```
In [ ]:   """ 1. Write a program that asks a user for a username and
          password. If password is "cdac" and does not contain username
          print "login successful" otherwise "login failure" """
          # here i have take utkarsh as user name and in question does not contain username
          x=input("What is your username :")
          y=input("What is your password :")
          if y=="cdac" and x!="utkarsh" :
            print("login successful")
          else :
            print ("login failure")
```

```
In [130…  """ Que2: Write a program to input 2 strings. If string1 is contained in string2 ,c
          string with the first four characters of string2 added with word "cdac" """
          s1=input("String1 :")
          s2=input("String2 :")
          if s1 in s2 :
           s3=s2[0:4]+"cdac"
           print(s3)
          else :
           print("s1 is not in s2")
```

s1 is not in s2

```
In [17]:  """ 3 Write a program that inputs a string that contains a decimal
          number and prints out the decimal part of the number(Do not
          convert the string to number) """
          s1=input("String1 :")

          if s1.isdigit()):
           print("numdigit",s1)
```

155

```
In [26]:  """ 4. Write a program that takes a string with multiple words and
          then capitalizes the first letter of each word and forms a new
          string out of it """
          s1=input("String 1")
          a =""
          s1.split()
          b=s1.split()
          for i in b:
           a+=i.capitalize()+ " "
          print("New String:",a)
```

New String: Utkarsh Bhai

```
In [29]:  """ 5. Write a program that reads a string and prints a string that
          capitalizes every other letter in the string (eg: python becomes
          pYtHoN) """
          s1 = input("String: ")
          for i in range(len(s1)):
            if i % 2 == 1:
              print(s1[i].upper(),end="")
            else:
              print(s1[i].lower(),end="")
```

uTkArShBhAi

In [39]:
```python
""" Que 6: Write a program that asks the user for a string and creates a new string
each character of the original string(eg: cdac becomes ccddaacc)
s1 = input("String: ")
doubled_s1 = ""   """

for i in s1:
    doubled_s1 += i * 2

print("Doubled string:", doubled_s1)
```

Doubled string: uuttkk

In [131...
```python
""" Que 7: Write a program that inputs a line of text and prints its each word in a
along with its length """
s = input("Entre Line of String:")
s= s.split(" ")
for i in s:
  print(i,len(i))
```

goldberg 8
is 2
man 3
of 2
honour 6

In [132...
```python
""" 8. Write a program which takes one string and a character. The
function should create a new string after deleting all the
occurrences of the character from the string """
str = input("Entre the repeating String")
c = input("Entre the character for removing")
rc= str.replace(c,'')
print(rc)
```

fhvbfhvbfhbhffff

In [41]:
```python
"""9. Write a program that reads a sentence and print the string
with lowercase characters converted to uppercase and
viceversa """
s = input("Entre String")
u=s.upper()
l=s.lower()
print(u)
print(l)
```

WORK HARD MEANS HARD
work hard means hard

In [43]:
```python
""" 10. Write a program that does the following:
a. Prompt the user for a string
b. Extract all the digits from the string
c. If there are digits
a. sum the collected digits together
b. print out: the original string , the digits, the sum of the
digits d. If there are no digits
a. print the original string and a message "has no digits" """
```

```python
s=input("enter string:")
ex=''
d=0
if s.isalpha()==True:
 print("original string:",s)
 print("has no digit")
else:
 for i in s:
    if i.isdigit()==True:
        ex += i
        s = int(i)
        d+=s
 print("original string:",s)
 print("digits in string:",ex)
 print("addition of digits:",d)
```

```
original string: 4
digits in string: 1234
addition of digits: 10
```

In [90]:
```python
"""  11. Extract two list slices out of a given list of numbers. Display and
print the sum of elements of the first slice which contains every
other element of the list between indexes 5 to 15. Program should
also display the average of elements in the second list slice that
contains every fourth element of the list """

l1 = []
for i in range(1, 20 ):
    l1.append(i)
print(l1)
l2 = []
for i in range(1,17):
    l2.append(i)
print(l2)
for i in l1 :
    if 5<= i <=16:
        print(i,end=",")
s=0
for i in l1 :
    if 5<= i <=16:
        s+=i
        print(i,end=",")
print("sum:",s)

s2=0
for i in range (1,17,4):
        s2+=i
        print(i,end=",")
print("sum:",s2)
s3=s2/(17//4)
print("avg :", s3)
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19]
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16]
5,6,7,8,9,10,11,12,13,14,15,16,5,6,7,8,9,10,11,12,13,14,15,16,sum: 126
1,5,9,13,sum: 28
avg : 7.0
```

