove spaces from string without inbuilt function

```
#taking input from the user
string = input("Enter a String : ")
result=''
#iterating the string
for i in string:
    #if the character is not a space
    if i!=' ':
        result += i
print("String after removing the spaces :",result)

Enter a String : baliram is good boy
String after removing the spaces : baliramisgoodboy
```

28) Python program to Count alphabets, digits, special char in string

```
#taking string as an input from the user
```

```python
string = input("Enter a String : ")
alphabets=0
digits=0
specialChars=0
#checks for each character in the string
for i in string:
    #if character of the string is an alphabet
        if i.isalpha():
                    alphabets+=1
        #if character of the string is a digit
        elif i.isdigit():
                    digits+=1
        else: #if character of the string is a special character
                    specialChars+=1
print("alphabets =",alphabets,"digits =",digits,"specialChars
=",specialChars)

Enter a String : Ques123!@#we12
alphabets = 6 digits = 5 specialChars = 3

# 29) Python program to count vowels and consonants in the string

#taking input from the user
string = input("Enter a String : ")
vowels = 0   #variable to count number of vowels
consonants = 0 #variable to count number of consonants
for i in string:   #string iteration
    if i in ('a', 'e', 'i', 'o', 'u','A', 'E', 'I', 'O', 'U'):   #if
character in string is vowel
        vowels+=1 #if vowel increment variable 'vowel' with one
    elif i.isalpha():   #checking if the character is alphabet
        consonants+=1   #if consonant increment variable 'consonants'
with one
print("Vowels :",vowels,"Consonants:",consonants)

Enter a String : baliram
Vowels : 3 Consonants: 4

# 30) Python program to remove vowels from the string

#taking the input string from the user
string = input("Enter a String : ")
result=''
for i in string:
#iterating through each character of the string
    if i in ('a', 'e', 'i', 'o', 'u', 'A', 'E', 'I', 'O', 'U'):
     #seaching for vowels
        i = ''
#if vowel found replace it with empty string
    result += i
```

```python
    #concatenate rest of the string
print("String after removing the vowels :",result)
```

```
Enter a String : baliram
String after removing the vowels : blrm
```

31) String Palindrome program in python

```python
string = input("Please give a String : ")
if(string == string[:: - 1]):
    print("Given String is a Palindrome")
else:
    print("Given String is not a Palindrome")
```

```
Please give a String : madam
Given String is a Palindrome
```

32) Python program to calculate simple interest

```python
principal = int(input("Enter the principal amount: "))
rate = int(input("Enter the rate of interest: "))
time = int(input("Enter the time of interest in year: "))
#using the input values calculate simple interest
simpleInterest = (principal*rate*time)/100
print("Simple Interest = ",simpleInterest)
```

```
Enter the principal amount: 10000
Enter the rate of interest: 55
Enter the time of interest in year: 5
Simple Interest =  27500.0
```