

Basic questions

1)take input from user and print its inputvalue using input function

```
In [2]: a=input("enter something:")  
print(a)
```

```
enter something:Omkar  
Omkar
```

2)create a string and print the last element

```
In [3]: s="Omkar"  
s[-1]
```

```
Out[3]: 'r'
```

3)create a string and print second last element

```
In [4]: d="Tanvi"  
d[-2]
```

```
Out[4]: 'v'
```

4)create a string as eg:"hellohellohellohello" and print it

```
In [5]: f="hellohellohellohello"  
print(f)
```

```
hellohellohellohello
```

5)create two string like "hello" and "world" and print "helloworld"

```
In [6]: g="hello"  
h="world"  
print(g+h)
```

```
helloworld
```

6)create two variable and swap its value eg a=10,b=20 afer swapping there output is a=20,b=10

```
In [7]: j=10
        k=20
        l=j
        j=k
        k=l
        print(j)
        print(k)
```

20

10

7)create a tuple like(1,2,3,4,3,2) and count number of occurrences of 3

```
In [8]: q=(1,2,3,4,3,2)
        q.count(3)
```

Out[8]: 2

8)create a tuple like(1,2,3,4,3,2) and print the index number of 3

```
In [9]: q=(1,2,3,4,3,2)
        q.index(3)
```

Out[9]: 2

9)create a tuple like(1,2,3,4,3,2) and print (2,3,4) only

```
In [10]: q=(1,2,3,4,3,2)
         q[1:4]
```

Out[10]: (2, 3, 4)

10)create tuple like(1,2,3,4,3,2) and remove 3 in this tuple

```
In [3]: q=(1,2,3,4,3,2)
        c=()
        for i in q:
            if i!=3:
                c=c+(i,)
        c
```

Out[3]: (1, 2, 4, 2)

11)create a list like[1,2,3,4] and change the elements like[1,2,4,3] without using list methods

```
In [6]: e=[1,2,3,4]
        e[2]=4
        e[3]=3
        e
```

Out[6]: [1, 2, 4, 3]

12)create a list like[1,2,3,4] and delete all the elements in list and print empty list without using any method

```
In [7]: e=[1,2,3,4]
        e=list()
        e
```

Out[7]: []

```
In [14]: e=[1,2,3,4]
         i=0
         while i<len(e):
             del e[i]
         e
```

Out[14]: []

13)create single value tuple

```
In [44]: o='q'
         tuple(o)
```

Out[44]: ('q',)

14)create empty set

```
In [53]: u=set()
         type(u)
```

Out[53]: set

15)create a dictionary like {"a":10,"b":20} and print the value of "a" without using methods

```
In [56]: d1={"a":10,"b":20}
         d1['a']
```

Out[56]: 10

16)create a dictionary like {"a":10,"b":20} and change the value of "b" is 30 and print it without using methods

```
In [58]: d1={"a":10,"b":20}
         d1['b']=30
         d1
```

Out[58]: {'a': 10, 'b': 30}

17)create a dictionary like {"a":10,"b":20} and insert the key value pair which the key is "c" and the value is 30 and print it

```
In [61]: d1={"a":10,"b":20}
         d1['c']=30
         d1['c']
```

Out[61]: 30

18)create two sets like {1,2,3,4} and {3,4,5,6} and find the union without using union method

```
In [65]: s1={1,2,3,4}
         s2={3,4,5,6}
         l1=list(s1)+list(s2)
         set(l1)
```

Out[65]: {1, 2, 3, 4, 5, 6}

19) create two sets like {1,2,3,4} and {3,4,5,6} and find the intersection without using intersection method

```
In [69]: s1={1,2,3,4}
         s2={3,4,5,6}
         s3=set()
         for i in s1:
             for j in s2:
                 if i==j:
                     s3.add(i)
         s3
```

Out[69]: {3, 4}

20)create two sets like {1,2,3,4} and {3,4,5,6} and find there difference without using difference method

```
In [16]: s1={1,2,3,4}
         s2={3,4,5,6}
         s3=set()
         for i in s1:
             for j in s2:
                 if i not in s2:
                     s3.add(i)
                 elif j not in s1:
                     s3.add(j)
         s3
```

Out[16]: {1, 2, 5, 6}

21)create a set like {1,2,3,4} and remove 3

```
In [78]: s1={1,2,3,4}
s1.remove(3)
s1
```

Out[78]: {1, 2, 4}

22)create a set like {1,2,3,4} and remove 3 using discard method and understand what's the difference between remove and pop

```
In [17]: s1={1,2,3,4}
s1.discard(3)
print(s1)
s1.remove(1)
print(s1)
s1.pop()
s1
```

```
{1, 2, 4}
{2, 4}
```

Out[17]: {4}

23)create a string like "hello world" and count "o"

```
In [88]: "hello world".count("o")
```

Out[88]: 2

24)create a string like "hello world" and find "z" or index "z" and understand difference between index and count

```
In [94]: print("helloworld".find("z"))
"helloworld".index("h")
```

```
-1
```

Out[94]: 0

25)create a list like ["p","y","t","h","o","n"] and print "python"

```
In [97]: y=["p","y","t","h","o","n"]
''.join(y)
```

Out[97]: 'python'

26)create a string "python" and print ["p","y","t","h","o","n"]

```
In [101]: i="python"
list(i)
```

Out[101]: ['p', 'y', 't', 'h', 'o', 'n']

27)create a string like" python" and print "python"

```
In [103]: f="    python"
          print(f.strip())
```

python

28)create a list [1,2,3,4] and print it like [1,2,3,4,5]

```
In [109]: p=[1,2,3,4]
          p.append(5)
          p
```

Out[109]: [1, 2, 3, 4, 5]

29)create a list [1,2,3,4] and print [1,2,3,4,1,2,3,4] using extend function

```
In [110]: p.extend([1,2,3,4])
          p
```

Out[110]: [1, 2, 3, 4, 5, 1, 2, 3, 4]

30)create a list [1,2,3,4] and print [1,2,3,4,"p","y","t","h","o","n"] using extend function

```
In [111]: h=[1,2,3,4]
          h.extend(['p','y','t','h','o','n'])
          h
```

Out[111]: [1, 2, 3, 4, 'p', 'y', 't', 'h', 'o', 'n']

31)create a list [1,2,3,4] and remove 2 using pop function

```
In [112]: k=[1,2,3,4]
          k.pop(2)
```

Out[112]: 3

32)create a list [1,2,3,4] and print [1,5,3,4] using insert function

```
In [113]: d=[1,2,3,4]
          d[1]=5
          d
```

Out[113]: [1, 5, 3, 4]

33)create a list [1,2,3,4] and print [1,5,3,4] using negative indexing in insert function

```
In [114]: d=[1,2,3,4]
          d[-3]=5
          d
```

Out[114]: [1, 5, 3, 4]

34)create a list [1,2,3,4] and print [4,3,2,1]

```
In [115]: d=[1,2,3,4]
          d[::-1]
```

Out[115]: [4, 3, 2, 1]

35)create a list [1,4,3,2] and print [1,2,3,4] using function

```
In [116]: d=[1,4,3,2]
          d.sort()
          d
```

Out[116]: [1, 2, 3, 4]

36)create a dict {"a":10,"b":12,"c":14} and clear it{}

```
In [117]: d2={"a":10,"b":12,"c":14}
          d2.clear()
          d2
```

Out[117]: {}

37)create a empty set{}

```
In [121]: s5=set()
          s5
```

Out[121]: set()

38)create empty dict{}

```
In [122]: d4={}
          d4
```

Out[122]: {}

39)create a dict{"a":10,"b":20,"c":30} and print {"b":20,"c":30}

```
In [125]: d2={"a":10,"b":20,"c":30}
          d2.pop('a')
          d2
```

Out[125]: {'b': 20, 'c': 30}

40)create a set {1,2,3,4} and remove 2

```
In [17]: s5={1,2,3,4}
s5.remove(2)
s5
```

Out[17]: {1, 3, 4}

Moderate questions

1)create a string "hello" and print >> ll:2 times without using count method

```
In [20]: countl=0
for i in 'hello':
    if i=='l':
        countl+=1
countl
```

Out[20]: 2

2)create a string "hello" and sort it

```
In [22]: p='hello'
s1=list(p)
s2=[]
while s1:
    mini=s1[0]
    for i in s1:
        if i<mini:
            mini=i
    s2.append(mini)
    s1.remove(mini)
print(''.join(s2))
```

ehllo

3)Take input string from user and find vowels

```
In [23]: v=(input('enter a string:'))
vowels='aeiou'
vowel1=''
for i in v:
    if i in vowels:
        vowel1+=i
vowel1
```

enter a string:apple

Out[23]: 'ae'

4) create a list [(1,2),{"A":10},"abc",[1,2,3,4]] and find the data type of each element


```
In [25]: typ=[(1,2),{"A":10},"abc",[1,2,3,4]]
         for i in typ:
             print(type(i))

<class 'tuple'>
<class 'dict'>
<class 'str'>
<class 'list'>
```

5) print A to Z in sequence like A B C D E.....XYZ.

```
In [28]: for i in range(ord('A'),ord('Z')+1):
         print(chr(i),end=' ')

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
```

6)print ten time "hii" |

```
In [29]: 'hii'*10

Out[29]: 'hiihiihiihiihiihiihiihiihiihiihiihii'
```

7)print right angle triangle using while loop

```
In [52]: rows=int(input('enter rows:'))
         i=1
         while i<=rows:
             j=1
             while j<=i:
                 print('*',end=' ')
                 j=j+1
             i=i+1
             print()
```

```
*
* *
* * *
* * * *
* * * * *
```

8)print right angle triangle using for loop

```
In [60]: rows=int(input('enter rows:'))
         for i in range(1,rows+1):
             for j in range(1,i+1):
                 print('*',end=' ')
             print()
```

```
enter rows:5
*
* *
* * *
* * * *
* * * * *
```

9)take input from user and check its even or odd

```
In [30]: e=int(input('enter a no:'))
         if e%2==0:
             print('even')
         else:
             print('odd')
```

```
enter a no:5
odd
```

10)take input from user and check the number is divisible by 5 or not

```
In [31]: n=int(input('enter a no:'))
         if n%5==0:
             print('divisible by 5')
         else:
             print('not divisible by 5')
```

```
enter a no:5
divisible by 5
```

11)write a programme to check whether a person is eligible for voting or not(accept age from user)

```
In [32]: age=int(input())
         if age>=18 and age<100:
             print('eligible for voting')
         else:
             print('not eligible for voting')
```

```
20
eligible for voting
```

12)print 1 to 10 using for loop

```
In [35]: for i in range(1,11):
         print(i,end=' ')
```

```
1 2 3 4 5 6 7 8 9 10
```

13)write a programme to check whether a number is divisible by 7 or not

```
In [ ]: n=int(input('enter a no'))
        if n%7==0:
            print('divisible by 7')
        else:
            print('not divisible by 7')
```

14)wap to display "hello" if number entered by user is even , otherwise print "bye"

```
In [61]: m=int(input('enter a no:'))
        if m%2==0:
            print('hello')
        else:
            print('bye')
```

enter a no:5
bye

15)take input from user and check its data type

```
In [62]: y=input('enter anything:')
        print(type(y))
```

enter anything:omkar
<class 'str'>

16)create set like {1,2,3,4,5} and update it {1,2,3,4,5,6,7,8,9}

```
In [38]: s1={1,2,3,4,5}
        s1|{6,7,8,9}
```

Out[38]: {1, 2, 3, 4, 5, 6, 7, 8, 9}

17)create a set like {1,2,3,4,5} and add the element like {1,2,3,4,5,6,7,8,9}

```
In [64]: s1={1,2,3,4,5}
        s1.update({1,2,3,4,5,6,7,8,9})
        s1
```

Out[64]: {1, 2, 3, 4, 5, 6, 7, 8, 9}

18)take string from user like "python" and print ["p","y","t","h","o","n"]

```
In [66]: h=input() #enter python
        print(list(h))
```

python
['p', 'y', 't', 'h', 'o', 'n']

19)take input from user in int data type without using int() function

```
In [40]: n=round(float(input('enter a no:')))
n
```

enter a no:55

Out[40]: 55

20)create a string like " 7 apple 8 mango 9 banana" and print the int values only which dynamic state

```
In [41]: g="7 apple 8 mango 9 banana"
for i in g:
    if i.isnumeric():
        print(i,end=' ')
```

7 8 9

21)take input from user like 1234 and print the every second element 0 eg,1020

```
In [43]: h=input()
j=''
for i in h:
    j=j+i+'0'
int(j)
```

1234

Out[43]: 10203040

22)take gmail from user like "abc@gmail.com (<mailto:abc@gmail.com>)" and print its name only "abc"

```
In [70]: o=input('enter ur mail:')
o.split('@')[0]
```

enter ur mail:abc@gmail.com

Out[70]: 'abc'

23) Write a program to calculate the electricity bill (accept number of unit from user) according to the following criteria : Unit Price

First 100 units no charge Next 100 units Rs 5 per unit After 200 units Rs 10 per unit (For example if input unit is 350 than total bill amount is Rs2000)

```
In [5]: unit=int(input('enter no of units:'))
        b=0
        if unit<=100:
            b=0
            print(b)
        elif unit<=200:
            b=(unit-100)*5
            print(b)
        else:
            b=(100*5)+(unit-200)*10
            print(b)
```

```
enter no of units:350
2000
```

24) Write a program to check whether the last digit of a number (entered by user) is divisible by 3 or not.

```
In [75]: ldigit=input('enter a no:')
        ld=int(ldigit[-1])
        if ld%3==0:
            print('divisible by 3')
        else:
            print('not divisible by 3')
```

```
enter a no:123
divisible by 3
```

25) Write a program to determine whether a number (accepted from the user) is divisible by 2 and 3 both.

```
In [76]: d=int(input('enter a no:'))
        if d%2==0 and d%3==0:
            print('divisible by 2 and 3')
        else:
            print('not divisible by 2 and 3')
```

```
enter a no:12
divisible by 2 and 3
```

26)Accept the age of 4 people and display the youngest one?

```
In [89]: p1=int(input('enter ur age:'))
p2=int(input('enter ur age:'))
p3=int(input('enter ur age:'))
p4=int(input('enter ur age:'))
ls=[p1,p2,p3,p4]
ld=tuple(sorted(ls))
ld[0]
```

```
enter ur age:45
enter ur age:20
enter ur age:75
enter ur age:12
```

Out[89]: 12

27) Accept the age of 4 people and display the oldest one?

```
In [92]: p1=int(input('enter ur age:'))
p2=int(input('enter ur age:'))
p3=int(input('enter ur age:'))
p4=int(input('enter ur age:'))
ls=[p1,p2,p3,p4]
ld=tuple(sorted(ls))
ld[-1]
```

```
enter ur age:45
enter ur age:20
enter ur age:75
enter ur age:12
```

Out[92]: 75

28) Write a program to check whether an years is leap year or not

```
In [104]: 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 year:2020
leap year
```

29) Write a program to check whether an years is leap year or not without using (or) keyword

```
In [107]: year=int(input("Enter year:"))
if year%4==0 and year%100!=0:
    print("leap year")
elif year%400==0:
    print("leap year")
else:
    print("not a leap year")
```

Enter year:1800
not a leap year

30) Write a program to check whether an years is leap year or not , without using (and),(or) keywords

```
In [113]: year=int(input("Enter year:"))
if year%4==0:
    if year%100!=0:
        print('leap year')
    elif year%400==0:
        print("leap year")
    else:
        print("not a leap year")
```

Enter year:2012
leap year

31)Write a program to check whether a number entered is three digit number or not.

```
In [117]: no=int(input('enter a no:'))
if no<1000 and no>99:
    print('3 digit no')
else:
    print('not 3 digit no')
```

enter a no:999
3 digit no

32) Write a program to check whether a person is senior citizen or not.

```
In [119]: age=int(input('enter age:'))
if age>=60:
    print('senior citizen')
else:
    print('not senior citizen')
```

enter age:50
not senior citizen

33)wap which will add(sum) all the elements of list

```
In [123]: l=[1,2,3,4,5]
          sum1=0
          for i in l:
              sum1+=i
          print(sum1)
          print(sum(l))
```

15
15

34)wap to print maximum number without using max function

```
In [129]: l1=[1,2,44,3,5]
          max1=l1[0]
          for i in l1:
              if i>max1:
                  max1=i
          print(max1)
```

44

35)wap to print minimum number without using min function

```
In [130]: l2=[1,2,44,3,5]
          min1=l1[0]
          for i in l2:
              if i<min1:
                  min1=i
          print(min1)
```

1

36)wpa to square all the all elements of list note[1,5,3,9],>>[1,25,9,81]

```
In [6]: q=[1,5,3,9]
        sq=[i**2 for i in q]
        sq
```

Out[6]: [1, 25, 9, 81]

37)wpa to peint all the elements in list which are divisible by 3

```
In [133]: q1=[1,5,3,9]
          for i in q1:
              if i%3==0:
                  print(i,end=' ')
```

3 9

38)wpa to print all the elements which are greater then 100""