In [94]:
```python
""" 12. Write a program that inputs a list, replicates it twice and then
prints the sorted list both in ascending and descending order """

li=list(input("enter the elemets of list:").split(" "))
print("list:",li)
li3= li*2
print("repicated list:",li3)
li2=sorted(li3)
li4=sorted(li3,reverse=True)
print("list in ascending:",li2)
print("list in decending:",li4)
```

```
list: ['1,2']
repicated list: ['1,2', '1,2']
list in ascending: ['1,2', '1,2']
list in decending: ['1,2', '1,2']
```

In [96]:
```python
""" 13. Write a program to calculate the mean of a list of numbers """

l1=[1,2,4,5]
s=0
c=0
for i in l1 :
  s+=i
  c=+1
m = s/c
print("List:", l1)
print("Sum of elements:", s)
print("Count of elements:", c)
print("Mean (Average):", m)
```

```
List: [1, 2, 4, 5]
Sum of elements: 12
Count of elements: 1
Mean (Average): 12.0
```

In [100…
```python
"""  14. Write a program to check if the max element of the list lies
in the first half or the second half """

l=eval(input("enter a list of numbers :"))
maxn = l.index(max(l))
mid = len(l) // 2
if maxn < mid:
  print("max element is in the first half.")
elif maxn > mid:
  print("max element is in the second half.")
else:
  print("max element is in the middle")
```

```
max element is in the second half.
```

```python
""" 15. Write a program to input 2 lists and display the maximum
element from the elements of both the list, along with its index
in the list """

l1=eval(input("enter a list of numbers :"))
l2=eval(input("enter a list of numbers :"))
maxn = l1.index(max(l1))
print("max vlaue:",max(l1),"and its index:",maxn)
maxn = l2.index(max(l2))
print("max vlaue:",max(l2),"and its index:",maxn)
```

```
max vlaue: 7 and its index: 3
max vlaue: 11 and its index: 0
```

```python
"""  16. Given 2 lists, write a program that prints "overlapped" if they
have at least one member in common otherwise "not overlapped" """

l1=eval(input("enter a list of numbers :"))
l2=eval(input("enter a list of numbers :"))
f=1
for i in l1:
 for j in l2:

  if i==j:
     f=0
 if f==0:
  print("Overlapped")
 else:
  print("not Overlapped")
```

```
Overlapped
```

```python
""" Que 17 : Write a program to input a list and 2 numbers m and n. Then create a l
those elements which are divisible by both m and n """
l1=eval(input("Enter List1"))
m=int(input("Enter value of m:"))
n=int(input("Enter value of n:"))
l2=[]
for i in l1:
  if i % m == 0 and i % n == 0:

      l2.extend([i])
print("New list",l2)
```

```
New list [20]
```

```python
""" 18 Write a program to demonstrate the number guess game. (You v/s Random module

import random

num = random.randint(1, 10)
guess = None

while guess != num:
    guess = input("Guess a number between 1 and 10: ")
    guess = int(guess)
    if guess == num:
```

```
        print("Your Lucky Number!")
        break
    else:
        print("You are not lucky!")
```

```
You are not lucky!
You are not lucky!
You are not lucky!
You are not lucky!
You are not lucky!
You are not lucky!
You are not lucky!
Your Lucky Number!
```

In [116...
```python
""" 19. Write a program to print the multiplication table of a number and read the
from the console. """
num = int(input("Enter a number: "))
for i in range(1, 20):
 print(num,"x",i, "=", num*i)
```

```
14 x 1 = 14
14 x 2 = 28
14 x 3 = 42
14 x 4 = 56
14 x 5 = 70
14 x 6 = 84
14 x 7 = 98
14 x 8 = 112
14 x 9 = 126
14 x 10 = 140
```

In [118...
```python
""" 20. Write a program to calculate and print the sums of even and odd integers of
natural numbers """
n= int(input("Entre natural no:" ))
Esum=0
Osum=0
for i in range(1,n+1):
 if i%2==0:
     Esum+=i
 else:
     Osum+=i

print("Sum of Even No:",Esum)
print("Sum of Odd No:",Osum)
```

```
Sum of Even No: 12
Sum of Odd No: 16
```

