In [1]:
```
#1)display "Hello World" in your output screen.


print("HELLO WORLD!")
```

```
HELLO WORLD!
```

In [2]:
```
#2)Get the input from the user and perform addition of two numbers


print("enter any two values")
a=int(input('a:'))
b=int(input('b:'))
c=a+b
print(c)
```

```
enter any two values
a:12
b:45
57
```

In [5]:
```
#3)swap two variables without temp variable

print("enter any two values")
a=int(input('a:'))
b=int(input('b:'))
a=a+b
b=a-b
a=a-b
print("value of a is ",a)
print("value of b is ",b)

enter any two values
a:13
b:30
value of a is  30
value of b is  13
```

In [6]:
```
#4)convert the entered kilometres ( Convertion  Factor= 0.621371)


print("Enter the kilometers")
a=int(input('km is:'))
a=a*0.621371
print("The miles is",a)
```

```
Enter the kilometers
km is7
The miles is 4.349597
```

In [27]:
```
#5)check whether the given number is positive, negative or 0
print("enter any value")
a=int(input("value:"))
if(a>0):
    print("positive value")
elif(a<0):
    print("negative value")
else:
    print(" zero")


enter any value
value:23
positive value
```

In [10]:
```
#6)verify that the given year is a leap year
print("Enter the year")
year=int(input('enter year'))
if((year%4==0 and year%100!=0)or(year%400==0)):
    print("Leap year")
else:
    print("Not a leap year")

Enter the year
year2018
Not a leap year
```

In [23]:
```
#7)display the prime numbers within the given interval
print("Enter the ranges")
a=int(input('start from :'))
b=int(input('end at'))


Enter the ranges
start from 5
end at10
```

In [25]:
```
#8) display the Fibonacci sequence up to n-th term


a=int(input("Enter the ending range"))

for i in range (2,a):
    c=0
    for j in range (2,i):
        if i%j==0:
            c+=1
    if c==0:
        print(i)

Enter the ending range10
2
3
5
7
```

In [14]:
```
#9) check if the number is an Armstrong number or not

num = 10
n1, n2 = 0, 1
print("Fibonacci Series:", n1, n2, end=" ")
for i in range(2, num):
    n3 = n1 + n2
    n1 = n2
    n2 = n3
    print(n3, end=" ")


print()

Fibonacci Series: 0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597
```

In [15]:
```
#10) Find the Sum of natural numbers up to n-th term

num = int(input("Enter a number: "))
sum = 0
temp = num
while temp > 0:
    digit = temp % 10
    sum += digit ** 3
    temp //= 10
if num == sum:
    print(num,"is an Armstrong number")
else:
    print("not an armstrong number")

Enter a number: 12334
not an armstrong number
```

In [24]:
```
#11) Write a function called show_stars(rows). If rows are 5, it should print the following


rows = int(input("Enter the number of rows:"))
for i in range(0, rows):

    for j in range(0, i + 1):

        print("*",end='')



    print("\r")

Enter the number of rows:5
*
**
***
****
*****
```

In [16]:
```
# 12. Now string from old string by removing
def remove_chars(str, n):
    return str[:n] + str[n+1:]
my_string = input("Enter your string:")
n=int(input("Enter the index number where u want to remove: "))
new_string = remove_chars(my_string, i)
print(new_string)

Enter your string:disneyland
Enter the index number where u want to remove: 6
land
```

In [17]:
```
#13) Iterate the given list of numbers and print only those numbers which are divisible by 5

list = [10, 75, 33, 46, 225]
print("Given list:", list)
print('Numbers Divisible by 5:')
for num in list:
    if num % 5 == 0:
        print(num)

Given list: [10, 75, 33, 46, 225]
Numbers Divisible by 5:
10
75
225
```

In [31]:
```
#14) Write a program to find how many times substring "hi" appears in the given string.


gsinput("enter a sentence : ")
list=g.split(' ')
n=len(list)
c=0
for i in range (0):
    if list[i]=='hi':
        c+=1
if c!=0:
    print("'hi' is present {} times".format(c))
else:
    print("'hi' is not present")

enter a sentence : hi this is me
'hi' is present 1 times
```

In [3]:
```
#15) Print the following pattern
#1
#2 2
#3 3 3
#4 4 4 4
#5 5 5 5 5


n=int(input("enter the range : "))
for i in range (1,n+1):
    for j in range (0,i):
        print(i,end="")
    print(end="\n")
```

```
enter the range : 5
1
22
333
4444
55555
```

In [18]:
```
# 16. Palindrome sequence


def palindrome(n):
    temp=n
    rev=0
    while(n>0):
        dig=n%10
        rev=rev*10+dig
        n=n//10
    if temp==rev:
        print("hi! is a palindrome number")
    else:
        print("it is not palindrome number")
n=int(input("Enter your number:"))
palindrome(n)

Enter your number:123321
it is a palindrome number
```

In [19]:
```
# 17. Swapping first and last element


list = [25,63,13,30,23]
print("Initial list: ")
print(list)
list[0], list[-1] = list[-1],list[0]
print("list after swapping:")
print(list)

Initial list
[25, 63, 13, 30, 23]
list after swapping:
[23, 63, 13, 30, 25]
```

In [32]:
```
# 18. Swapping of two numbers in a list


list = [50,20,60,12,25,30]
print("The initial list is:")
print(list)
l1 =int(input("Enter index_1:"))
l2 =int(input("Enter index_2:"))
temp=list[l1]
list[l1] = list[l2]
list[l2] = temp
print("List After Swapping:")
print(list)

The initial list is:
[50, 20, 60, 12, 25, 30]
Enter index_1:2
Enter index_2:4
List After Swapping:
[50, 20, 25, 12, 60, 30]
```

In [33]:
```
# 19. Length of the list


list = [1,24,14,66,17]
print(" list elements: ")
print(list)
length = len(list)
print("The total length of the list is: ")
print(length)

 list elements:
[1, 24, 14, 66, 17]
The total length of the list is:
5
```

In [34]:
```
# 20. Maximum of two numbers


a=int(input("Enter the value of A: "))
b=int(input("Enterthe value of  B: "))
if (a>b):
    print("A is the greatest value")
else:
    print("B is the greatest value")

Enter the value of A: 30
Enterthe value of  B: 13
A is the greatest value
```

In [35]:
```
# 21. Minimum of two numbers
a=int(input("Enter the value of A: "))
b=int(input("Enter the value of B: "))
if (a<b):
    print("A is the  smallest value")
else:
    print("B is the smallest value ")

Enter the value of A: 30
Enter the value of B: 13
B is the smallest value
```

In [36]:
```
# 22. Palindrome and Symmetricity of a srting

string = input('Enter the string:')
symmetrical = string == string[::-1]
palindrome = string == ''.join(reversed(string))
if symmetrical:
    print("The string is symmetrical")
else:
    print("The string is not symmetrical")
if palindrome:
    print("The string is a palindrome")
else:
    print("The string is not a palindrome")

Enter the string:khokho
The string is not symmetrical
The string is not a palindrome
```

In [37]:
```
# 23. Reversing of string


string = "Harry Potter"
print("The  initial string is:")
print(string)
words = string.split(" ")
words.reverse()
output_string = " ".join(words)
print("My reversed string is:")
print(output_string)

The  initial string is:
Harry Potter
My reversed string is:
Potter Harry
```

In [38]:
```
# 24. Removing of index


string = "Hermoine Granger"
index_to_remove =int(input("Enter the index number to be removed:"))
output_string = string[:index_to_remove] + string[index_to_remove+1:]
print(output_string)

Enter the index number to be removed:8
HermoineGranger
```

In [20]:
```
# 25. Length of the string
string = "Chamber of secrets"
length = len(string)
print("Length of my string is:")
print(length)

Length of my string is:
16
```

In [21]:
```
# 26. Python code to print even length words in string


print("Enter any string:")
str1 = input()
k=n.split(" ")
print("The even indexed strings are:")
for i in k:
    if len(i)%2==0:
        print(i)

Enter any string:
Ronald weasley
The even indexed strings are:
Ronald
```

In [22]:
```
# 27. Python Tuple Size


import sys

tuple = (0,1,3,'rapunzel','elsa')
size = sys.getsizeof(tuple)
print("The size of the tuple is (size) bytes")

The size of the tuple is 80 bytes
```

In [24]:
```
# 28. Max and Min elements of a list


import heapq

def find_k_largest_smallest_elements(k, tuple):

    largest_elements = heapq.nlargest(k, tuple)

    smallest_elements = heapq.nsmallest(k, tuple)
    return largest_elements, smallest_elements
tuple = (55,595,262,962,858,25,2562,52,6)
k=int(input("Enter no. of elements needed:"))
largest, smallest = find_k_largest_smallest_elements(k, tuple)
print(f"The {k} largest elements in the tuple are: {largest}")
print(f"The {k} smallest elements in the tuple are: {smallest}")

Enter no. of elements needed:3
The 3 largest elements in the tuple are: [2562, 962, 858]
The 3 smallest elements in the tuple are: [6, 25, 52]
```

In [27]:
```
# 29. Sum of tuple elements
import math


t = (0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1)

print(math.fsum(t))

0.9
```

In [40]:
```
# 30. Addition of row matrix

a = [
        [1, 2, 3],
        [4, 5, 6],
        [7, 8, 9]
    ];


#Calculates number of rows and columns present in given matrix
rows = len(a)
cols = len(a[0])

#Calculates sum of each row of given matrix
for i in range(0, rows):
    sumRow = 0
    for j in range(0, cols):
        sumRow = sumRow + a[i][j]
    print("Sum of " + str(i+1) +" row: " + str(sumRow))

Sum of 1 row: 6
Sum of 2 row: 15
Sum of 3 row: 24
```

In [ ]:
```

```