

KASTURI RAM INTERNATIONAL SCHOOL

Session 2020-21



PYTHON

PROGRAMMING FILE

MADE BY-

NAME : _____

CLASS : XII-Science

ROLL NO : _____

LIST OF PRACTICALS :

S.NO.	PROGRAM
1	Write a program to show entered string is a palindrome or not.
2	Write a program to show statistics of characters in the given line(to counts the number of alphabets ,digits, uppercase, lowercase, spaces and other characters).
3	WAP to remove all odd numbers from the given list..
4	Write a program to display frequencies of all the element of a list.
5	Write a program to display those string which are starting with 'A' from the given list.
6	Write a program to find and display the sum of all the values which are ending with 3 from a list.
7	Write a program to show sorting of elements of a list step-by-step.
8	Write a program to swap the content with next value, if it is divisible by 7 so that the resultant array will look like : 3,5,21,6,8,14,3,14.
9	Write a program to accept values from a user and create a tuple.
10	Write a program to input total number of sections and stream name in 11 th class and display all information on the output screen.
11	Write a program to input name of 'n' countries and their capital and currency store, it in a dictionary and display in tabular form also search and display for a particular country.
12	Write a program to show elements of a two dimensional list in a 2-d array format.
13	Write a Program to show the sum of diagonal (major and minor) of a 2-d list.
14	Write a program to find factorial of entered number using library function fact().

15	Write a program to call great func() to find greater out of entered two numbers, using import command.
16	Write a program to show all non -prime numbers in the entered range .
17	Write a program to show fabonacci series using recursion .
18	Write a program to show GCD of two positive numbers .
19	Write a program to enter the numbers and find Linear Search, Binary Search, Lowest Number and Selection Sort using array code with user defined functions.
20	Write a program to show and count the number of words in a text file 'DATA.TXT' which is starting/ended with an word 'The', 'the'.
21	Write a program to read data from a text file DATA.TXT, and display each words with number of vowels and consonants.
22	Write a program to read data from a text file DATA.TXT, and display word which have maximum/minimum characters.
23	Write a program to write a string in the binary file "comp.dat" and count the number of times a character appears in the given string using a dictionary.
24	Write a program that will write a string in binary file "school.dat" and display the words of the string in reverse order.
25	Consider a binary file "Emp.dat" containing details such as empno: ename:salary(separator ':'). Write a python function to display details of those employees who are earning between 20000 and 40000.
26	Write a program to insert list data in CSV File and print it.
27	Write a Program to enter values in python using dataFrames and show these values/rows in 4 different excel files .
28	Write a Program to read CSV file and show its data in python using dataFrames and pandas.

29	Write a program that rotates the elements of a list so that the element at the first index moves to the second index, the element in the second index moves to the third index, etc., and the element in the last index moves to the first index.
30	Write a program to insert item on selected position in list and print the updated list.
31	Write a program to sort a list of items using BUBBLE SORT.
32	<p>A school wants to make an online application form on website for registration of students who wants to applied for the various school leaders post. The form requires firstname, lastname and post.</p> <p>Write a Menu driven program that provides functions for :</p> <ul style="list-style-type: none">a) Selecting only those names entered entries where the first letter of the firstname and lastname are capitalizedb) Selecting only the incorrectly entered namesc) Returning a list with corrected names.
33	Write a program to show push and pop operation using stack.
34	Write a program to show insertion and deletion operation using queue.
35	Write a program to show MySQL CONNECTIVITY for inserting two tuples in table:"student" inside database:"class12" .
36	Write a Program to show database connectivity of python Data Frames with mysql database.

Program1:WAP to accept a string and whether it is a palindrome or not.

```
str=input("enter the string")
```

```
l=len(str)
```

```
p=l-1
```

```
index=0
```

```
while(index<p):
```

```
    if(str[index]==str[p]):
```

```
        index=index+1
```

```
        p=p-1
```

```
    else:
```

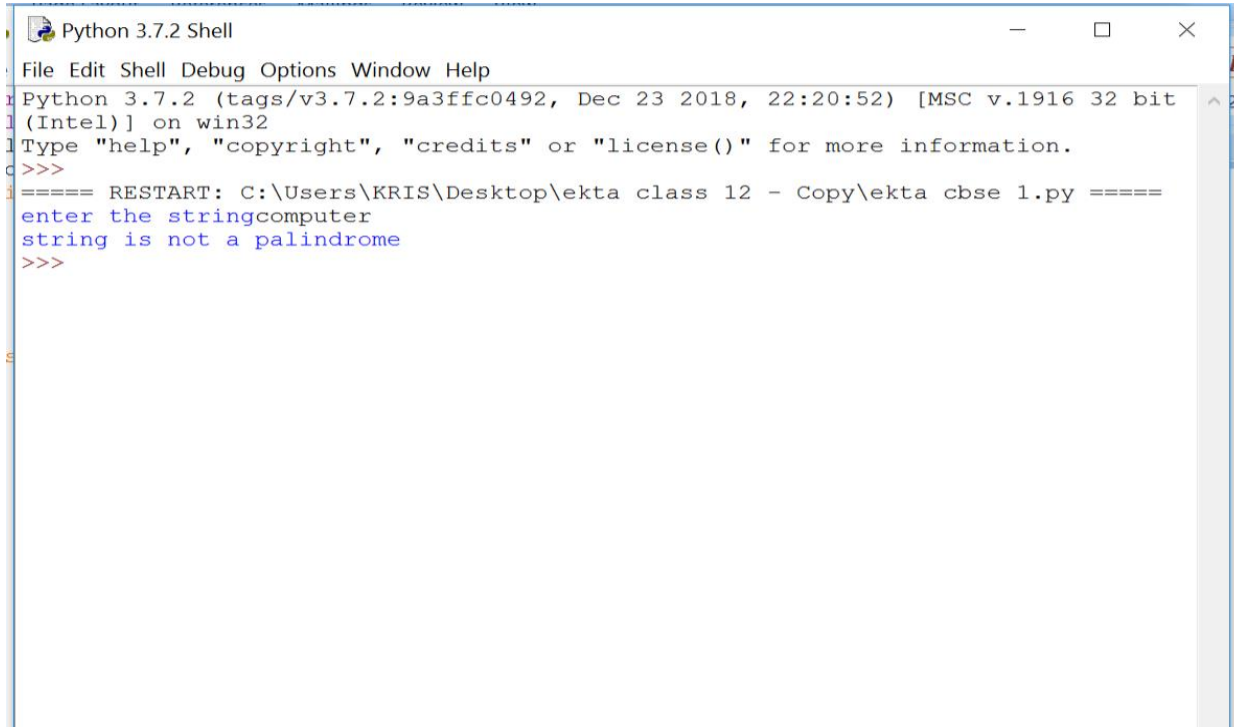
```
        print("string is not a palindrome")
```

```
        break
```

```
else:
```

```
    print("string is palindrome")
```

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```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:\Users\KRIS\Desktop\ekta class 12 - Copy\ekta cbse 1.py ====
enter the stringcomputer
string is not a palindrome
>>>
```

#Program2 : WAP to counts the number of alphabets ,digits, uppercase, lowercase, # spaces and other characters(status of a string).

```
str1 =input("enter a string")
```

```
n=c=d=s=u=l=o=0
```

```
for ch in str1:
```

```
    if ch.isalnum():
```

```
        n+=1
```

```
    if ch.isupper():
```

```
        u=u+1
```

```
    elif ch.islower():
```

```
        l=l+1
```

```
    elif ch.isalpha():
```

```
        c=c+1
```

```
    elif ch.isdigit():
```

```
        d=d+1
```

```
    elif ch.isspace():
```

```
        s=s+1
```

```
    else:
```

```
        o=o+1
```

```
print("no.of alpha and digit",n)
```

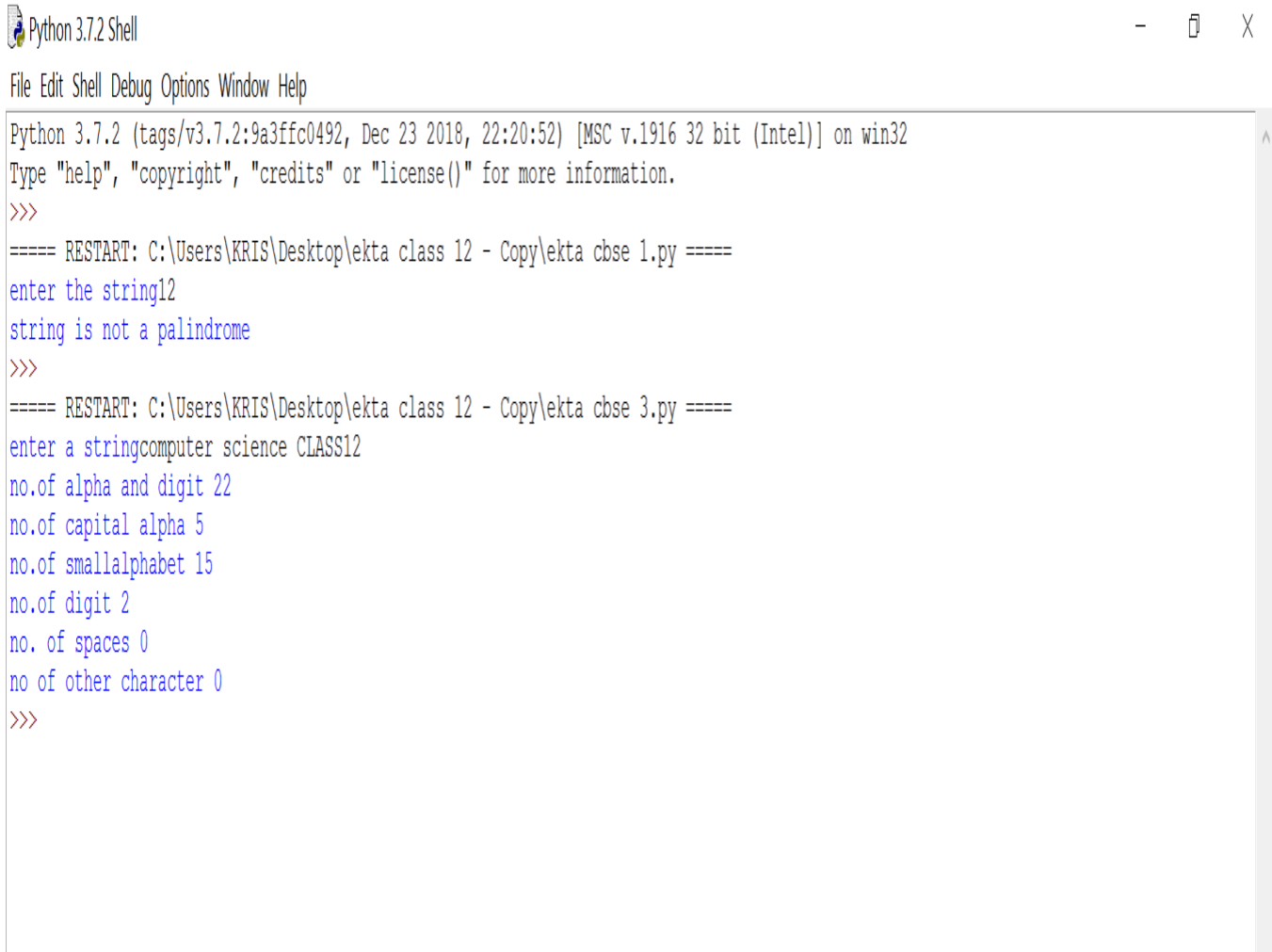
```
print("no.of capital alpha",u)
```

```
print("no.of smallalphabet",l)
```

```
print("no.of digit",d)
```

```
print("no. of spaces",s)
```

```
print("no of other character",o)
```



The screenshot shows a Python 3.7.2 Shell window with the following content:

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\KRIS\Desktop\ekta class 12 - Copy\ekta cbse 1.py =====
enter the string12
string is not a palindrome
>>>
===== RESTART: C:\Users\KRIS\Desktop\ekta class 12 - Copy\ekta cbse 3.py =====
enter a stringcomputer science CLASS12
no.of alpha and digit 22
no.of capital alpha 5
no.of smallalphabet 15
no.of digit 2
no. of spaces 0
no of other character 0
>>>
```


#Program 3:WAP to remove all odd numbers from the given list.

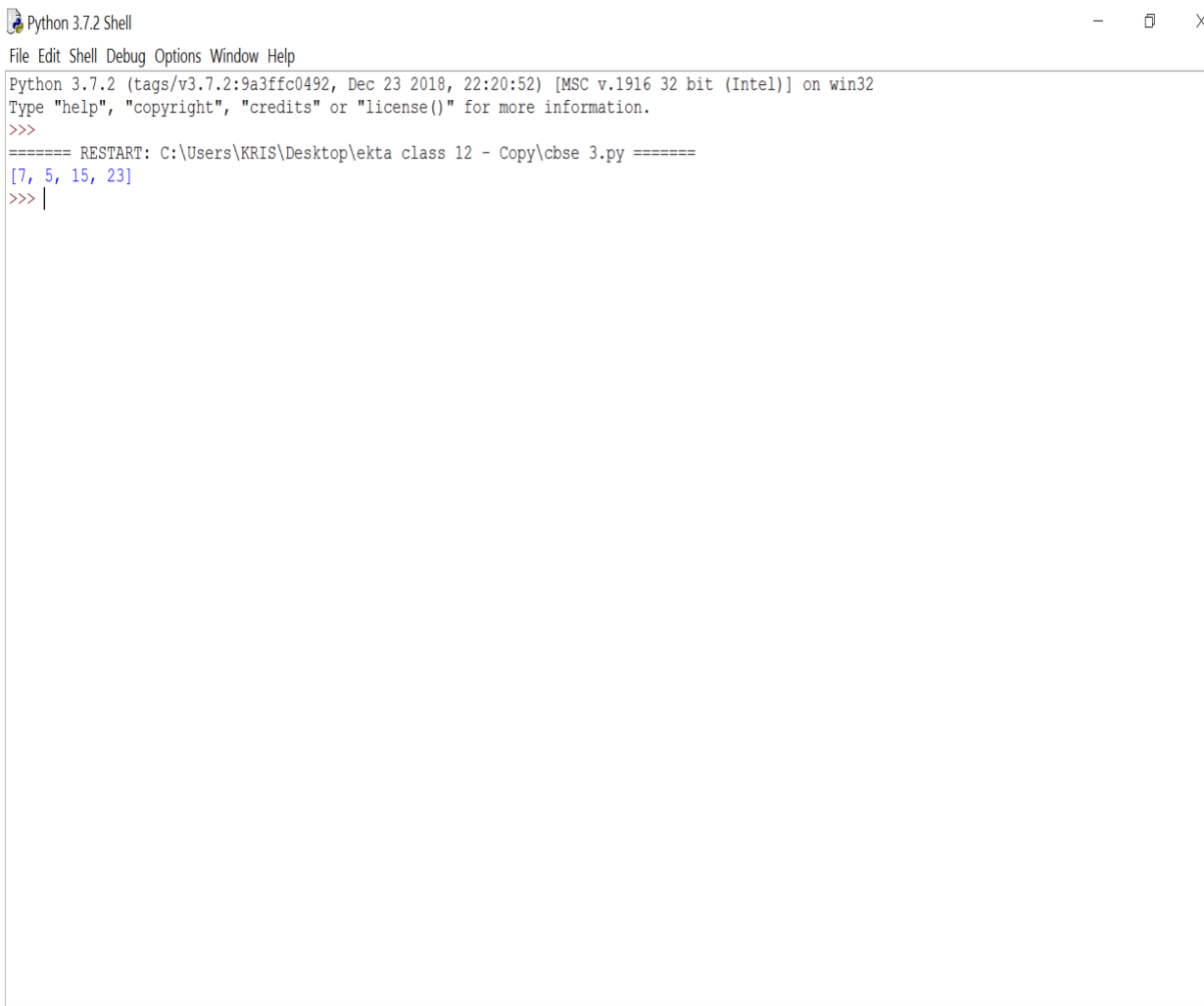
```
L=[2,7,12,5,10,15,23]
```

```
for i in L:
```

```
    if i%2==0:
```

```
        L.remove(i)
```

```
print(L)
```



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Python 3.7.2 Shell
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Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\KRIS\Desktop\ekta class 12 - Copy\cbse 3.py =====
[7, 5, 15, 23]
>>> |
```

#Program 4 :WAP to display frequencies of all the element of a list.

```
L=[3,21,5,6,3,8,21,6]
```

```
L1=[]
```

```
L2=[]
```

```
for i in L:
```

```
    if i not in L2:
```

```
        x=L.count(i)
```

```
        L1.append(x)
```

```
        L2.append(i)
```

```
print('element','\t\t','frequency')
```

```
for i in range (len(L1)):
```

```
    print(L2[i],'\t\t',L1[i])
```

Python 3.7.2 Shell

- □ ×

File Edit Shell Debug Options Window Help

Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

===== RESTART: C:\Users\KRIS\Desktop\ekta class 12 - Copy\cbse 4.py =====

```
element                frequency
```

```
3                       2
```

```
21                      2
```

```
5                       1
```

```
6                       2
```

```
8                       1
```

```
>>> |
```

#Program 5: WAP to display those string which starts with 'A' from the given list.

```
L=['AUSHIM','LEENA','AKHTAR','HIBA','NISHANT','AMAR']  
count=0  
for i in L:  
    if i[0] in ('aA'):  
        count=count+1  
        print(i)  
print("appearing",count,"times")
```

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```
Python 3.7.2 Shell
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Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\KRIS\Desktop\ekta class 12 - Copy\cbse 3.py =====
AUSHIM
AKHTAR
AMAR
appearing 3 times
>>> |
```

“Program 6:WAP to find and display the sum of all the values which are ending with 3 from a list.”

```
L=[33,13,92,99,3,12]
```

```
sum=0
```

```
x=len(L)
```

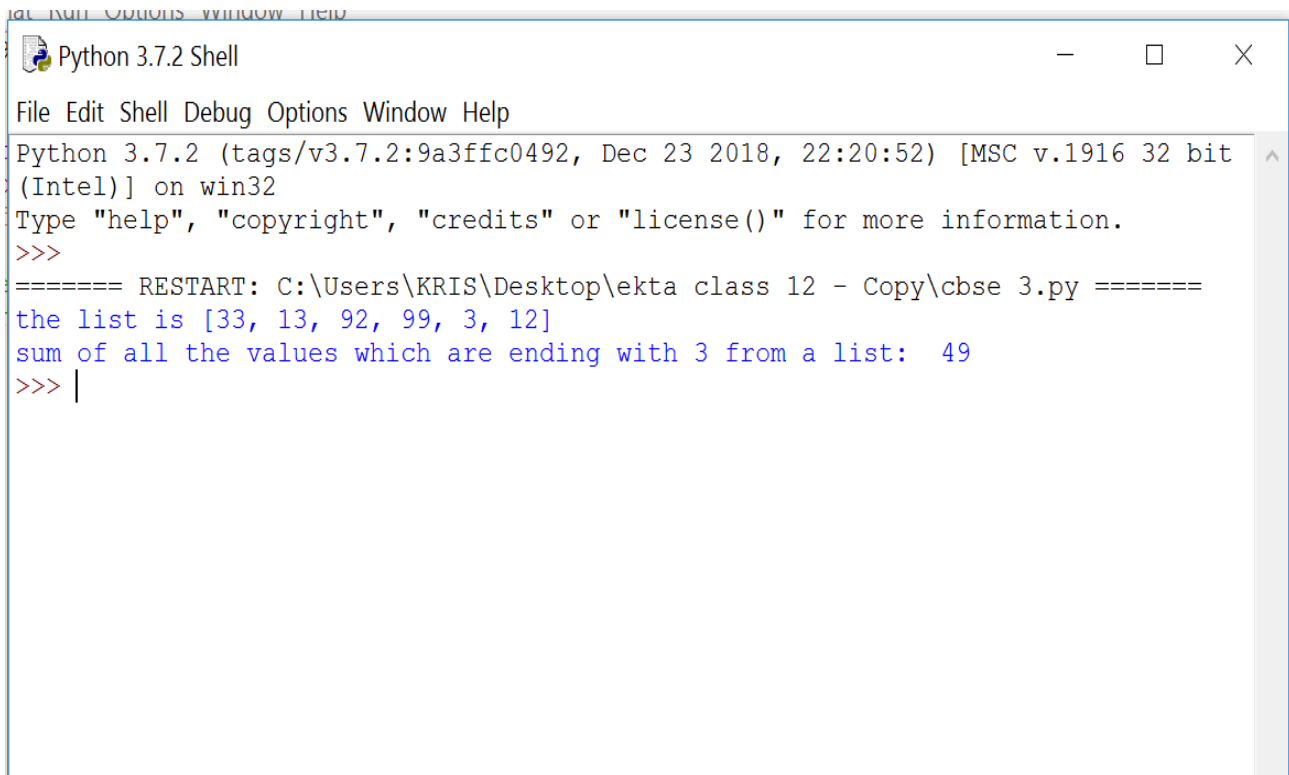
```
for i in range(0,x):
```

```
    if type(L[i])==int:
```

```
        if L[i]% 10==3:
```

```
            sum+=L[i]
```

```
print(sum)
```



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\KRIS\Desktop\ekta class 12 - Copy\cbse 3.py =====
the list is [33, 13, 92, 99, 3, 12]
sum of all the values which are ending with 3 from a list: 49
>>> |
```

#Program 7: Write a program to show sorting of elements of a list step-by-step.

```
a=[16,10,2,4,9,18]
print("the unsorted list is ",a)
print("the sorting starts now:")
n=len(a)
for i in range(n):
    for j in range(0,n-i-1):
        if a[j]>a[j+1]:
            a[j],a[j+1]=a[j+1],a[j]
    print("the list after sorting " , i ,"loop is",a)
print("the list after sorting is",a)
```

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```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\KRIS\Desktop\ekta class 12\ekta cbse 7.py =====
the unsorted list is [16, 10, 2, 4, 9, 18]
the sorting starts now:
the list after sorting 0 loop is [10, 2, 4, 9, 16, 18]
the list after sorting 1 loop is [2, 4, 9, 10, 16, 18]
the list after sorting 2 loop is [2, 4, 9, 10, 16, 18]
the list after sorting 3 loop is [2, 4, 9, 10, 16, 18]
the list after sorting 4 loop is [2, 4, 9, 10, 16, 18]
the list after sorting 5 loop is [2, 4, 9, 10, 16, 18]
the list after sorting is [2, 4, 9, 10, 16, 18]
>>>
```

“Program8 : A list num contains the following elements : 3,21,5,6,14,8,14,3 . WAP to swap the content with next value, if it is divisible by 7 so that the resultant array will look like : 3,5,21,6,8,14,3,14 .”

```
num=[3,21,5,6,14,8,14,3]
```

```
l=len(num)
```

```
i=0
```

```
print("the elements of the list is ",num)
```

```
while i<10:
```

```
    if num[i]%7==0:
```

```
        num[i],num[i+1]=num[i+1],num[i]
```

```
        i=i+2
```

```
    else:
```

```
        i=i+1
```

```
print(the elements of the list after swapping is ", num)
```



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/KRIS/Desktop/ekta class 12 - Copy/cbse8.py =====
the elements of the list is : [3, 21, 5, 6, 14, 8, 14, 3]
the elements of the list after swapping is : [3, 3, 21, 6, 14, 14, 14, 14]
>>> |
```

#Program9: Write a program to accept values from a user and create a tuple.

```
t=tuple()
n=int(input("enter limit:"))
for i in range(n):
    a=input("enter number:")
    t=t+(a,)
print("output is")
print(t)
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\KRIS\Desktop\ekta class 12 - Copy\cdse9.py =====
enter limit for numbers in a tuple:5
enter number:2
enter number:3
enter number:5
enter number:6
enter number:8
output is
('2', '3', '5', '6', '8')
>>> |
```

“Program10:WAP to input total number of sections and stream name in 11th class and display all information on the output screen.”

```
classxi=dict()
n=int(input("enter total number of section in xi class"))
i=1
while i<=n:
    a=input("enter section:")
    b=input("enter stream name:")
    classxi[a]=b
    i=i+1
print("class",'\t',"section",'\t',"stream name")
for i in classxi:
    print("xi",'\t',i,'\t',classxi[i])
```

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```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
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Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/KRIS/Desktop/ekta class 12 - Copy/cdse 7.py =====
enter total number of section in xi class4
enter section:A
enter stream name:HUMANITIES
enter section:B
enter stream name:COMMERCE
enter section:C
enter stream name:NON-MEDICAL
enter section:D
enter stream name:MEDICAL
class    section    stream name
xi      A      HUMANITIES
xi      B      COMMERCE
xi      C      NON-MEDICAL
xi      D      MEDICAL
>>>
```

Activate Windows
Go to Settings to activate Windows.

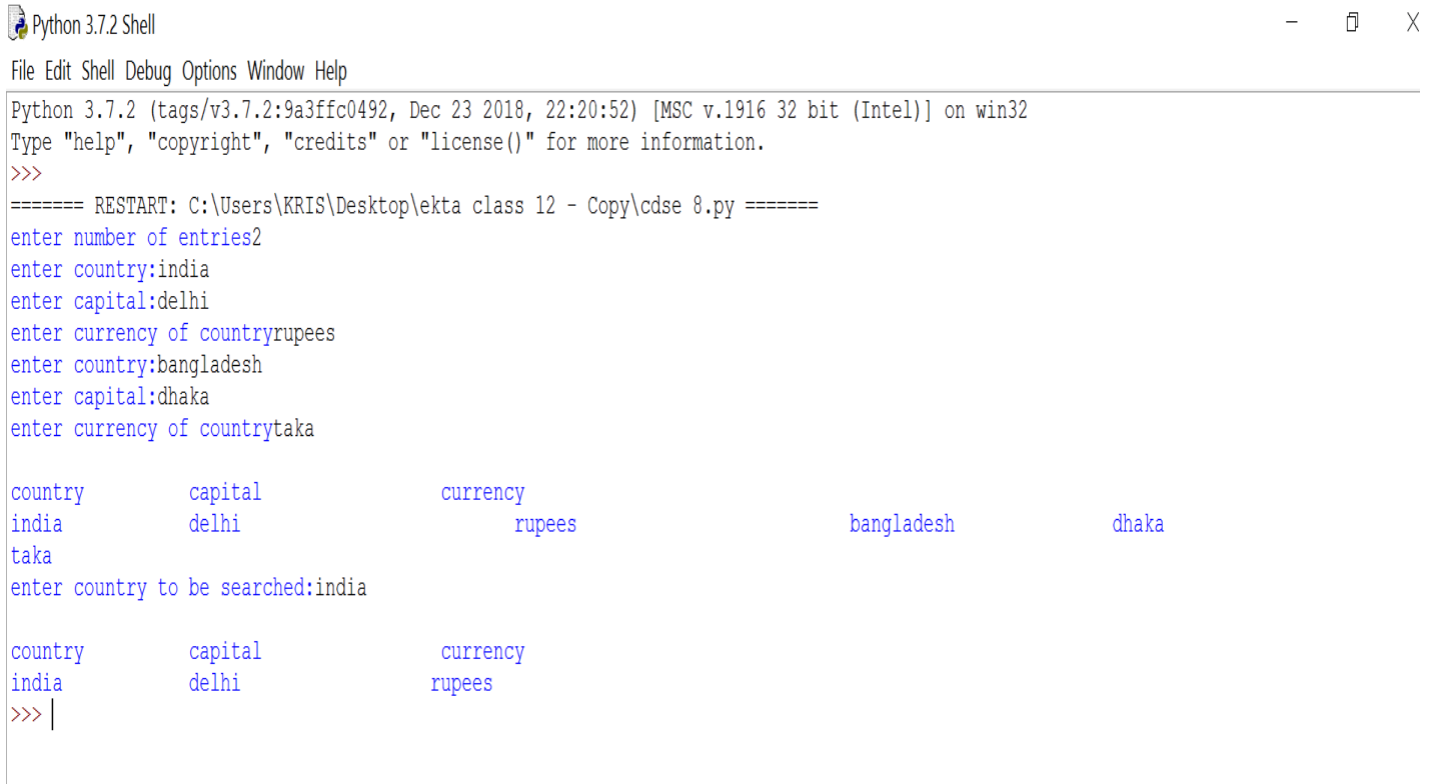
“Program11:WAP to input name of ‘n’ countries and their capital and currency store, it in a dictionary and display in tabular form also search and display for a particular country.”

```
d1=dict(), i=1
n=int(input("enter number of entries"))
while i<=n:
    c=input("enter country:")
    cap=input("enter capital:")
    curr=input("enter currency of country")
    d1[c]=[cap,curr]
    i=i+1
l=d1.keys()
print("\ncountry\t\t","capital\t\t","currency")
for i in l:
    z=d1[i]
    print(i,'\t\t',end=" ")
    for j in z:
        print(j,'\t\t',end='\t\t')
x=input("\nenter country to be searched:") #searching
for i in l:
    if i==x:
        print("\ncountry\t\t","capital\t\t","currency\t\t")
        z=d1[i]
        print(i,'\t\t',end=" ")
```

for j in z:

print(j, '\t\t', end='\t')

break



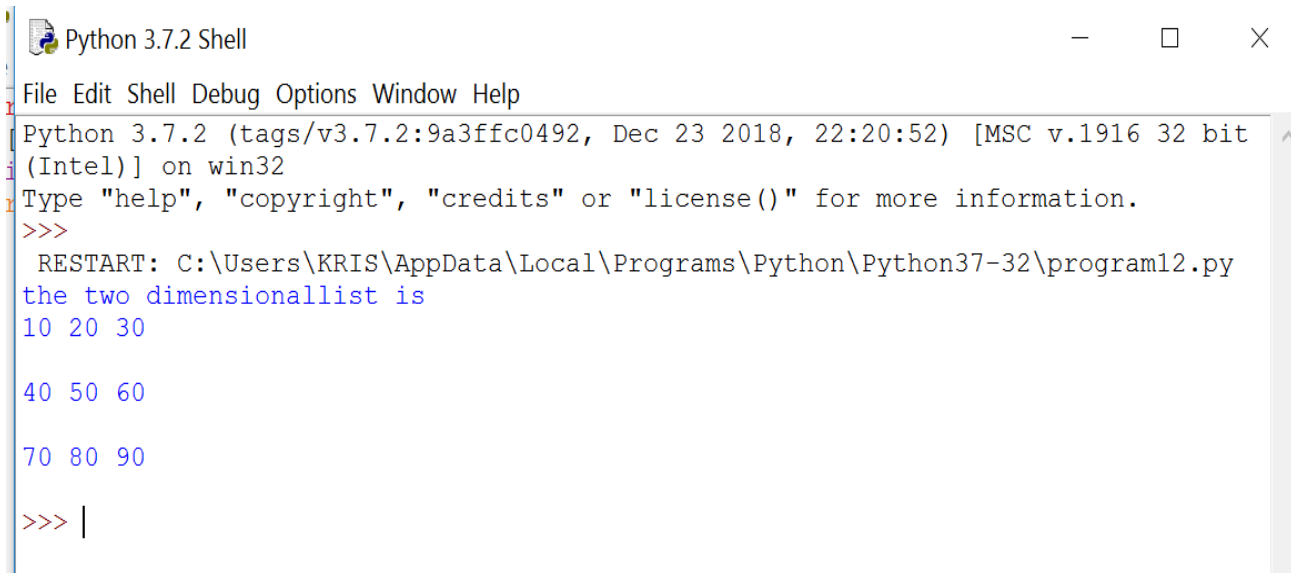
```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\KRIS\Desktop\ekta class 12 - Copy\cdse 8.py =====
enter number of entries2
enter country:india
enter capital:delhi
enter currency of countryrupees
enter country:bangladesh
enter capital:dhaka
enter currency of countrytaka

country      capital      currency
india        delhi        rupees
taka
enter country to be searched:india

country      capital      currency
india        delhi        rupees
>>> |
```

“““Program12: Write a Program to show the elements of a nested or two dimensional list in a 2-d array format.”””

```
x=[[10,20,30],[40,50,60],[70,80,90]]
for i in range(0,3):
    for j in range(0,3):
        print (x[i][j],end=' ')
    print("\n")
```



The screenshot shows a Python 3.7.2 Shell window with the following content:

```
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Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\KRIS\AppData\Local\Programs\Python\Python37-32\program12.py
the two dimensionallist is
10 20 30

40 50 60

70 80 90

>>> |
```


“““Program13: Write a Program to show Sum of Diagonals (major and minor) in Two Dimensional List. ”””

```
r=int(input("Enter Number of Rows : "))
c=int(input("Enter Number of Columns : "))
mylist=[]
for i in range(0, r):
    mylist.append([])
for i in range(0, r):
    for j in range(0, c):
        mylist[i].append(j)
# mylist[i][j]=0
for i in range(0, r):
    for j in range(0, c):
        print("Enter Value : ")
        mylist[i][j]=int(input())
for i in range(0, r):
    for j in range(0, c):
        print (mylist[i][j], end=' ')
    print("\n")
sumd1=0
sumd2=0
j=c-1
print("Sum of Diagonals (major and minor) in Two Dimensional List: ")
for i in range(0,r):
    sumd1=sumd1+mylist[i][i]
    sumd2=sumd2+mylist[i][j]
    j=j-1
print ("The sum of diagonal 1 is : ", sumd1)
print ("The sum of diagonal 2 is : ", sumd2)
```

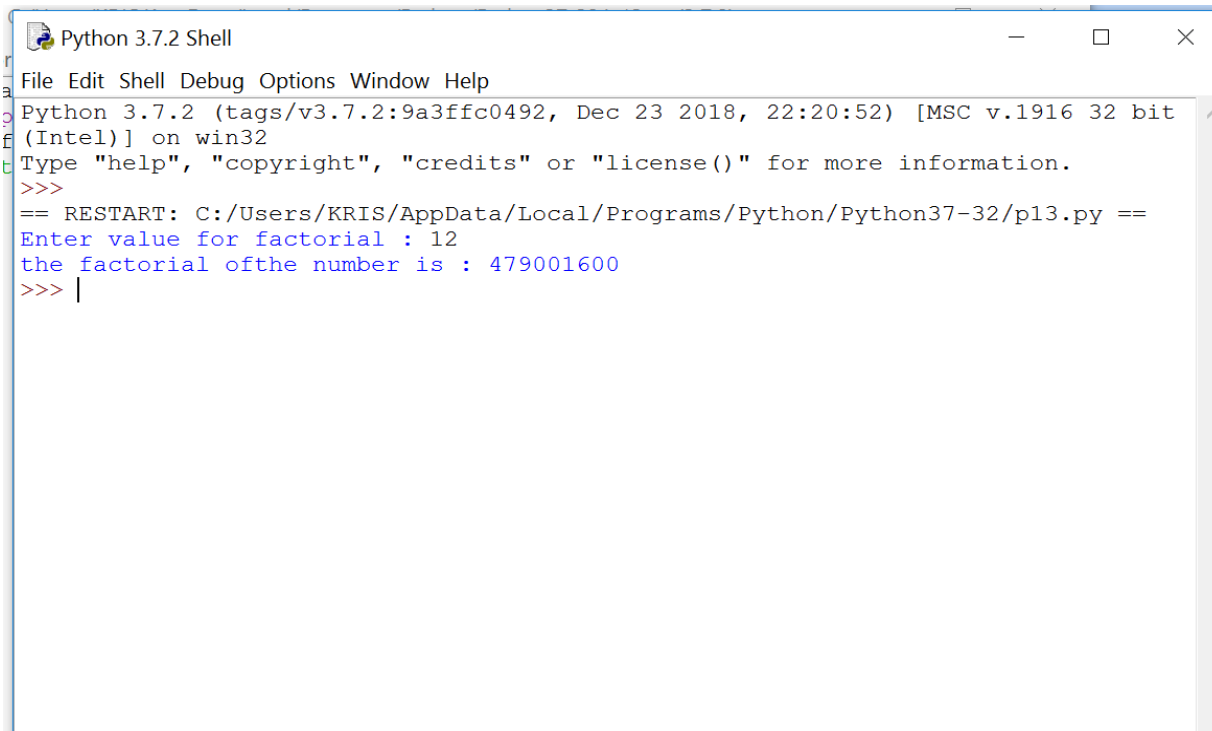
```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/KRIS/Desktop/ekta class 12/program13.py =====
Enter Number of Rows : 3
Enter Number of Columns : 3
Enter Value :
1
Enter Value :
2
Enter Value :
3
Enter Value :
4
Enter Value :
5
Enter Value :
6
Enter Value :
7
Enter Value :
8
Enter Value :
9
1 2 3
4 5 6
7 8 9

Sum of Diagonals (major and minor) in Two Dimensional List:
The sum of diagonal 1 is : 15
The sum of diagonal 2 is : 15
>>>
```

“““Program14 : Write a program to find factorial of entered number using library function fact().”””

```
def fact(n):  
    if n<2:  
        return 1  
    else :  
        return n*fact(n-1)
```

```
import factfunc  
x=int(input("Enter value for factorial : "))  
ans=factfunc.fact(x)  
print (ans)
```



The screenshot shows a Python 3.7.2 Shell window with the following content:

```
Python 3.7.2 Shell  
File Edit Shell Debug Options Window Help  
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit  
(Intel)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>>  
== RESTART: C:/Users/KRIS/AppData/Local/Programs/Python/Python37-32/p13.py ==  
Enter value for factorial : 12  
the factorial ofthe number is : 479001600  
>>> |
```

#Program15 : Write a Program to call great function to find greater out of entered 2 numbers, using import command.

```
def chknos(a, b):  
    if a>b:  
        print("the first number ",a,"is greater")  
        return a  
    else:  
        print("the second number ",b,"is greater")  
        return b  
  
import greatfunc  
a=int(input("Enter First Number : "))  
b=int(input("Enter Second Number : "))  
ans=greatfunc.chknos(a, b)  
print("GREATEST NUMBER = ",ans)
```



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/KRIS/Desktop/ekta class 12/cbse16.py =====
Enter First Number : 67
Enter Second Number : 34
the first number 67 is greater
GREATEST NUMBER = 67
>>> |
```

#Program16: Write a program to show all non -prime numbers in the entered range

```
def nprime(lower,upper):
    print("“SHOW ALL NUMBERS EXCEPT PRIME NUMBERS WITHIN THE RANGE”")
    for i in range(lower, upper+1):
        for j in range(2, i):
            ans = i % j
            if ans==0:
                print (i,end=' ')
            break

lower=int(input("Enter lowest number as lower bound to check : "))
upper=int(input("Enter highest number as upper bound to check: "))
reply=nprime(lower,upper)
print(reply)
```

Python 3.7.2 Shell

File Edit Shell Debug Options Window Help

Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

RESTART: C:/Users/kris2/AppData/Local/Programs/Python/Python37-32/cbse-cs17.py

Enter lowest number as lower bound to check : 3

Enter highest number as upper bound to check: 41

"SHOW ALL NUMBERS EXCEPT PRIME NUMBERS WITHIN THE RANGE"

4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 None

>>> |

#Program17 : Write a program to show fabonacci series using recursion.

```
def faboncci(n):  
    if n==1:  
        return 0  
    elif n==2:  
        return 1  
    else:  
        return(faboncci(n-1)+faboncci(n-2))  
  
#main  
limit=int(input("enter the ending number"))  
print("he fabonacci series are")  
for i in range(1,limit+1):  
    print(faboncci(i))
```


Python 3.7.2 Shell



File Edit Shell Debug Options Window Help

Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

===== RESTART: C:\Users\KRIS\Desktop\ekta class 12\recursion3.py =====

enter the ending number6

the fabonacci series are

0

1

1

2

3

5

>>> |

#Program18 : Write a program to show GCD of two positive numbers .

```
def GCD(x,y):  
    if y==0:  
        return x  
    else:  
        return GCD(y,x%y)  
  
#main  
a=int(input("enter the first number"))  
b=int(input("enter the second number"))  
ans=GCD(a,b)  
print("the GCD of two number is ",ans)
```



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\KRIS\Desktop\ekta class 12\recursion4.py =====
enter the first number1440
enter the second number408
the GCD of two number is 24
>>> |
```

“Program19 : Write a Program to enter the numbers and find Linear Search, Binary Search, Lowest Number and Selection Sort using array code.”

```
arr=[]
def array_operation():
    ch=1
    while ch!=10 :
        print('Various Array operation\n')
        print('1 Create and Enter value\n')
        print('2 Print Array\n')
        print('3 Reverse Array\n')
        print('4 Linear Search\n')
        print('5 Binary Search\n')
        print('6 Lowest Number \n')
        print('7 Selection Sort\n')
        print('10 Exit\n')
        ch=int(input('Enter Choice '))
        if ch==1 :
            appendarray()
        elif ch==2 :
            print_array()
        elif ch==3 :
            reverse_array()
        elif ch==4 :
            linear_search()
        elif ch==5 :
            binary_search()
        elif ch==6 :
            min_number()
        elif ch==7 :
            selection_sort()

def appendarray():
    for i in range(0,10):
        x=int(input('Enter Number : '))
```

```
arr.insert(i,x)
```

```
#-----
```

```
def print_array():  
    for i in range(0,10):  
        print(arr[i],
```

```
#-----
```

```
def reverse_array():  
    for i in range(1,11):  
        print(arr[-i],
```

```
#-----
```

```
def lsearch():  
    try:  
        x=int(input('Enter the Number You want to search : '))  
        n=arr.index(x)  
        print ('Number Found at %d location'% (i+1))  
    except:  
        print('Number Not Exist in list')
```

```
#-----
```

```
def linear_search():  
    x=int(input('Enter the Number you want to search : '))  
    fl=0  
    for i in range(0,10):  
        if arr[i]==x :  
            fl=1  
            print ('Number Found at %d location'% (i+1))  
            break  
    if fl==0 :  
        print ('Number Not Found')
```

```
#-----
```

```
def binary_search():
    x=int(input('Enter the Number you want to search : '))
    fl=0
    low=0
    heigh=len(arr)
    while low<=heigh :
        mid=int((low+heigh)/2)
        if arr[mid]==x :
            fl=1
            print ('Number Found at %d location'% (mid+1))
            break
        elif arr[mid]>x :
            low=mid+1
        else :
            heigh=mid-1
    if fl==0 :
        print ('Number Not Found')
```

#-----

```
def min_number():
    n=arr[0]
    k=0
    for i in range(0,10):
        if arr[i]<n :
            n=arr[i]
            k=i
    print('The Lowest number is %d'%(n))
```

#-----

```
def selection_sort():
    for i in range(0,10):
        n=arr[i]
        k=i
```

```
for j in range(i+1,10):  
    if arr[j]<n :  
        n=arr[j]  
        k=j  
    arr[k]=arr[i]  
    arr[i]=n
```

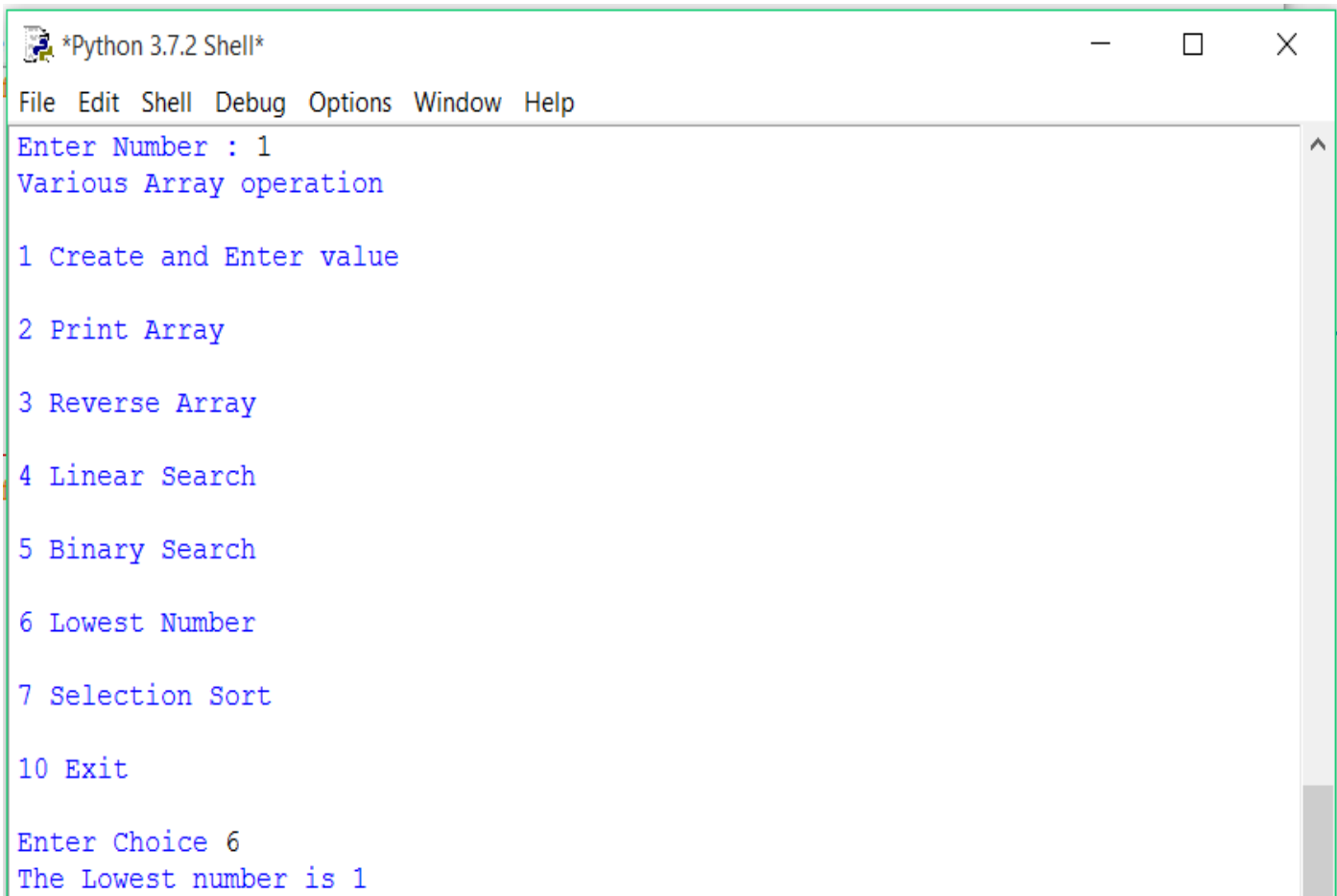
array_operation()



```
Python 3.7.2 Shell  
File Edit Shell Debug Options Window Help  
1 Create and Enter value  
2 Print Array  
3 Reverse Array  
4 Linear Search  
5 Binary Search  
6 Lowest Number  
7 Selection Sort  
10 Exit  
Enter Choice 1  
Enter Number : 1  
Enter Number : 2  
Enter Number : 3  
Enter Number : 4  
Enter Number : 5  
Enter Number : 6  
Enter Number : 7  
Enter Number : 8  
Enter Number : 9  
Enter Number : 11
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Various Array operation
1 Create and Enter value
2 Print Array
3 Reverse Array
4 Linear Search
5 Binary Search
6 Lowest Number
7 Selection Sort
10 Exit
Enter Choice 2
1
2
3
4
5
6
7
8
9
11
```

```
4 Linear Search
5 Binary Search
6 Lowest Number
7 Selection Sort
10 Exit
Enter Choice 3
1
10
9
8
7
6
5
4
3
2
```

```
*Python 3.7.2 Shell*
File Edit Shell Debug Options Window Help
Enter Number : 1
Various Array operation

1 Create and Enter value
2 Print Array
3 Reverse Array
4 Linear Search
5 Binary Search
6 Lowest Number
7 Selection Sort
10 Exit

Enter Choice 6
The Lowest number is 1
```

#Program20 : Write a program to show and count the number of **words** in a text file 'DATA.TXT' which is **starting/ended** with an **word** 'The', 'the', 'my', 'he', 'they'.

```
f1=open("data.txt","r")

s=f1.read()

print("All Data of file in string : \n",s)

print("="*30)

count=0

words=s.split()

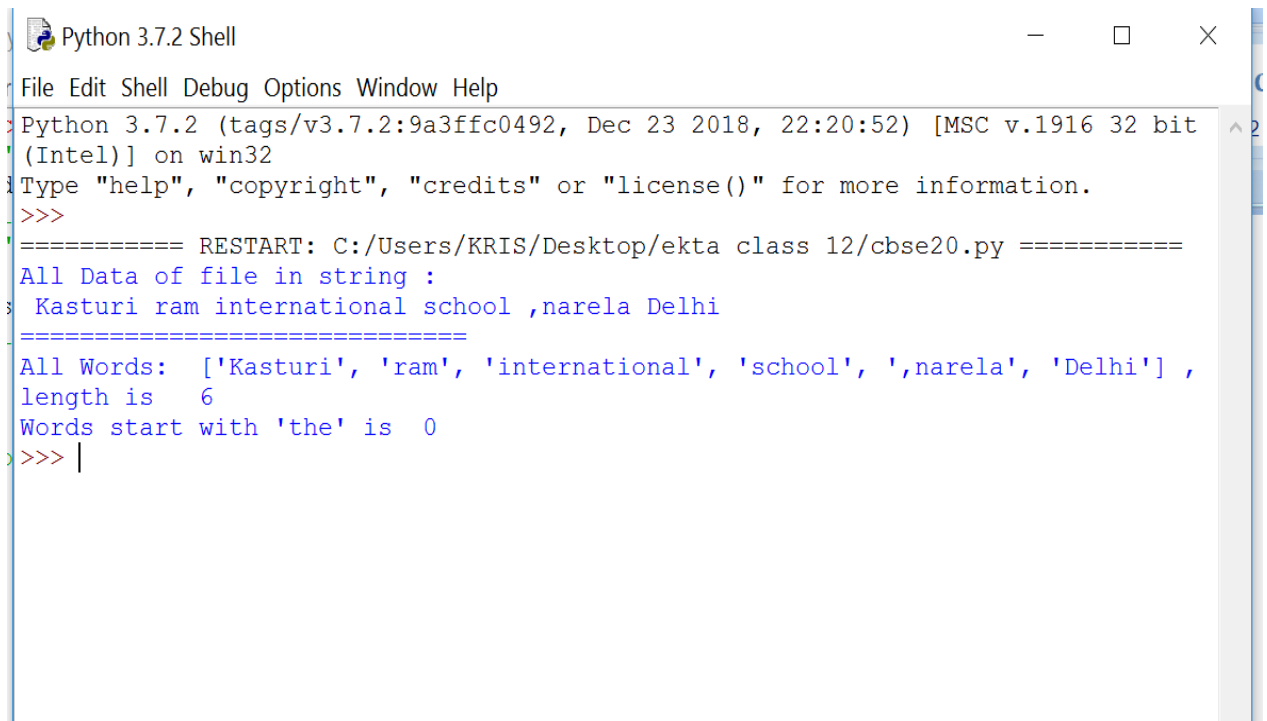
print("All Words: ",words," , length is ",len(words))

for word in words:

    if word.startswith("the")==True: # word.ends with("the")

        count+=1

print("Words start with 'the' is ",count)
```



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/KRIS/Desktop/ekta class 12/cbse20.py =====
All Data of file in string :
Kasturi ram international school ,narela Delhi
=====
All Words: ['Kasturi', 'ram', 'international', 'school', ',narela', 'Delhi'] ,
length is 6
Words start with 'the' is 0
>>> |
```

#PROGRAM 21 : WAP to read data from a text file DATA.TXT, and display each words with number of vowels and consonants.

```
f1=open("data.txt","r")
s=f1.read()
print(s)
countV=0
countC=0
words=s.split()
print(words," ",len(words))
for word in words:
    countV=0
    countC=0
    for ch in word:
        if ch.isalnum()==True:
            if ch=='a' or ch=='e' or ch=='i' or ch=='o' or ch=='u':
                countV+=1
            else:
                countC+=1
    print("Word : ",word," V: ",countV," C= ", countC)
```

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```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
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(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/KRIS/Desktop/ekta class 12/CBSE21.py =====
Kasturi ram international school ,narela Delhi
['Kasturi', 'ram', 'international', 'school', ',narela', 'Delhi'] , 6
Word : Kasturi , V: 3 , C= 4
Word : ram , V: 1 , C= 2
Word : international , V: 6 , C= 7
Word : school , V: 2 , C= 4
Word : ,narela , V: 3 , C= 3
Word : Delhi , V: 2 , C= 3
>>> |
```

#PROGRAM 22 : WAP to read data from a text file DATA.TXT, and display word which have maximum/minimum characters.

```
f1=open("data.txt","r")
s=f1.read()
print(s)
words=s.split()
print(words," ",len(words))
maxC=len(words[0])
minC=len(words[0])
minfinal=""
maxfinal=""
for word in words[1:]:
    length=len(word)
    if maxC<length:
        maxC=length
        maxfinal=word
    if minC>length:
        minC=length
        minfinal=word
print("Max word : ",maxfinal,"", maxC: ",maxC)
print("Min word : ",minfinal,"", minC: ",minC)
```

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Python 3.7.2 Shell



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Type "help", "copyright", "credits" or "license()" for more information.

>>>

===== RESTART: C:/Users/KRIS/Desktop/ekta class 12/CBSE22.py =====

Kasturi ram international school ,narela Delhi

['Kasturi', 'ram', 'international', 'school', ',narela', 'Delhi'] , 6

Max word : international , maxC: 13

Min word : ram , minC: 3

>>>

“PROGRAM23 : Write a program to write a string in the binary file “comp.dat” and count the number of times a character appears in the given string using a dictionary.

```
import pickle

str="This is the Computer Science with Python Class"

f1=open('comp.dat','wb')

pickle.dump(str,f1)

print("the string is written in the ",f1.name, "file")

f1.close()

f1=open('comp.dat','rb')

str=pickle.load(f1)

print("\n\nthe string in the binary file is : \n",str)

d={ }

for x in str:

    if x not in d:

        d[x]=1

    else:

        d[x]=d[x]+1

print("\n\nThe occurrences of each letter of string is :\n", d)

f1.close()
```

**#PROGRAM 24:Write a program that will write a string in binary file "school.dat" and
#display the words of the string in reverse order.**

#Example: myString="Silicon Institute of Technology"

#Output: Technology of Institute Silicon

```
import pickle  
  
str="This is the Class of Computer Science with Python "  
  
f1=open('school.dat','wb')  
  
pickle.dump(str,f1)  
  
print("the string is written in the ",f1.name, "file")  
  
f1.close()
```

```
f1=open('school.dat','rb')  
  
str1=pickle.load(f1)  
  
print("\n\nthe string in the binary file is : \n",str1)  
  
str1=str1.split(" ")  
  
l=list(str1)  
  
print("the list is ",l)  
  
l.reverse()
```

```
print("the reverse is ",l)
```

#II METHOD

```
f1=open('school.dat','rb')  
  
str1=pickle.load(f1)
```



```
print("\n\nthe string in the binary file is : \n",str1)
```

```
str1=str.split(" ")
```

```
l=list(str1)
```

```
print("\nthe list is ",l)
```

```
length=len(l)
```

```
while length>0:
```

```
    print(l[length-1],end=" ")
```

```
    length-=1
```

#Program25: Consider a binary file “Emp.dat” containing details such as empno:ename:salary(separator‘:’). Write a python function to display details of those employees who are earning between 20000 and 40000.

```
fin=open("emp.dat", 'rb')
x=fin.readline()
while x:
    data=x.split(":")
    if float(data[0])>20000 and float(data[0])<30000:
        print(data)
        x=fin.readline()
fin.close()
```

#Program26: Write a program to insert list data in CSV File and print it

```
import csv # importing the csv module
fields = ['Name', 'Branch', 'Year', 'CGPA'] # field names
# data rows of csv file
rows = [ ['Nikhil', 'COE', '2', '9.0'],
         ['Sanchit', 'COE', '2', '9.1'],
         ['Aditya', 'IT', '2', '9.3'],
         ['Sagar', 'SE', '1', '9.5'],
         ['Prateek', 'MCE', '3', '7.8'],
         ['Sahil', 'EP', '2', '9.1']]
filename = "MYCSV.csv" # name of csv file
with open(filename, 'w') as csvfile: # writing to csv file
    csvwriter = csv.writer(csvfile) # creating a csv writer object
    csvwriter.writerow(fields) # writing the fields
    csvwriter.writerows(rows) # writing the data rows
with open('MYCSV.csv', newline='') as File:
    reader = csv.reader(File)
    for row in reader:
        print(row)
```

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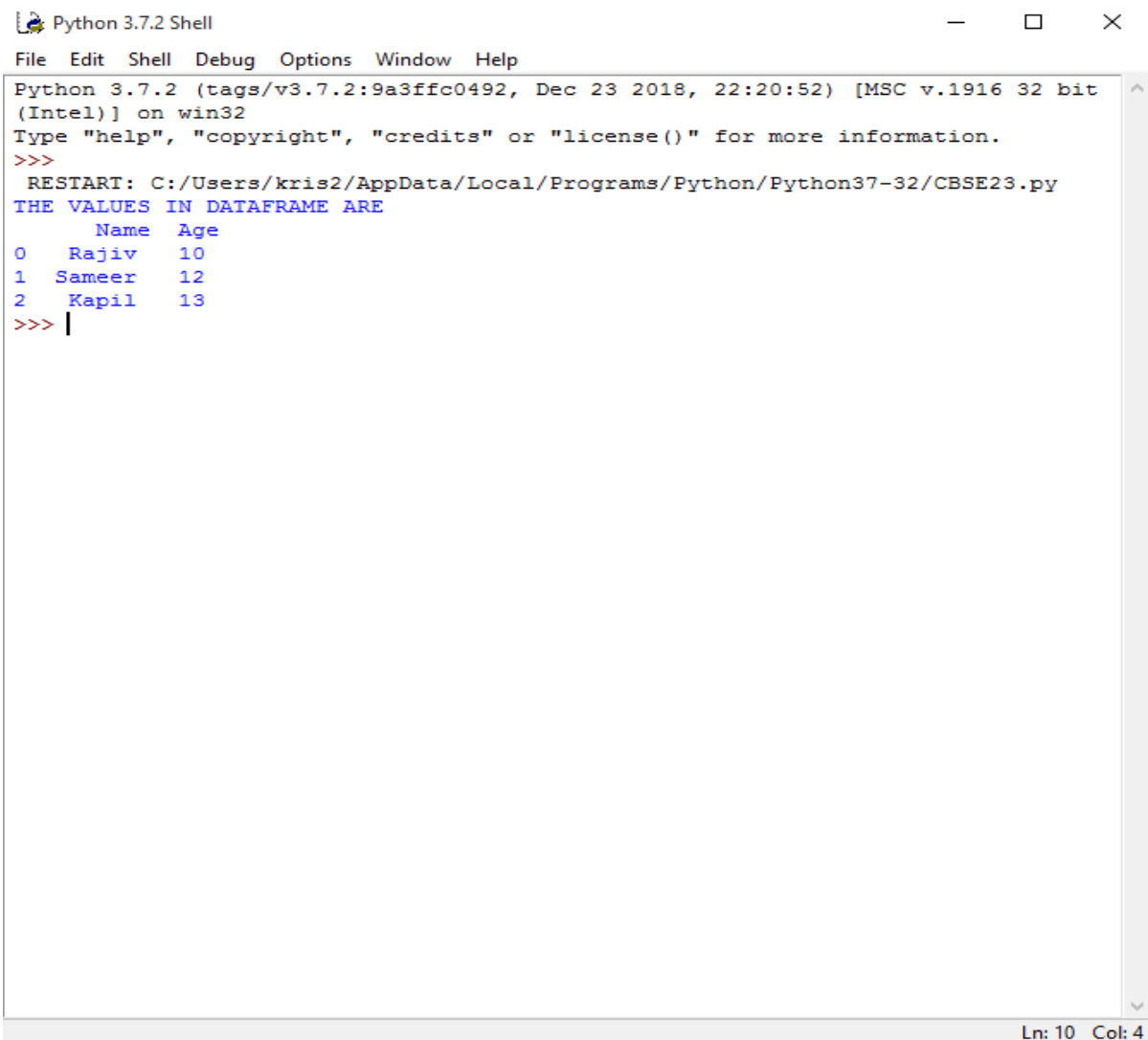
```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/kris2/AppData/Local/Programs/Python/Python37-32/cbeee31.py
[('Name', 'Branch', 'Year', 'CGPA')]
[]
[('Nikhil', 'COE', '2', '9.0')]
[]
[('Sanchit', 'COE', '2', '9.1')]
[]
[('Aditya', 'IT', '2', '9.3')]
[]
[('Sagar', 'SE', '1', '9.5')]
[]
[('Prateek', 'MCE', '3', '7.8')]
[]
[('Sahil', 'EP', '2', '9.1')]
[]
>>> |
```

Activate Windows
Go to Settings to activate Windows.

Ln: 19 Col: 4
10:55 AM
11/13/2019

#PROGRAM 27: Write a Program to enter values in python using dataFrames and show these values/rows in 4 different excel files .’’

```
import pandas as pd
data = [['Rajiv',10],['Sameer',12],['Kapil',13]]
df = pd.DataFrame(data,columns=['Name','Age'])
print ("THE VALUES IN DATAFRAME ARE \n",df)
df.to_csv('new.csv')
df.to_csv('new1.csv', index=False)
df.to_csv('new2.csv', columns=['Name'])
df.to_csv('new4.csv', header=False)
```



```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/kris2/AppData/Local/Programs/Python/Python37-32/CBSE23.py
THE VALUES IN DATAFRAME ARE
   Name  Age
0  Rajiv   10
1  Sameer  12
2   Kapil  13
>>> |
```

Ln: 10 Col: 4

#PROGRAM 28: Write a Program to read CSV file and show its data in python using dataFrames and pandas.’’

```
import pandas as pd
df=pd.read_csv("student.csv", nrows=3)
print("\nTo display selected number of rows from beginning")
print(df)
df=pd.read_csv("student.csv")
print(df)
print("\nNumber of Rows and Columns : ",df.shape)
print("\nHead-Records from starting : ")
print(df.head(2))
print("\nTail-records from bottom :")
print(df.tail(2))
print("\nSpecified Number of Rows")
print(df[2:5])
print("\nPrint Everything")
print(df[:])
print("\nPrint Column Names")
print(df.columns)
print("\nData from Individual Column")
print(df.Name) #or df.Name
print(df['Marks'])
print("Maximum Marks : ", df['Marks'].max())
print("Printing According to Condition")
print(df[df.Marks>70])
print("Printing the row with maximum temperature")
print(df[df.Marks==df.Marks.max()])
print("Printing specific columns with maximum Marks")
print(df[['Name','Marks']][df.Marks==df.Marks.max()])
print("According to index")
print(df.loc[3])
print("Changing of Index")
df.set_index('Scno',inplace=True)
print(df)
```

```
#print("Searching according to new index")
#print(df.loc[4])
print("Resetting the Index")
df.reset_index(inplace=True)
print(df)
print("Sorting")
print(df.sort_values(by=['Marks'],ascending=False))
print("Sorting on Multiple Columns")
print(df.sort_values(by=['Class','Section'],ascending=True))
print("Sorting on Multiple Columns one in ascending, another in descending")
print(df.sort_values(by=['Marks','Name'],ascending=[False,True]))
print("Sum Operations on Data Frame")
print(df['Marks'].sum())
print("Group By Operations")
print(df.groupby('Class')['Marks'].sum())
```

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```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3fff0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/kris2/AppData/Local/Programs/Python/Python37-32/cbse-ip-22.py

To display selected number of rows from beginning
Sno  Name  Class Section  Marks
0  1  abhi  10  A  20.0
1  2  babita  11  B  19.0
2  3  Chirag  12  A  18.5
Sno  Name  Class Section  Marks
0  1  abhi  10  A  20.0
1  2  babita  11  B  19.0
2  3  Chirag  12  A  18.5
3  4  Deepak  10  C  19.5
4  5  Ena  11  B  20.0

Number of Rows and Columns : (5, 5)

Head-Records from starting :
Sno  Name  Class Section  Marks
0  1  abhi  10  A  20.0
1  2  babita  11  B  19.0

Tail-records from bottom :
Sno  Name  Class Section  Marks
3  4  Deepak  10  C  19.5
4  5  Ena  11  B  20.0

Specified Number of Rows
Sno  Name  Class Section  Marks
2  3  Chirag  12  A  18.5
3  4  Deepak  10  C  19.5
4  5  Ena  11  B  20.0

Print Everything
Sno  Name  Class Section  Marks
0  1  abhi  10  A  20.0
1  2  babita  11  B  19.0
2  3  Chirag  12  A  18.5
3  4  Deepak  10  C  19.5
4  5  Ena  11  B  20.0

Print Column Names
Index(['Sno', 'Name', 'Class', 'Section', 'Marks'], dtype='object')

Data from Individual Column
0  abhi
1  babita
2  Chirag
3  Deepak
4  Ena
Name: Name, dtype: object
0  20.0
1  19.0
2  18.5
3  19.5
4  20.0
Name: Marks, dtype: float64
Maximum Marks : 20.0
Printing According to Condition
Empty DataFrame
Columns: [Sno, Name, Class, Section, Marks]
Index: []
Printing the row with maximum temperature
Sno  Name  Class Section  Marks
0  1  abhi  10  A  20.0
4  5  Ena  11  B  20.0
```

Activate Windows
Go to Settings to activate Windows.

Ln 124 Col 4

10:01 AM
11/13/2019

#Program 29: Write a program that rotates the elements of a list so that the element at the first index moves to the second index, the element in the second index moves to the third index, etc., and the element in the last index moves to the first index.

```
n=int(input("Enter Number of items in List: "))
DATA=[]
for i in range(n):
    item=int(input("Item :%d: "%(i+1)))
    DATA.append(item)
print("Now List Items are :",DATA)
lg=len(DATA)
print("Now Number of items before update are :",lg)
b=["undef"]*lg
for x in (range(lg-1)):
    if (x)>lg:
        break
    b[x+1]=DATA[x]
b[0]=DATA[-1]
print("RESULT OF NEW LIST IS " , b)
```

#Program30: Write a program to insert item on selected position in list and print the updated list.

```
n=int(input("Enter Number of items in List: "))
DATA=[]
for i in range(n):
    item=int(input("Item :%d: "%(i+1)))
    DATA.append(item)
print("Now List Items are :",DATA)
print("Now Number of items before update are :",len(DATA))
e=int(input("Enter Item = "))
pos=int(input("Enter POS = "))
DATA.append(None)
le=len(DATA)
for i in range(le-1,pos-1,-1):
    DATA[i]=DATA[i-1]
print("Now List Items are :",DATA)
DATA[pos-1]=e
print("Now Number of items are :",len(DATA))
print("Now Updated List Items are :",DATA)
```

```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/KRIS/Desktop/ekta class 12/cbse29.py =====
Enter Number of items in List: 4
Item :1: 2
Item :2: 4
Item :3: 6
Item :4: 8
Now List Items are : [2, 4, 6, 8]
Now Number of items before update are : 4
Enter Item = 3
Enter POS = 2
Now List Items are : [2, 4, 4, 6, 8]
Now Number of items are : 5
Now Updated List Items are : [2, 3, 4, 6, 8]
>>> |
```

#Program31:Write a program to sort a list of items using BUBBLE SORT

```
import time
n=int(input("Enter Number of items in List: "))
DATA=[]
for i in range(n):
    item=int(input("Item :%d: "%(i+1)))
    DATA.append(item)
print("Array Before Sorted : ",DATA)
for i in range(1,len(DATA)):
    print("*****(%d)*****"%i)
    c=1
    for j in range(0,len(DATA)-i):
        if(DATA[j]>DATA[j+1]):
            DATA[j],DATA[j+1] = DATA[j+1],DATA[j]
            time.sleep(0.200)
            print("%2d"%c,":",DATA)
            c+=1
            print("%2d"%i,":",DATA)
    time.sleep(0.900)
print("Array After Sorted : ",DATA)
```

Python 3.7.2 Shell

File Edit Shell Debug Options Window Help

Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

RESTART: C:/Users/kris2/AppData/Local/Programs/Python/Python37-32/cbse28.py

Enter Number of items in List: 5

Item :1: 3

Item :2: 2

Item :3: 5

Item :4: 4

Item :5: 1

Array Before Sorted : [3, 2, 5, 4, 1]

***** (1) *****

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

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

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

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

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

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

***** (2) *****

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

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

***** (3) *****

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

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

***** (4) *****

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

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

Array After Sorted : [1, 2, 3, 4, 5]

>>> |

#PROGRAM 32: A school wants to make an online application form on website for registration of students who wants to applied for the various school leaders post. The form requires firstname, lastname and post.

#Write a Menu driven program that provides functions for :

#a) Selecting only those names entered entries where the first letter of the firstname and lastname are capitalized

#b) Selecting only the incorrectly entered names

#c) Returning a list with corrected names.

```
def select_errors(STL):
```

```
    newlist=[]
```

```
    for record in STL:
```

```
        name_surname = record.split(' ')
```

```
        name = name_surname[0]
```

```
        surname = name_surname[1]
```

```
        if name[0].islower() or surname[0].islower():
```

```
            newlist.append(record)
```

```
    return newlist
```

```
def select_correct(STL):
```

```
    newlist = []
```

```
    for record in STL:
```

```
        name_surname = record.split(' ')
```

```
        name = name_surname[0]
```

```
        surname = name_surname[1]
```

```
        if not name[0].islower() and not surname[0].islower():
```

```
            newlsit.append(record)
```

```
    return newlist
```

```
def correct_entries(STL):
```

```
    newlist = []
```

```
    for record in STL:
```

```
        name_surname = record.split(' ')
```

```
        name = name_surname[0]
```

```
        surname =name_surname[1]
```

```
    newlist.append(name.capitalize()+" "+ surname.capitalize())  
return newlist
```

```
#__main__  
STL = []  
ch = 0  
while (ch != 4):  
    print("\t----")  
    print("\tMENU")  
    print("\t----")  
    print("1.Apply for the School Post")  
    print("2.List of all applicants")  
    print("3.Correct the Incorrect Enteries")  
    print("4.Exit")  
    ch = int(input("Enter your choice (1-4):"))  
    if ch == 1:  
        name = input("Enter your name :")  
        STL.append(name)  
    elif ch == 2:  
        print("\tStudents applied so far:")  
        print(STL)  
    elif ch == 3:  
        ok_enteries = select_correct(STL)  
        error_enteries = select_errors(STL)  
        corrected_enterie = correct_enteries(STL)  
        print("Correctly entered names:", ok_enteries)  
        print("Incorrectly entered names;", error_enteries)  
        print("corrected names:", corrected_enterie)  
    elif ch !=4:  
        print("valid choices are 1..4:")  
    else:  
        print("THANK YOU")
```

#PROGRAM 33 : Write a program to show push and pop operation using stack.

```
#stack.py
def push(stack,x):    #function to add element at the end of list
    stack.append(x)
def pop(stack):      #function to remove last element from list
    n = len(stack)
    if(n<=0):
        print("Stack empty....Pop not possible")
    else:
        stack.pop()
def display(stack):  #function to display stack entry
    if len(stack)<=0:
        print("Stack empty.....Nothing to display")
    for i in stack:
        print(i,end=" ")
#main program starts from here
x=[]
choice=0
while (choice!=4):
    print("*****Stack Menu*****")
    print("1. push(INSERT)")
    print("2. pop(DELETE)")
    print("3. Display ")
    print("4. Exit")
    choice = int(input("Enter your choice :"))
    if(choice==1):
        value = int(input("Enter value "))
        push(x,value)
    if(choice==2):
        pop(x)
    if(choice==3):
        display(x)
    if(choice==4):
```



```
print("You selected to close this program")
```

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Python 3.7.2 Shell

File Edit Shell Debug Options Window Help

Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

RESTART: C:/Users/kris2/AppData/Local/Programs/Python/Python37-32/CBSE29.py

*****Stack Menu*****

1. push(INSERT)
2. pop(DELETE)
3. Display
4. Exit

Enter your choice :1

Enter value 41

*****Stack Menu*****

1. push(INSERT)
2. pop(DELETE)
3. Display
4. Exit

Enter your choice :1

Enter value 45

*****Stack Menu*****

1. push(INSERT)
2. pop(DELETE)
3. Display
4. Exit

Enter your choice :3

41 45 *****Stack Menu*****

1. push(INSERT)
2. pop(DELETE)
3. Display
4. Exit

Enter your choice :2

*****Stack Menu*****

1. push(INSERT)
2. pop(DELETE)
3. Display
4. Exit

Enter your choice :3

41 *****Stack Menu*****

1. push(INSERT)
2. pop(DELETE)
3. Display
4. Exit

Enter your choice :4

You selected to close this program

>>>

#PROGRAM 34 :Write a program to show insertion and deletion operation using queue.

```
def add_element(Queue,x):          #function to add element at the end of list
    Queue.append(x)

def delete_element(Queue):        #function to remove last element from list
    n = len(Queue)
    if(n<=0):
        print("Queue empty....Deletion not possible")
    else:
        del(Queue[0])

def display(Queue):              #function to display Queue entry
    if len(Queue)<=0:
        print("Queue empty.....Nothing to display")
    for i in Queue:
        print(i,end=" ")

#main program starts from here
x=[]
choice=0
while (choice!=4):
    print(" *****Queue menu*****")
    print("1. Add Element ")
    print("2. Delete Element")
    print("3. Display ")
    print("4. Exit")
    choice = int(input("Enter your choice : "))
    if(choice==1):
        value = int(input("Enter value : "))
        add_element(x,value)
    if(choice==2):
        delete_element(x)
    if(choice==3):
        display(x)
```

```
if(choice==4):  
    print("You selected to close this program")
```

```
Python 3.7.2 Shell  
File Edit Shell Debug Options Window Help  
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit (Intel)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>>  
RESTART: C:\Users\kris2\AppData\Local\Programs\Python\Python37-32\cbse30.py  
*****Queue menu*****  
1. Add Element  
2. Delete Element  
3. Display  
4. Exit  
Enter your choice : 1  
Enter value : 34  
*****Queue menu*****  
1. Add Element  
2. Delete Element  
3. Display  
4. Exit  
Enter your choice : 3  
34 *****Queue menu*****  
1. Add Element  
2. Delete Element  
3. Display  
4. Exit  
Enter your choice : 1  
Enter value : 45  
*****Queue menu*****  
1. Add Element  
2. Delete Element  
3. Display  
4. Exit  
Enter your choice : 3  
34 45 *****Queue menu*****  
1. Add Element  
2. Delete Element  
3. Display  
4. Exit  
Enter your choice : 2  
*****Queue menu*****  
1. Add Element  
2. Delete Element  
3. Display  
4. Exit  
Enter your choice : 3  
45 *****Queue menu*****  
1. Add Element  
2. Delete Element  
3. Display  
4. Exit  
Enter your choice : 4  
You selected to close this program  
>>> |
```

#Program 35: Write a program to show MySQL CONNECTIVITY for inserting two tuples in table:"student" inside database:"class12"

```
import mysql.connector as m

db=m.connect(host="localhost",user="root",passwd="h",database="class12")
cursor_obj=db.cursor()
cursor_obj.execute("INSERT INTO student(admno,name,class,sec,rno,address)
VALUES({},{},'{}','{}',{},{})".format(1236,"kamala",11,'a',43,"NARELA"))
cursor_obj.execute("INSERT INTO
student(admno,name,class,sec,rno,address)VALUES({},{},'{}','{}',{},{})".format(1237,"kishore
",12,'c',3,"NARELA"))
db.commit()
print("record inserted")
cursor_obj.execute("select * from student")
data=cursor_obj.fetchall()
for row in data:
    print(row)
```

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```
Python 3.7.2 Shell
File Edit Shell Debug Options Window Help
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\kris2\Desktop\honey\class12-IP\cbse25.py =====
record inserted
(1234, 'kamal', 12, 'b', 34, 'NARELA')
(1235, 'kamal', 12, 'b', 34, 'NARELA')
(1236, 'kamala', 11, 'a', 43, 'NARELA')
(1237, 'kishore', 12, 'c', 3, 'NARELA')
(3712, 'tanya verma ', 11, 'C', 21, 'Malviya nagar')
(4031, 'shivani mehta', 9, 'A', 33, 'Hauz khas')
(6523, 'zayn malik', 11, 'E', 40, 'Rohini')
>>>
>>>
```

#Program36: Write a Program to show database connectivity of python Data Frames with mysql database.

```
def fetchdata():
    import mysql.connector
    try:
        db = mysql.connector.connect(user='root', password="", host='127.0.0.1',
        database='test')
        cursor = db.cursor()
        sql = "SELECT * FROM student"
        cursor.execute(sql)
        results = cursor.fetchall()
        for cols in results:
            nm = cols[0]
            st = cols[1]
            stream =cols[2]
            av=cols[3]
            gd=cols[4]
            cl=cols[5]
            print ("Name =%s, Stipend=%f, Stream=%s, Average Marks=%f, Grade=%s,
            Class=%d" % (nm,st,stream,av,gd,cl ))
    except:
        print ("Error: unable to fecth data")
db.close()
```

```
def adddata():
    import mysql.connector
    nm=input("Enter Name : ")
    stipend=int(input("Enter Stipend : "))
    stream=input("Stream: ")
    avgmark=float(input("Enter Average Marks : "))
    grade=input("Enter Grade : ")
    cls=int(input('Enter Class : '))
    db = mysql.connector.connect(user='root', password="", host='127.0.0.1',database='test')
```

```
cursor = db.cursor()
sql="INSERT INTO student VALUES ( '%s' ,'%d','%s','%f','%s','%d')" %(nm, stipend, stream,
avgmark, grade, cls)
try:
cursor.execute(sql)
db.commit()
except:
db.rollback()
db.close()
```

```
def updatedata():
import mysql.connector
try:
db = mysql.connector.connect(user='root', password='tiger', host='127.0.0.1',database='test')
cursor = db.cursor()
sql = "Update student set stipend=%d where name='%s'" % (500,'Arun')
cursor.execute(sql)
db.commit()
except Exception as e:
print (e)
db.close()
```

```
def udata():
import mysql.connector
try:
db = mysql.connector.connect(user='root', password="", host='127.0.0.1',database='test')
cursor = db.cursor()
sql = "SELECT * FROM student"
cursor.execute(sql)
results = cursor.fetchall()
for cols in results:
nm = cols[0]
st = cols[1]
stream =cols[2]
av=cols[3]
```



```
gd=cols[4]
cl=cols[5]
print ("Name =%s, Stipend=%f, Stream=%s, Average Marks=%f, Grade=%s, Class=%d" %
(nm,st,stream,av,gd,cl ))
except:
print ("Error: unable to fetch data")
temp=input("Enter Student Name to Updated : ")
tempst=int(input("Enter New Stipend Amount : "))
try:
#db = mysql.connector.connect(user='root', password='tiger', host='127.0.0.1',database='test')
#cursor = db.cursor()
sql = "Update student set stipend=%d where name='%s'" % (tempst,temp)
cursor.execute(sql)
db.commit()
except Exception as e:
print (e)
db.close()

def deldata():
import mysql.connector
try:
db = mysql.connector.connect(user='root', password="", host='127.0.0.1',database='test')
cursor = db.cursor()
sql = "SELECT * FROM student"
cursor.execute(sql)
results = cursor.fetchall()
for cols in results:
nm = cols[0]
st = cols[1]
stream =cols[2]
av=cols[3]
gd=cols[4]
cl=cols[5]
print ("Name =%s, Stipend=%f, Stream=%s, Average Marks=%f, Grade=%s, Class=%d" %
(nm,st,stream,av,gd,cl ))
```

```
except:
print ("Error: unable to fetch data")
temp=input("Enter Student Name to deleted : ")
try:
#db = mysql.connector.connect(user='root', password='tiger', host='127.0.0.1',database='test')
#cursor = db.cursor()
sql = "delete from student where name='%s'" % (temp)
ans=input("Are you sure you want to delete the record : ")
if ans=='yes' or ans=='YES':
cursor.execute(sql)
db.commit()
except Exception as e:
print (e)
try:
db = mysql.connector.connect(user='root', password="", host='127.0.0.1',database='test')
cursor = db.cursor()
sql = "SELECT * FROM student"
cursor.execute(sql)
results = cursor.fetchall()
for row in results:
    nm = row[0]
    st = row[1]
    stream =row[2]
    av=row[3]
    gd=row[4]
    cl=row[5]
    print ("Name =%s, Stipend=%f, Stream=%s, Average Marks=%f, Grade=%s, Class=%d"
%(nm,st,stream,av,gd,cl ))
except:
print ("Error: unable to fetch data")
```