In [121...
```python
#21. Write a program to input a number and test whether it is prime or not
num = int(input("Enter a number: "))


if num < 2:
    p = False
else:
    p = True
    for i in range(2, int(num**0.5) + 1):
```

```
            if num % i == 0:
                p = False
                break

    if p:
        print(f"{num} is a prime number")
    else:
        print(f"{num} is not a prime number")
```

7 is a prime number

In [122…
```
# 22 Write a program that prints the prime numbers from 15 through 25
for num in range(15, 26):
    if num > 1:
        is_prime = True
        for i in range(2, int(num**0.5) + 1):
            if (num % i) == 0:
                is_prime = False
                break
        if is_prime:
            print(num)
```

17
19
23

In [123…
```
# 23. Write a program to print the first 20 elements of the Fibonacci series
f = [0, 1]  # Initial values of the Fibonacci sequence

while len(f) < 20:
    n = f[-1] + f[-2]
    f.append(n)

print(f)
```

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181]

In [124…
```
# 24. Write a program to reverse a number
num = int(input("Enter a number: "))
rev= 0
while num > 0:
  d = num % 10
  rev= (rev * 10) + d
  num = num // 10
print("The reversed number is:", rev)
```

The reversed number is: 41

In [125…
```
# 25. Write a program to generate divisors of a number
num = int(input("Enter a number: "))
div = []
for i in range(1, num + 1):
 if num % i == 0:
   div.append(i)
print("The divisors of", num,"are:" ,div)
```

The divisors of 5 are: [1, 5]

```python
""" 26. Write a program to calculate the BMI of a person after inputting the weight
height in meters and then print the Nutritional Status as per the following table
Nutritional Status BMI Underweight <18.5 Normal 18.5-24.9 Overweight 25-29.9 Obese
>=30 BMI =weight / (height *height ) """
w = float(input("Enter weight (in kg): "))
h = float(input("Enter height (in meters): "))
bmi = w / (h ** 2)

if bmi < 18.5:
    stat = "Underweight"
elif 18.5 <= bmi < 25:  # Adjusted the range for "Normal"
    stat = "Normal"
elif 25 <= bmi < 30:
    stat = "Overweight"
else:
    stat = "Obese"

print("Your BMI is:", bmi)
print("Nutritional Status:", stat)
```

Your BMI is: 0.45454545454545453
Nutritional Status: Underweight

```python
# 28. Write a program to check whether a number is an Armstrong number or not
num = int(input("Enter a number: "))
nums = str(num)
p = len(nums)
total = 0

for i in nums:
    total += int(i) ** p

if total == num:
    print(num, "is an Armstrong number")
else:
    print(num, "is not an Armstrong number")
```

77 is not an Armstrong number

```python
""" 29. Write a python program to demonstrate the common network connection errors
display its reasons, get the error code from the user. """
print("1 - 404, 2 - 401, 3 - 502, 4 - 400, 5 - 500")
num = int(input("Choose error code: "))

if num == 404:
    print("Error code:", num)
    print("The 404 status code, The server has not found anything matching the requ
elif num == 401:
    print("Error code:", num)
    print("The 401 status code, or an Unauthorized error, means that the user is no
elif num == 502:
    print("Error code:", num)
    print("The 502 Bad Gateway error. The server, while acting as a gateway or prox
elif num == 400:
    print("Error code:", num)
    print("400 Bad Request. The request could not be understood by the server due t
```

```python
    elif num == 500:
        print("Error code:", num)
        print("The 500 status code, The server encountered an unexpected condition that
    else:
        print("Different error code, don't have information for this code.")
```

```
1 - 404, 2 - 401, 3 - 502, 4 - 400, 5 - 500
Error code: 400
400 Bad Request. The request could not be understood by the server due to malformed
syntax.
```

In [129…

```python
""" 30. Write a program to take n (n > 20) as an input from the user. Print numbers
n. If the number is a multiple of 3 print "Multiple of 3",if it is a multiple of 7
"Multiple of 7", if it is a multiple of both, print multiple of both 3 and 7 """

n = int(input("Enter a number which is greater than 20: "))
m = ""

for i in range(11, n + 1):
    m = ""
    if i % 3 == 0:
        m += "is multiple of 3 "
    if i % 7 == 0:
        m += "is multiple of 7 "
    print(i, m.strip())
```

```
11
12 is multiple of 3
13
14 is multiple of 7
15 is multiple of 3
16
17
18 is multiple of 3
19
20
21 is multiple of 3 is multiple of 7
22
23
24 is multiple of 3
```

In [ ]: