Program no:01

Aim: Display future leap years from current year to a final year entered by user

Source Code:

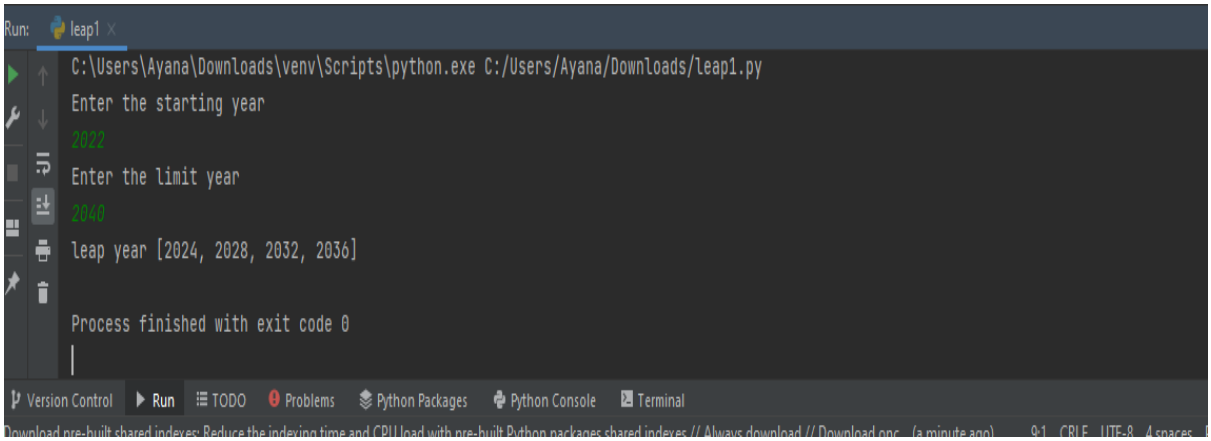
```
start_yr=int(input("Enter the starting year\n"))
limit_yr=int(input("Enter the limit year\n"))

lst=[]

for i in range(start_yr,limit_yr):
    if((i%4==0 and i%100!=0) or i%400==0):
        lst.append(i)

print("leap year",lst)
```

Output:



Program no:02

Aim: List comprehensions:

a. Generate positive list of numbers from a given list of integers
b. Square of N numbers
c. Form a list of vowels selected from a given word
d. List ordinal value of each element of a word (Hint: use ord() to get ordinal values)

Source Code:

a.

```
li=[34,-90,45,-7,-3,21,67,89,100]
pos=[n for n in li if n>0]
print("POSITIVE NUMBERS ARE:",pos)
```

b.

```
li=[2,4,6]
sq=[n*n for n in li]
print("SQUARES ARE:",sq)
```

c.

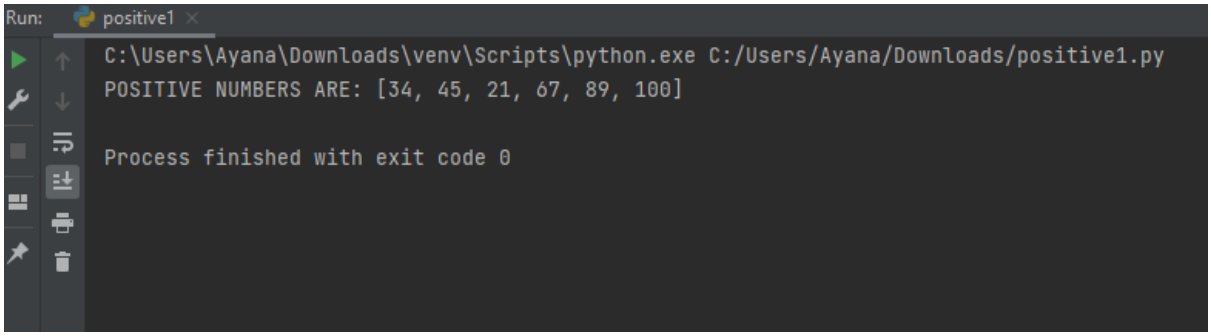
```
w=input("ENTER A WORD:")
v=[x for x in w if x=='a' or x=='A' or x=='e' or x=='E' or x=='i' or x=='I' or
x=='o' or x=='O' or x=='u' or x=='U']
print(v)
```

d.

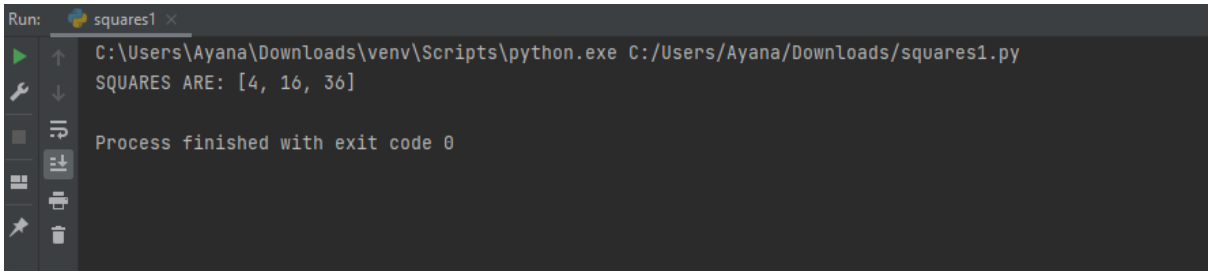
```
l=["bat","ball"]
ord=[ord(element)for sub in l for element in sub]
print(ord)
```

Output:

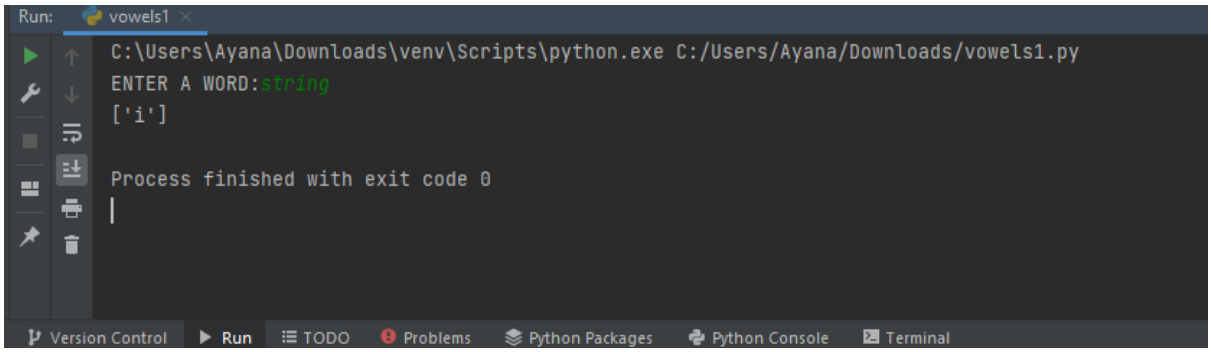
a.


Run:
positive1
C:\Users\Ayana\Downloads\venv\Scripts\python.exe C:/Users/Ayana/Downloads/positive1.py
POSITIVE NUMBERS ARE: [34, 45, 21, 67, 89, 100]
Process finished with exit code 0

b.


Run:
squares1
C:\Users\Ayana\Downloads\venv\Scripts\python.exe C:/Users/Ayana/Downloads/squares1.py
SQUARES ARE: [4, 16, 36]
Process finished with exit code 0

c.


Run:
vowels1
C:\Users\Ayana\Downloads\venv\Scripts\python.exe C:/Users/Ayana/Downloads/vowels1.py
ENTER A WORD:string
['i']
Process finished with exit code 0
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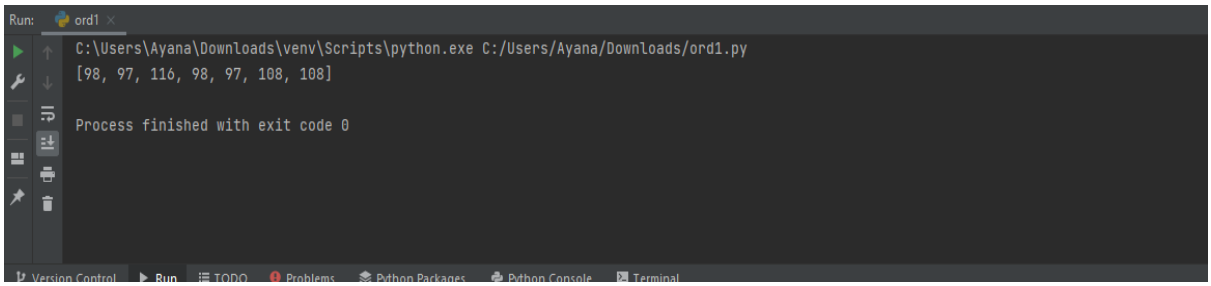
d.


Run:
ord1
C:\Users\Ayana\Downloads\venv\Scripts\python.exe C:/Users/Ayana/Downloads/ord1.py
[98, 97, 116, 98, 97, 108, 108]
Process finished with exit code 0

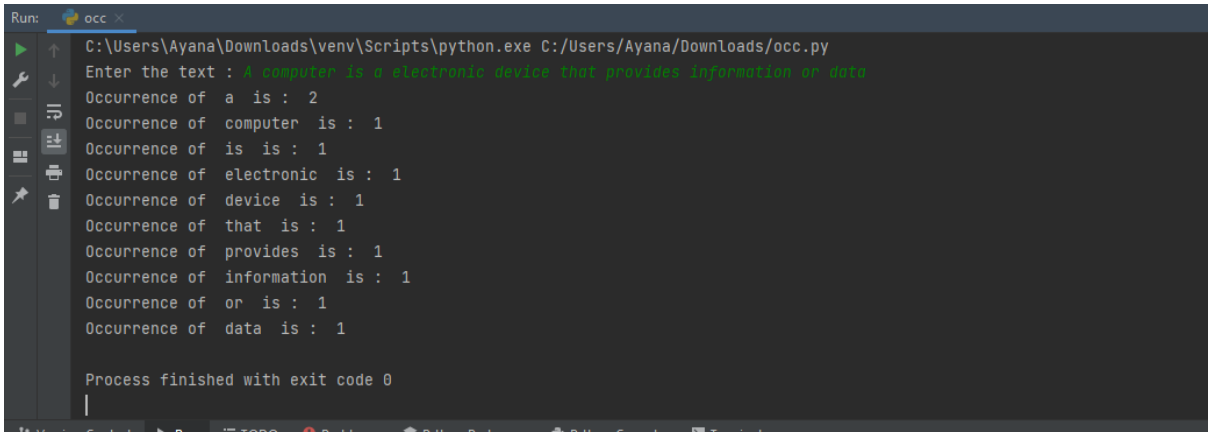
Program no:03

Aim: Count the occurrences of each word in a line of text.

Source Code:

```
text = str(input("Enter the text : "))
split = text.lower().split()
checkedList = []
for i in range(len(split)):
    checkedList.append(split[i])
    count = 1
    if checkedList.count(split[i]) <= 1:
        for j in range(i+1, len(split)):
            if split[i] == split[j]:
                count += 1
        print("Occurrence of ", split[i], " is : ", count)
```

Output:



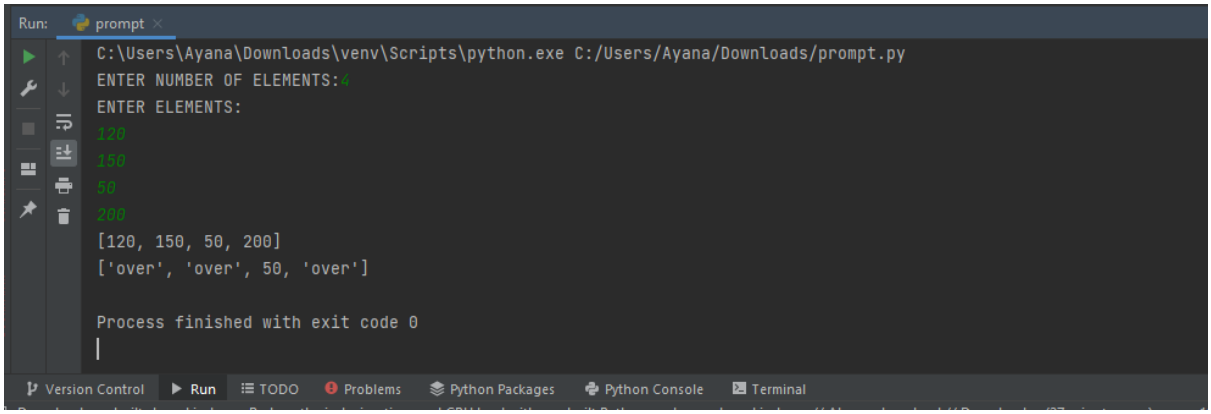
Program no:04

Aim: Prompt the user for a list of integers. For all values greater than 100, store ‘over’ instead.

Source Code:

```
n=int(input("ENTER NUMBER OF ELEMENTS:"))
print("ENTER ELEMENTS:")
list=[]
res=[]
for i in range (0,n):
    ele=int(input())
    list.append(ele)
print(list)
for i in list:
   if i>100:
      res.append('over')
   else:
      res.append(i)
print(res)
```

Output:


Run:
prompt
C:\Users\Ayana\Downloads\venv\Scripts\python.exe C:/Users/Ayana/Downloads/prompt.py
ENTER NUMBER OF ELEMENTS:4
ENTER ELEMENTS:
120
150
50
200
[120, 150, 50, 200]
['over', 'over', 50, 'over']
Process finished with exit code 0
Version Control
Run
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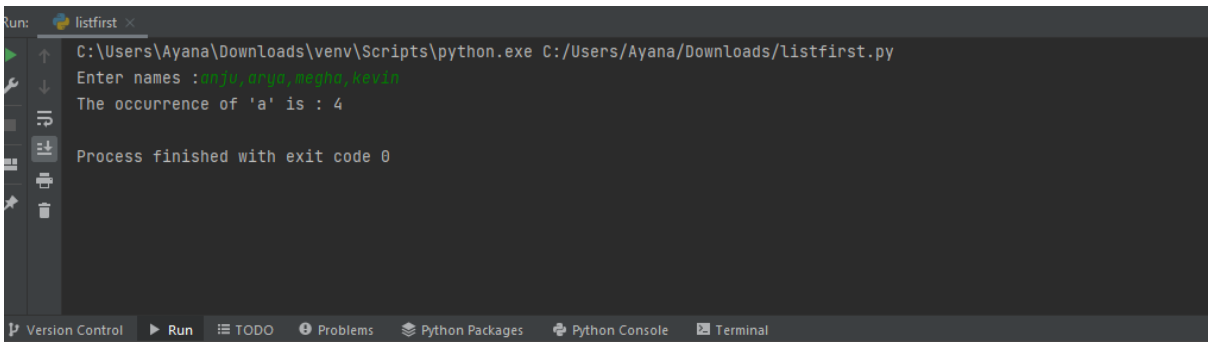
Program no:05

Aim: Store a list of first names. Count the occurrences of ‘a’ within the list

Source Code:

```
list=input("Enter names :")
count=0
for x in list:
    if x == 'a':
        count+=1
print("The occurrence of 'a' is :",count)
```

Output:



Program no:06

Aim: Enter 2 lists of integers. Check:

a. Whether list are of same length
b. whether list sums to same value
c. whether any value occur in both

Source Code:

```
l1=[20,40,30,10,90,15]

l2=[80,25,50,90,120,12]

print("length of list1 :",l1)

print("length of list2 :",l2)

if len(l1)==len(l2):

   print("Two lists are of same length")

total=sum(l1)

print("sum of list1 :",total)

total=sum(l2)

print("sum of list2 :",total)

if sum(l1)==sum(l2):

   print("Two lists sum is equal")

print("Value occur in both:")
```

```
for i in l1:
    if i in l2:
        print(i)
```

Output:

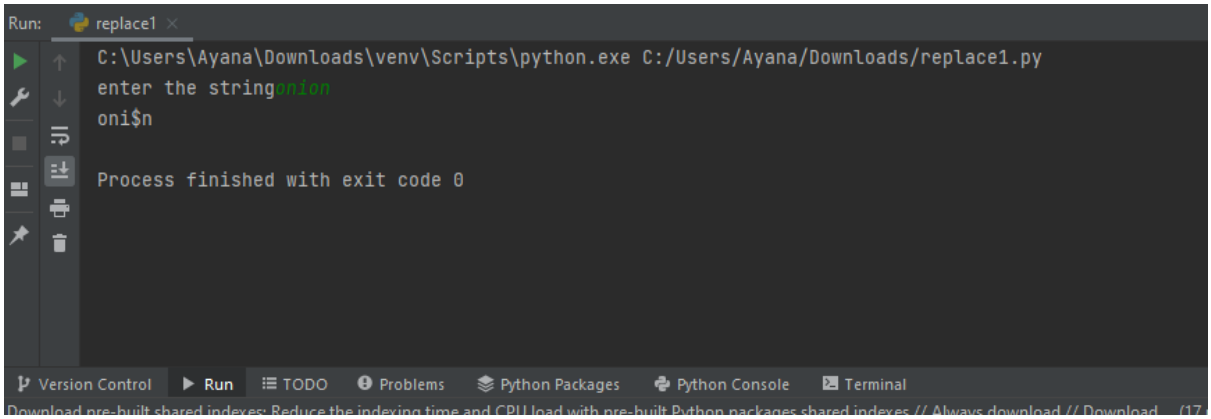
Program no:07

Aim: Get a string from an input string where all occurrences of first character replaced with '$', except first character. [eg: onion -> oni$n]

Source Code:

```
n=(input("enter the string"))
c=n[0]
for i in n:
    if i==c:
        n=n.replace(i,'$')
        n=c+n[1:]
print(n)
```

Output:



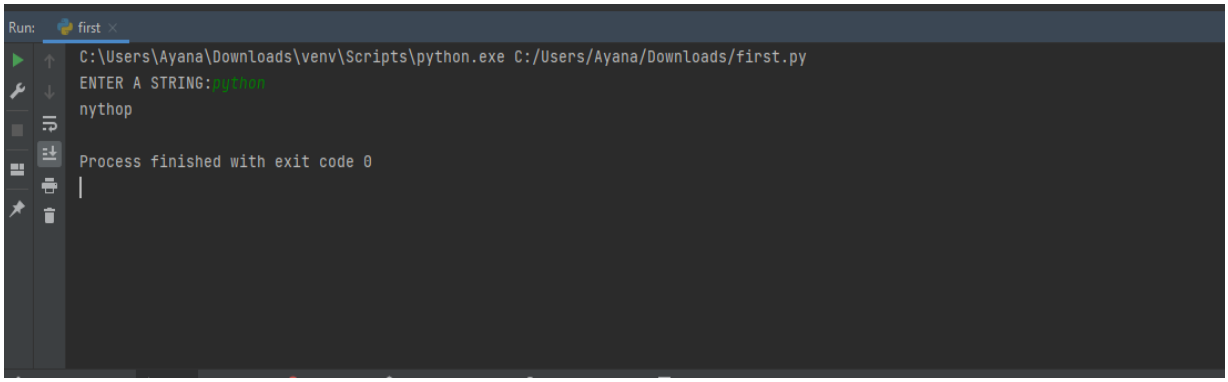
Program no:08

Aim: Create a string from given string where first and last characters exchanged. [eg: python -> nythop]

Source Code:

```
str1=input("ENTER A STRING:")
a=str1[-1]
b=str1[1:-1]
c=str1[0]
print(a+b+c)
```

Output:



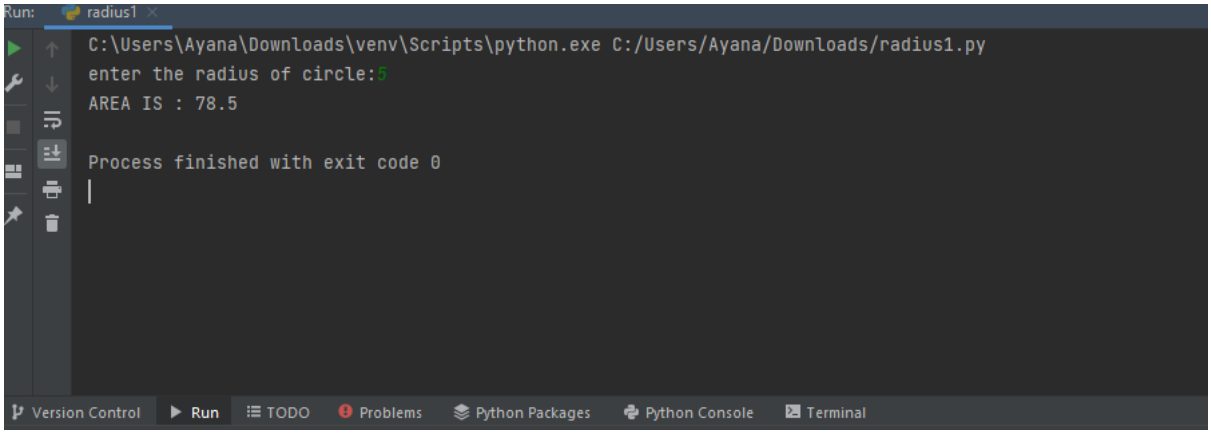
Program no:09

Aim: Accept the radius from user and find area of circle.

Source Code:

```
r=int(input("enter the radius of circle:"))
print("AREA IS :",+3.14*(r*r))
```

Output:



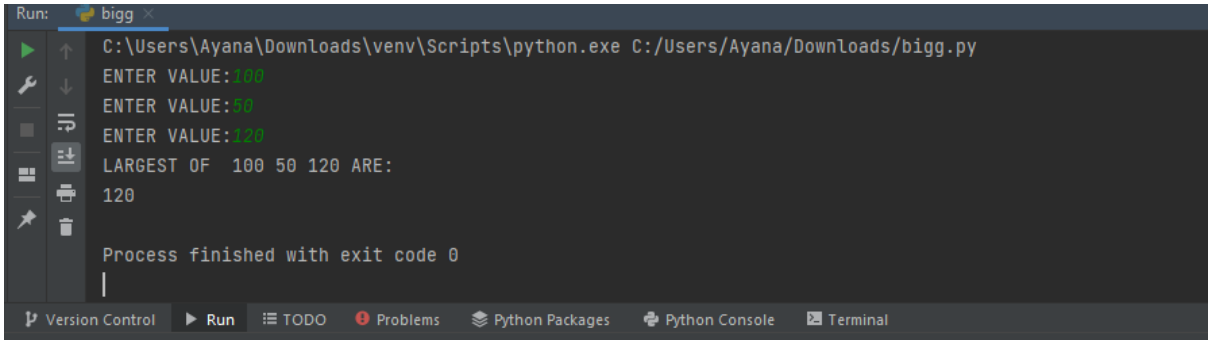
Program no:10

Aim: Find biggest of 3 numbers entered

Source Code:

```
l=int(input("ENTER VALUE:"))
m=int(input("ENTER VALUE:"))
n=int(input("ENTER VALUE:"))
print("LARGEST OF ",l,m,n,"ARE:")
print(max(l,m,n))
```

Output:



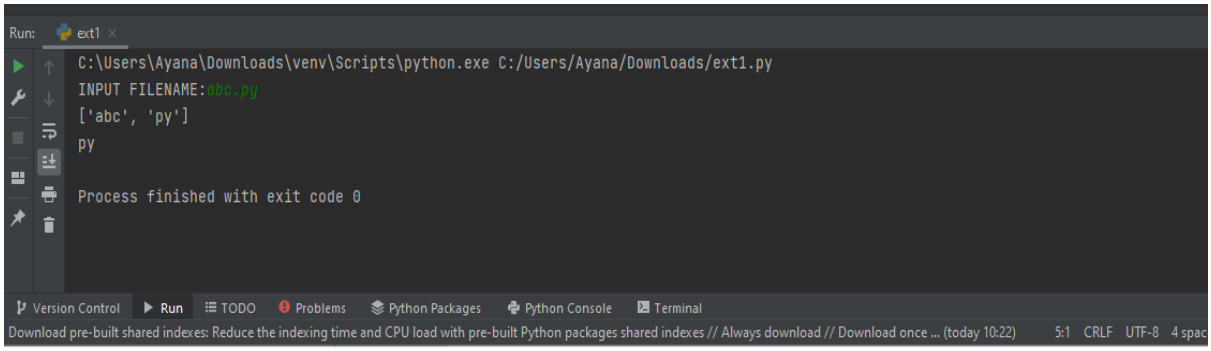
Program no:11

Aim: Accept a file name from user and print extension of that.

Source Code:

```
file=input("INPUT FILENAME:")
fext=file.split(".")
print(fext)
print(fext[-1])
```

Output:



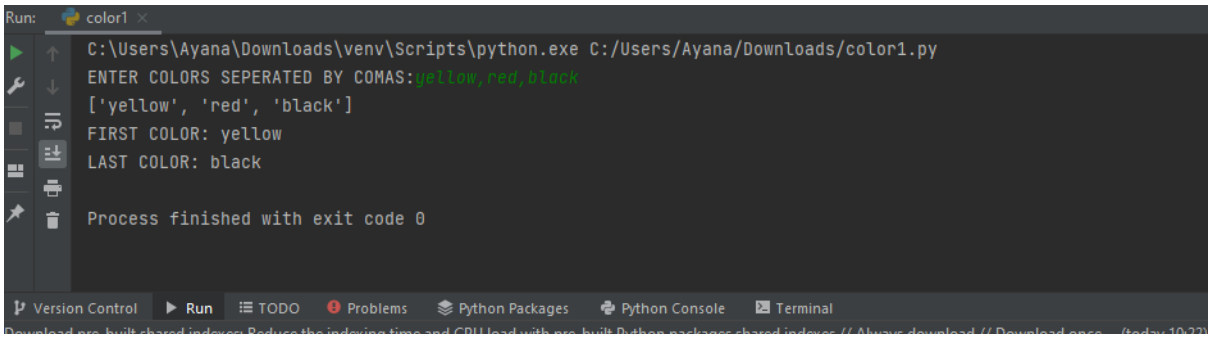
Program no:12

Aim: Create a list of colors from comma-separated color names entered by user. Display first and last colors.

Source Code:

```
color=input("ENTER COLORS SEPERATED BY COMAS:")
co_list=color.split(',')
print(co_list)
print("FIRST COLOR:",co_list[0])
print("LAST COLOR:",co_list[-1])
```

Output:



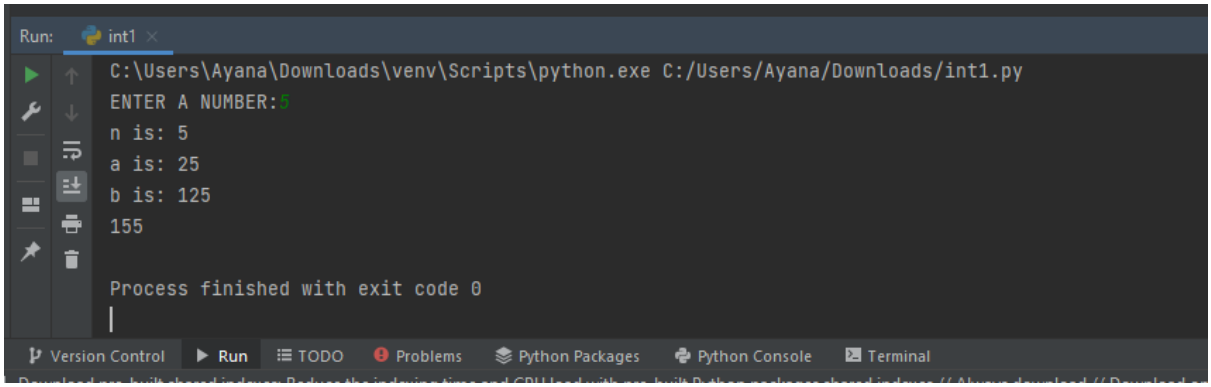
Program no:13

Aim: Accept an integer n and compute n+nn+nnn.

Source Code:

```
n=int(input("ENTER A NUMBER:"))
a=int(n*n)
b=int(n*n*n)
print("n is:",n)
print("a is:",a)
print("b is:",b)
print(int(n)+a+b)
```

Output:



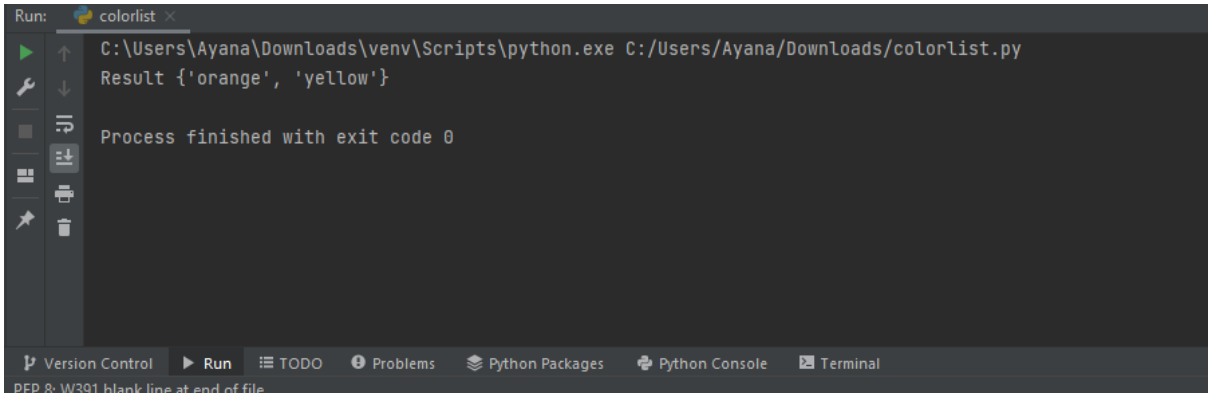
Program no:14

Aim: Print out all colors from color-list1 not contained in color-list2.

Source Code:

```
color_list1 = {"red","green","yellow","orange"}
color_list2 = {"white","red","blue","violet","green"}
new_list = color_list1.difference(color_list2)
print("Result" ,new_list)
```

Output:



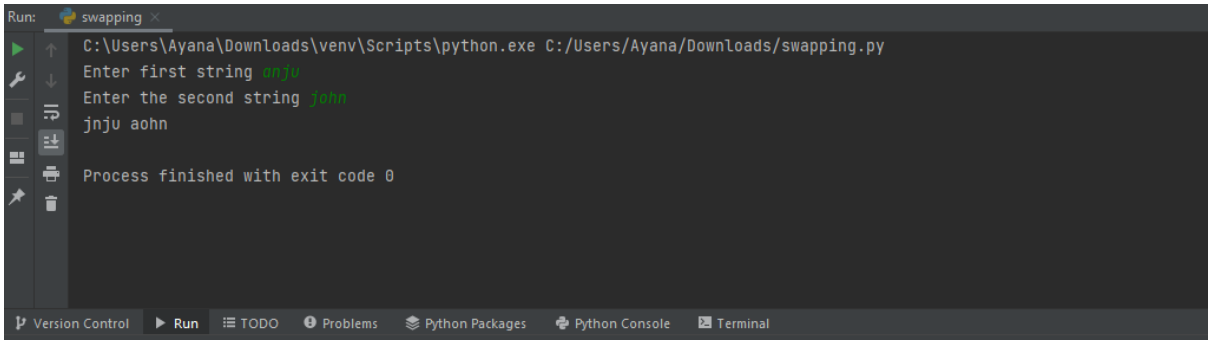
Program no:15

Aim: Create a single string separated with space from two strings by swapping the character at position 1.

Source Code:

```
str1 = input("Enter first string ")
str2 = input("Enter the second string ")
a = str2[:1] + str1[1:]
b = str1[:1] + str2[1:]
print(a+' '+b)
```

Output:



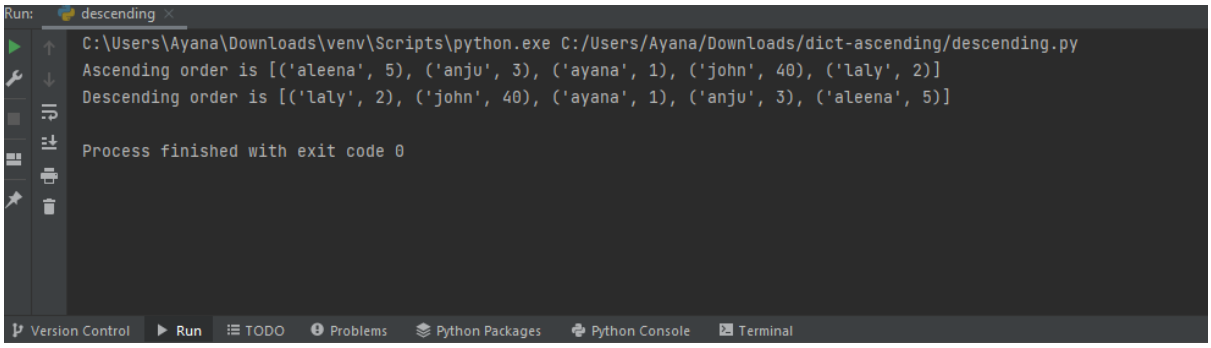
Program no:16

Aim: Sort dictionary in ascending and descending order.

Source Code:

```
y = {'john': 40, 'laly': 2, 'ayana': 1, 'anju': 3, 'aleena':5}

l = list(y.items())

l.sort()
print('Ascending order is', l)

l = list(y.items())
l.sort(reverse=True)
print('Descending order is', l)
```

Output:



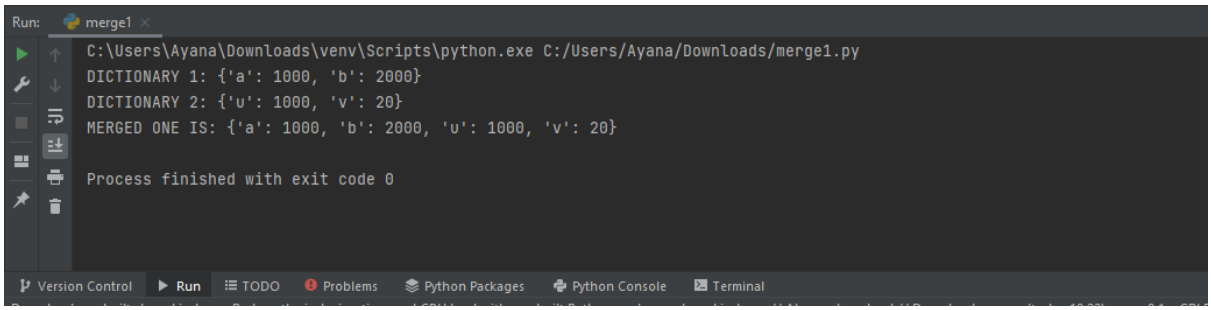
Program no:17

Aim: Merge two dictionaries.

Source Code:

```
dic1={'a':1000 ,'b':2000}
dic2={'u':1000 ,'v':20}
print("DICTIONARY 1:",dic1)
print("DICTIONARY 2:",dic2)
d=dic1.copy()
d.update(dic2)
print("MERGED ONE IS:",d)
```

Output:



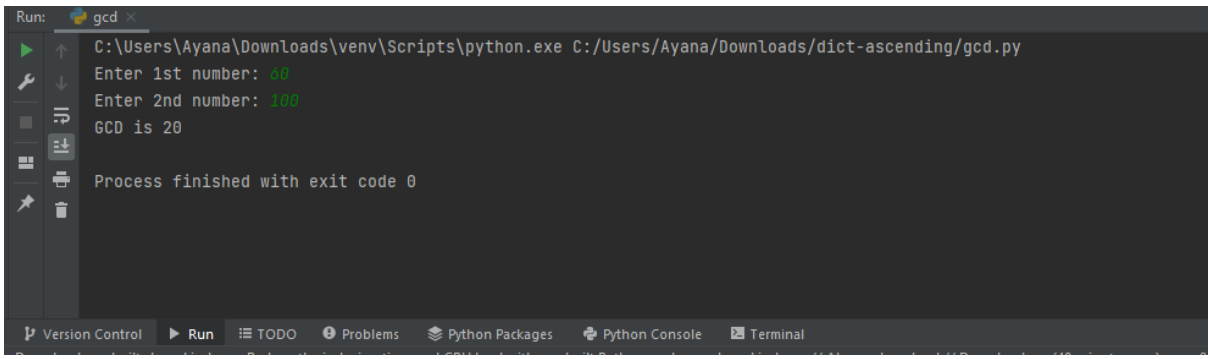
Program no:18

Aim: Find gcd of 2 numbers.

Source Code:

```
num1 = int(input("Enter 1st number: "))
num2 = int(input("Enter 2nd number: "))
i = 1
while(i <= num1 and i <= num2):
  if(num1 % i == 0 and num2 % i == 0):
    gcd = i
  i = i + 1
print("GCD is", gcd)
```

Output:



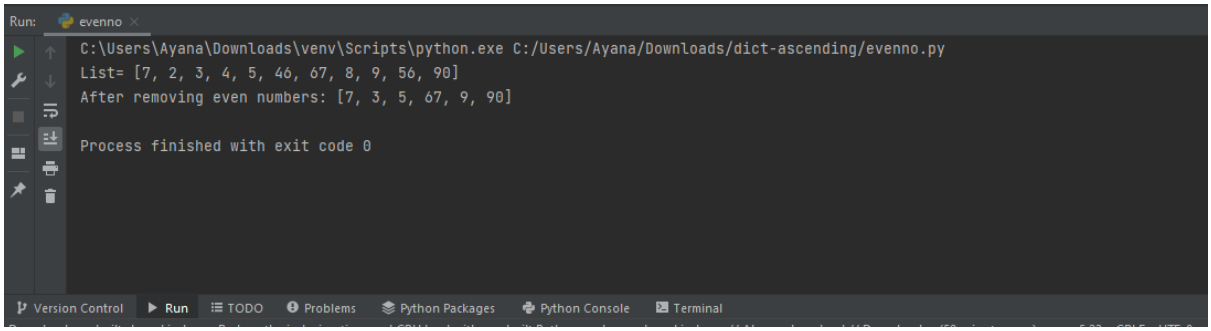
Program no:19

Aim: From a list of integers, create a list removing even numbers.

Source Code:

```
list = [7,2,3,4,5,46,67,8,9,56,90]
print("List=",list)
for x in list:
    if(x%2)==0:
        list.remove(x)

print("After removing even numbers:", list)
```

Output:



Program no:20

Aim: Program to find the factorial of a number

Source Code:

```
a=int(input("enter the number:"))
def fact(num):
    fact = 1
    for i in range(num,0,-1):
        fact=fact*i
    print("factorial=",fact)
fact(a)
```

Output:

Program no:21

Aim: Generate Fibonacci series of N terms

Source Code:

```
n1=0
n2=1
num=int(input("enter limit"))
print(n1)
print(n2)
for i in range(0,num-2):
    n3=n1+n2
    print(n3)
    n1=n2
    n2=n3
```

Output:

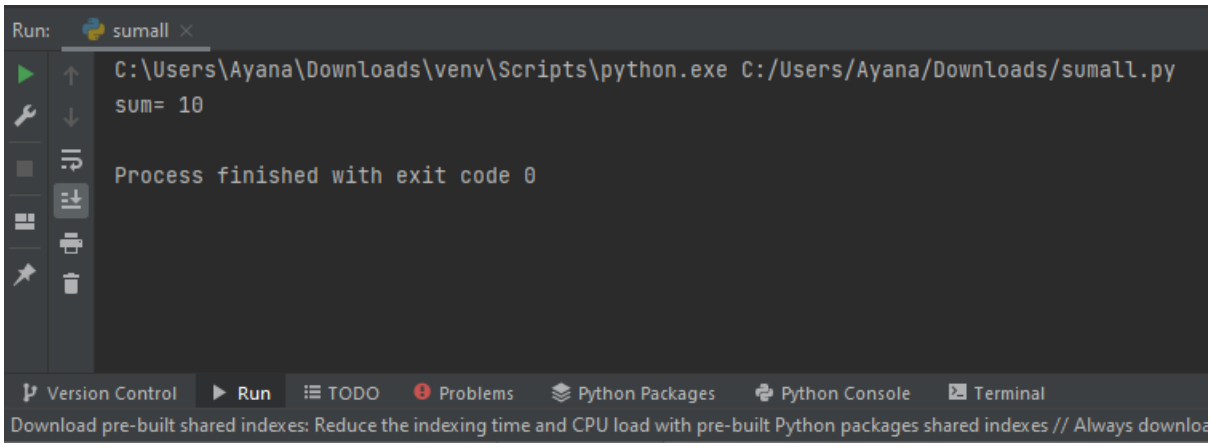
Program no:22

Aim: Find the sum of all items in a list.

Source Code:

```
list=[1,2,3,4]
sum=0
for i in list:
    sum=sum+i
print("sum=",sum)
```

Output:



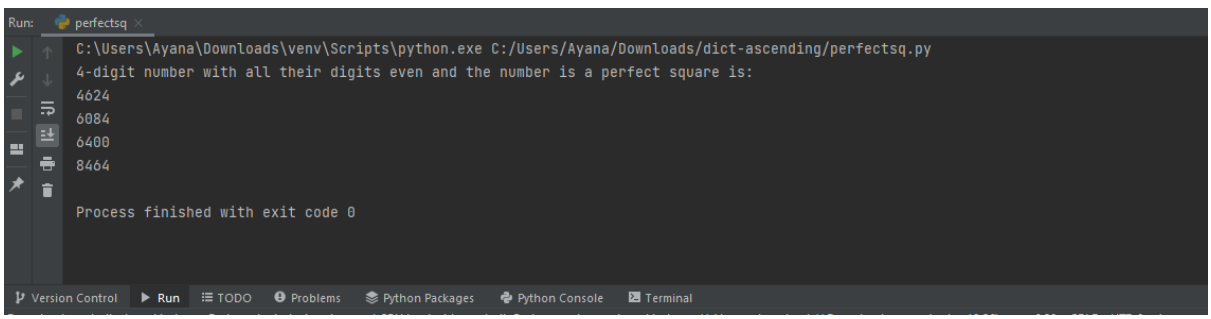
Program no:23

Aim: Generate a list of four digit numbers in a given range with all their digits even and the number is a perfect square.

Source Code:

```
print("4-digit number with all their digits even and the number is a perfect square is: ")
for i in range(1000,10000,1):

  for j in range(32,100,1):

    if i == j*j:

      string = str(i)

      if int(string[0])%2 == 0 and int(string[1])%2 == 0 and int(string[2])%2== 0 and int(string[3])%2 == 0:

        print(i)
```

Output:



Program no:24

Aim: Display the given pyramid with step number accepted from user.

Eg: N=4

1

2 4

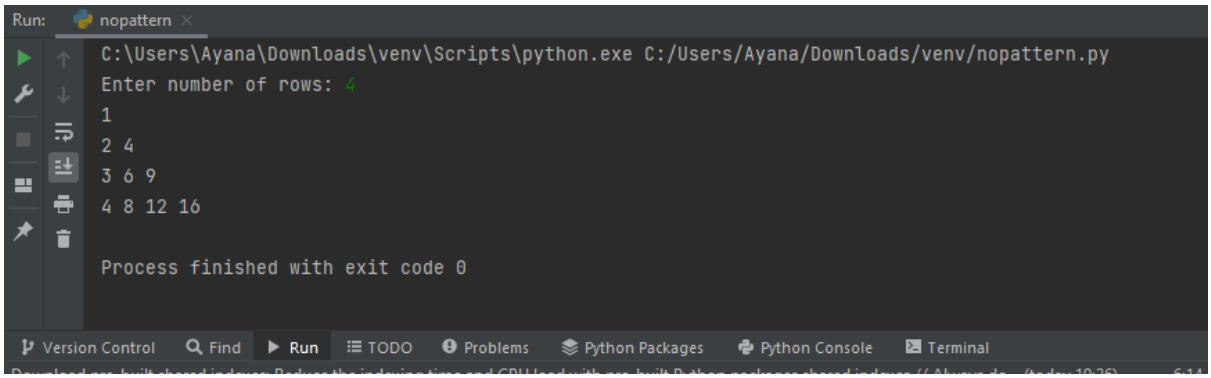
3 6 9

4 8 12 16

Source Code:

```
rows = int(input("Enter number of rows: "))
for i in range(1, rows + 1):
    for j in range(1, i + 1):
        square=i*j
        print(i*j, end=' ')
    print('')
```

Output:



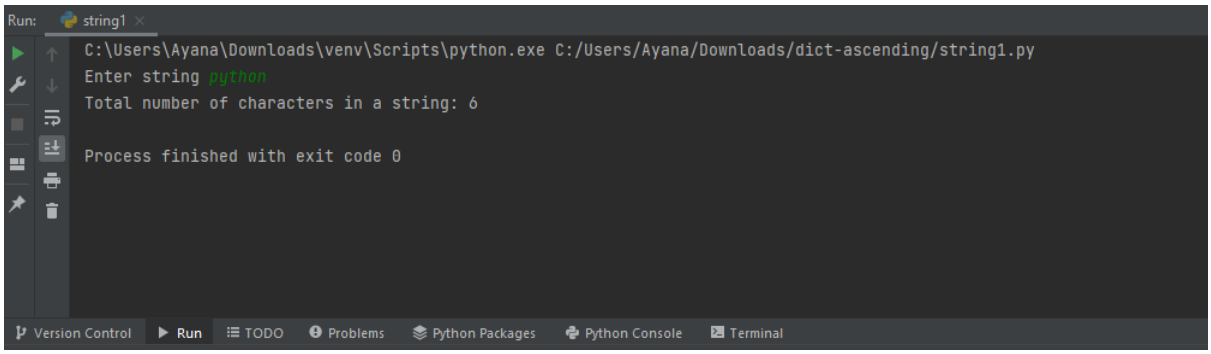
Program no:25

Aim: Count the number of characters (character frequency) in a string

Source Code:

```
string = input("Enter string ")
count = 0;

for i in range(0, len(string)):
    if (string[i] != ' '):
        count = count + 1;

print("Total number of characters in a string: " + str(count));
```

Output:



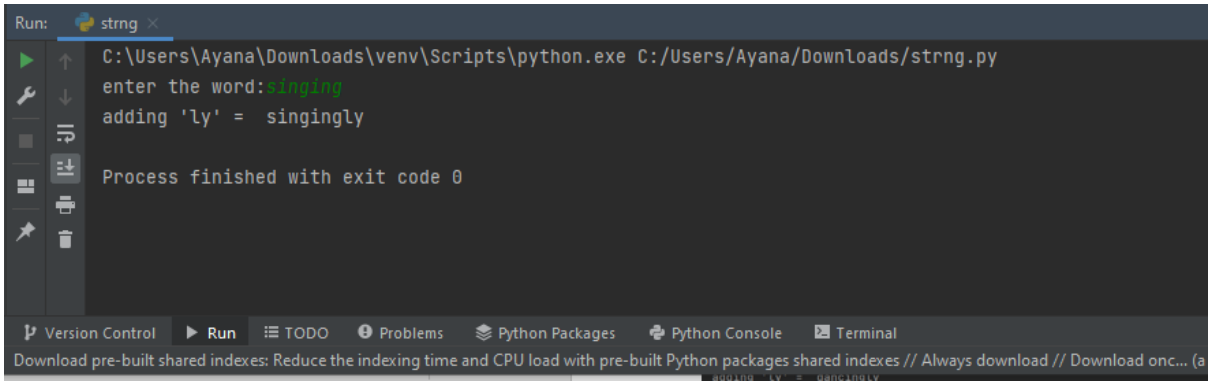
Program no:26

Aim: Add ‘ing’ at the end of a given string. If it already ends with ‘ing’, then add ‘ly’

Source Code:

```
a=input("enter the word:")
def words(word):
    word1=word[-3:]
    if word1 != "ing":
        print("adding 'ing' = ",word+"ing")
    else:
        print("adding 'ly' = ",word+"ly")
words(word=a)
```

Output:



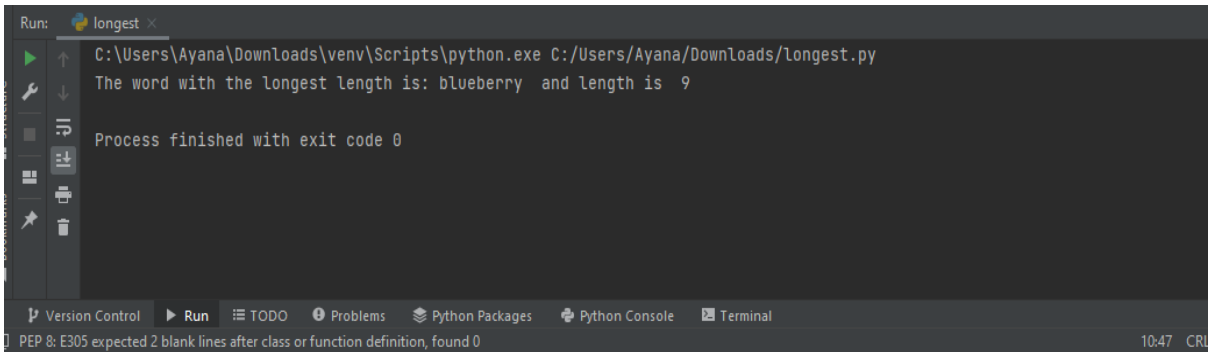
Program no:27

Aim: Accept a list of words and return length of longest word.

Source Code:

```
def longestLength(a):
    max1 = len(a[0])
    temp = a[0]
    for i in a:
        if (len(i) > max1):
            max1 = len(i)
            temp = i
    print("The word with the longest length is:", temp,
          " and length is ", max1)
a = ["apple", "orange", "cherry", "pomegranate"]
longestLength(a)
```

Output:



Program no:28

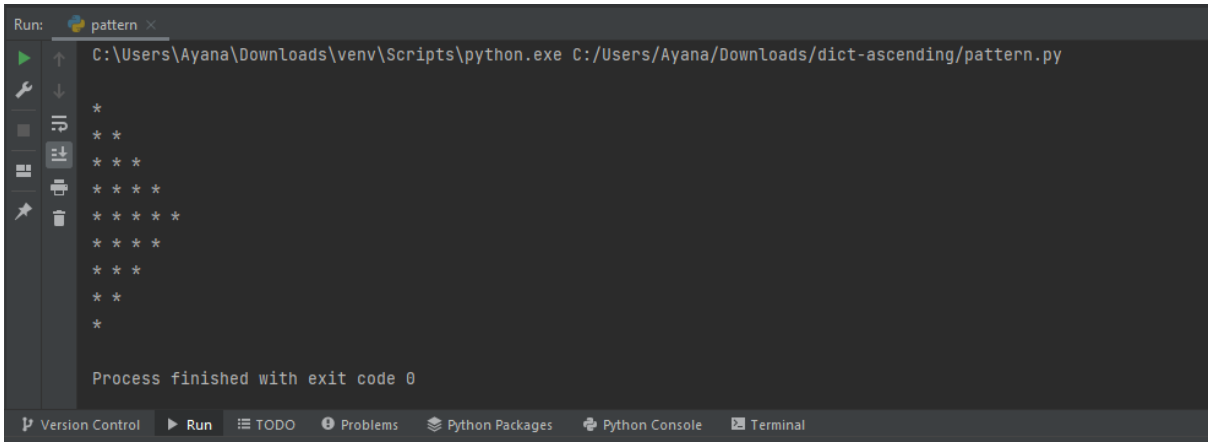
Aim: Construct following pattern using nested loop

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

Source Code:

```
n = 5;
for i in range(n):
    for j in range(i):
        print('* ', end="")
    print('')

for i in range(n, 0, -1):
    for j in range(i):
        print('* ', end="")
    print('')
```

Output:


Run:
pattern
C:\Users\Ayana\Downloads\venv\Scripts\python.exe C:/Users/Ayana/Downloads/dict-ascending/pattern.py
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
Process finished with exit code 0
Version Control
Run
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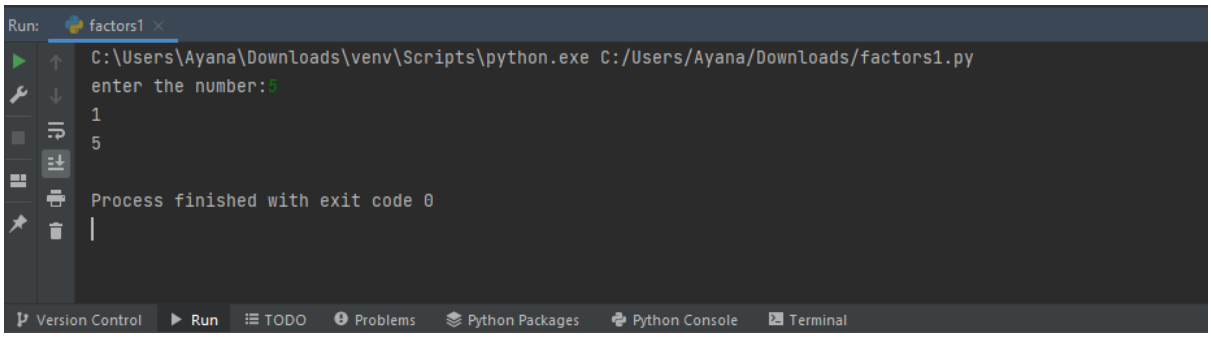
Program no:29

Aim: Generate all factors of a number.

Source Code:

```
a=int(input("enter the number:"))
def factor(num):
    for i in range(1,num+1):
        if num % i == 0:
            print(i)
factor(a)
```

Output:



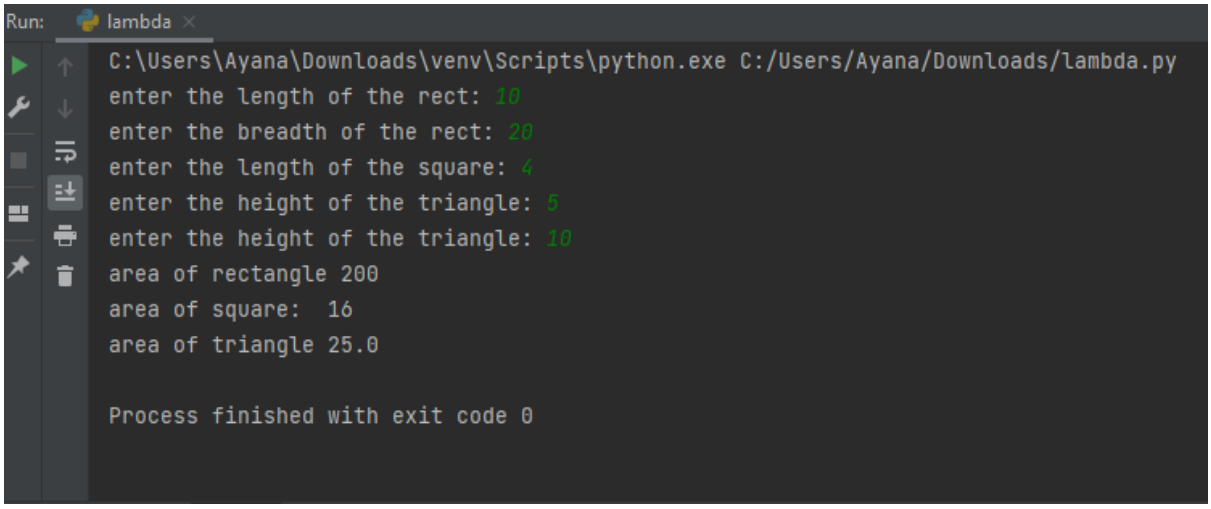
Program no:30

Aim: Write lambda functions to find area of square, rectangle and triangle.

Source Code:

```
rect=lambda x,y:x*y
sqr=lambda m:m*m
tri=lambda b,h:0.5*b*h
i=int(input("enter the length of the rect: "))
j=int(input("enter the breadth of the rect: "))
k=int(input("enter the length of the square: "))
i1=int(input("enter the height of the triangle: "))
j1=int(input("enter the height of the triangle: "))
print("area of rectangle",rect(i,j))
print("area of square: ",sqr(k))
print("area of triangle",tri(i1,j1))
```

Output:



Program no:31

Aim: Create a package graphics with modules rectangle, circle and sub-package 3D-graphics with modules cuboid and sphere. Include methods to find area and perimeter of respective figures in each module. Write programs that finds area and perimeter of figures by different importing statements. (Include selective import of modules and import * statements)

Source Code:

```
def Circle(r):
    print("Area = ", 3.14*r**2)
    print("Perimeter = ", 2*3.14*r)
def Rectangle(l,b):
    print("Area = ", l*b)
    print("Perimeter = ", (2*l)+(2*b))

def Cuboid(l,w,h):
    print("Perimeter of cuboid= ", 4*(l+w+h))
    print("Area of cuboid= ", 2*l*w + 2*l*h + 2*h*w)

def Sphere(r):
    print("Perimeter of sphere = ", 2*3.14*r)
    print("Area of sphere= ", 4*3.14*r**2)

import Graphics.Circle
print("CIRCLE")
r = int(input("Enter radius "))
Graphics.Circle.Circle(r)
```

```
import Graphics.Rectangle
print("RECTANGLE")
l = int(input("Enter length "))
b = int(input("Enter breadth "))
Graphics.Rectangle.Rectangle(l,b)

from Graphics.ThreeDgraphics import Cuboid
print("CUBOID")
l = int(input("Enter length "))
w = int(input("Enter width "))
h = int(input("Enter height "))
Graphics.ThreeDgraphics.Cuboid.Cuboid(l,w,h)

from Graphics.ThreeDgraphics import Sphere
print("SPHERE")
r = int(input("Enter radius "))
Graphics.ThreeDgraphics.Sphere.Sphere(r)
```

Output:

```
CIRCLE
Enter radius 5
Area =  78.5
Perimeter =  31.400000000000002
RECTANGLE
Enter length 8
Enter breadth 4
Area =  32
Perimeter =  24
CUBOID
Enter length 6
Enter width 7
Enter height 8
Perimeter of cuboid=  84
Area of cuboid=  292
SPHERE
Enter radius 5
Perimeter of sphere =  31.400000000000002
Area of sphere=  314.0
```

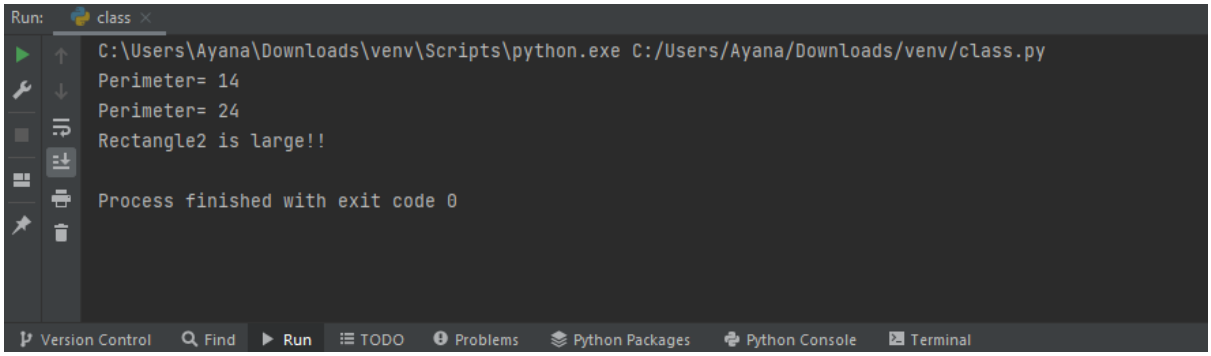
Program no:32

Aim: Create Rectangle class with attributes length and breadth and methods to find area and perimeter. Compare two Rectangle objects by their area.

Source Code:

```
class rectangle:
    def __init__(self,l1,b1):
        self.length=l1
        self.breadth=b1
    def area(self):
        return(self.length*self.breadth)
    def perimeter(self):
        print("Perimeter=", 2*(self.length+self.breadth))
    def compare(self,obj):
        if(self.area()>obj.area()):
            print("Rectangle1 is large!!")
        else:print("Rectangle2 is large!!")
R1=rectangle(2,5)
R1.area()
R1.perimeter()
R2=rectangle(4,8)
R2.area()
R2.perimeter()
R1.compare(R2)
```

Output:


Run:
class
C:\Users\Ayana\Downloads\venv\Scripts\python.exe C:/Users/Ayana/Downloads/venv/class.py
Perimeter= 14
Perimeter= 24
Rectangle2 is large!!
Process finished with exit code 0
Version Control
Find
Run
TODO
Problems
Python Packages
Python Console
Terminal

Program no:33

Aim: Create a Bank account with members account number, name, type of account and balance. Write constructor and methods to deposit at the bank and withdraw an amount from the bank.

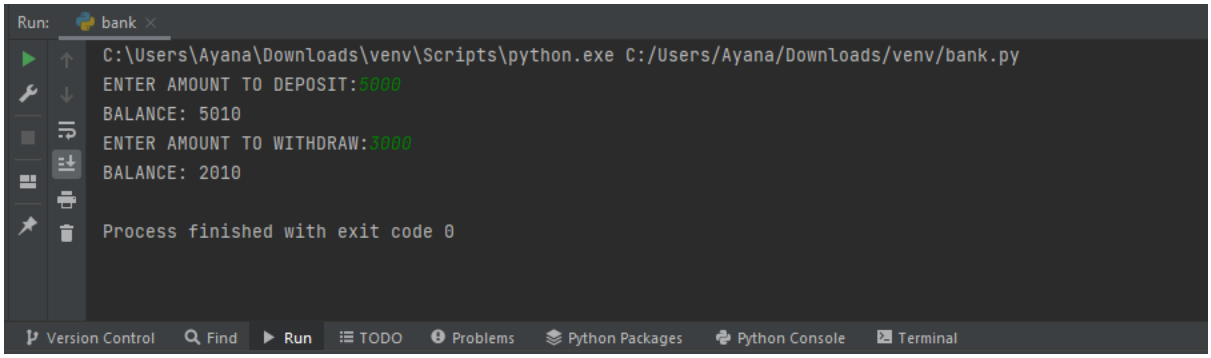
Source Code:

```
class bank:
   def __init__(self,ac,n1,t1,b1):
      self.accntno=ac
      self.name=n1
      self.type=t1
      self.balance=b1

   def deposit(self,amnt):
      self.balance+=amnt
      print("BALANCE:",self.balance)

   def withdraw(self, amnt):
      if(self.balance>amnt):
         self.balance-= amnt
         print("BALANCE:", self.balance)
   else:
         print("SORRY :) BALANCE IS TOO LOW")
b=bank(210200,'ANNU','SAVINGS',10)
a=int(input("ENTER AMOUNT TO DEPOSIT:"))
b.deposit(a)
w=int(input("ENTER AMOUNT TO WITHDRAW:"))
b.withdraw(w)
```

Output:


Run:
bank
C:\Users\Ayana\Downloads\venv\Scripts\python.exe C:/Users/Ayana/Downloads/venv/bank.py
ENTER AMOUNT TO DEPOSIT:5000
BALANCE: 5010
ENTER AMOUNT TO WITHDRAW:3000
BALANCE: 2010
Process finished with exit code 0
Version Control
Find
Run
TODO
Problems
Python Packages
Python Console
Terminal

Program no:34

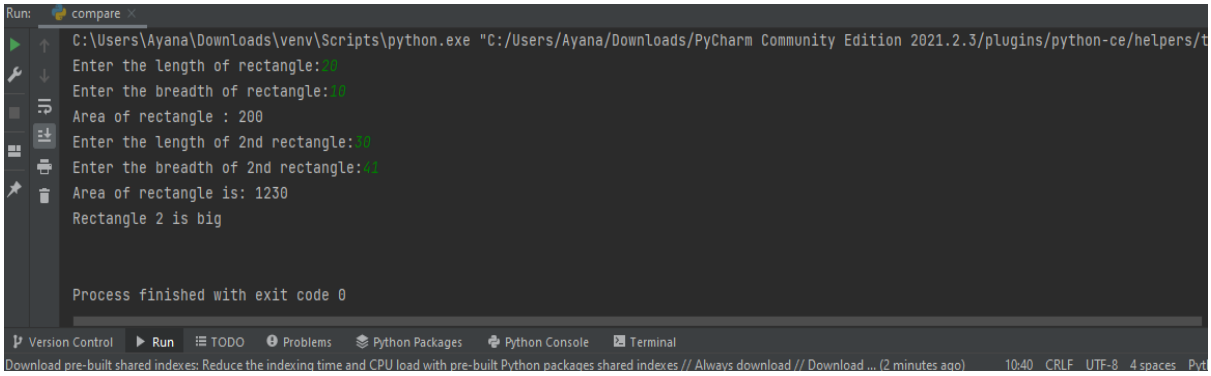
Aim: Create a class Rectangle with private attributes length and width.

Overload '<' operator to compare the area of 2 rectangles.

Source Code:

```
class rectangle:
    def __init__(self,breadth,length):
        self.breadth=breadth
        self.length=length
    def area(self):
        return self.breadth*self.length
a=int(input("Enter the length of rectangle:"))
b=int(input("Enter the breadth of rectangle:"))
obj=rectangle(a,b)
print("Area of rectangle :",obj.area())
c=int(input("Enter the length of 2nd rectangle:"))
d=int(input("Enter the breadth of 2nd rectangle:"))
obj2=rectangle(c,d)
print("Area of rectangle is:",obj2.area())
if obj.area()==obj2.area():
    print("Both equal")
elif obj.area()>obj2.area():
    print("Rectangle 1 is big")
else:
    print("Rectangle 2 is big")
print()
```

Output:


Run:
compare
C:\Users\Ayana\Downloads\venv\Scripts\python.exe "C:/Users/Ayana/Downloads/PyCharm Community Edition 2021.2.3/plugins/python-ce/helpers/t
Enter the length of rectangle:20
Enter the breadth of rectangle:10
Area of rectangle : 200
Enter the length of 2nd rectangle:30
Enter the breadth of 2nd rectangle:41
Area of rectangle is: 1230
Rectangle 2 is big
Process finished with exit code 0
Version Control
Run
TODO
Problems
Python Packages
Python Console
Terminal
Download pre-built shared indexes: Reduce the indexing time and CPU load with pre-built Python packages shared indexes // Always download // Download ... (2 minutes ago)
10:40
CRLF
UTF-8
4 spaces

Program no:35

Aim: Create a class Time with private attributes hour, minute and second. Overload '+' operator to find sum of 2 time.

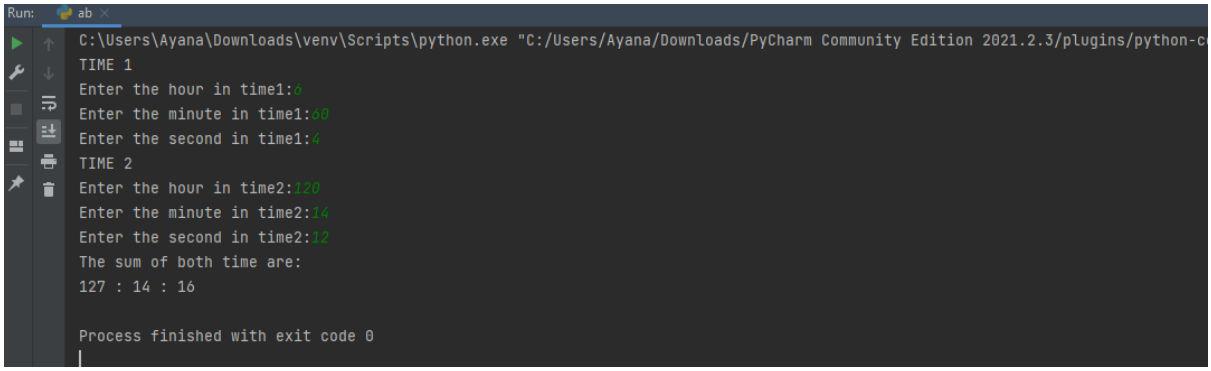
Source Code:

```
class Time:
    def __init__(self, h, m, s):
        self._h1 = h
        self._m1 = m
        self._s1 = s

    def __add__(self, x):
        sum1 = self._h1 + x._h1
        sum2 = self._m1 + x._m1
        sum3 = self._s1 + x._s1
        if sum3 >= 60:
            sum3 = sum3 - 60
            sum2 = sum2 + 1
        if sum2 >= 60:
            sum2 = sum2 - 60
            sum1 = sum1 + 1
        print(sum1, ":", sum2, ":", sum3);


print("TIME 1")
h1 = int(input("Enter the hour in time1:"))
m1 = int(input("Enter the minute in time1:"))
s1 = int(input("Enter the second in time1:"))
obj1 = Time(h1, m1, s1)
print("TIME 2")
h2 = int(input("Enter the hour in time2:"))
m2 = int(input("Enter the minute in time2:"))
s2 = int(input("Enter the second in time2:"))
obj2 = Time(h2, m2, s2)
print("The sum of both time are:")
obj1 + obj2
```

Output:


Run:
ab
C:\Users\Ayana\Downloads\venv\Scripts\python.exe "C:/Users/Ayana/Downloads/PyCharm Community Edition 2021.2.3/plugins/python-c
TIME 1
Enter the hour in time1:6
Enter the minute in time1:60
Enter the second in time1:4
TIME 2
Enter the hour in time2:120
Enter the minute in time2:14
Enter the second in time2:12
The sum of both time are:
127 : 14 : 16
Process finished with exit code 0

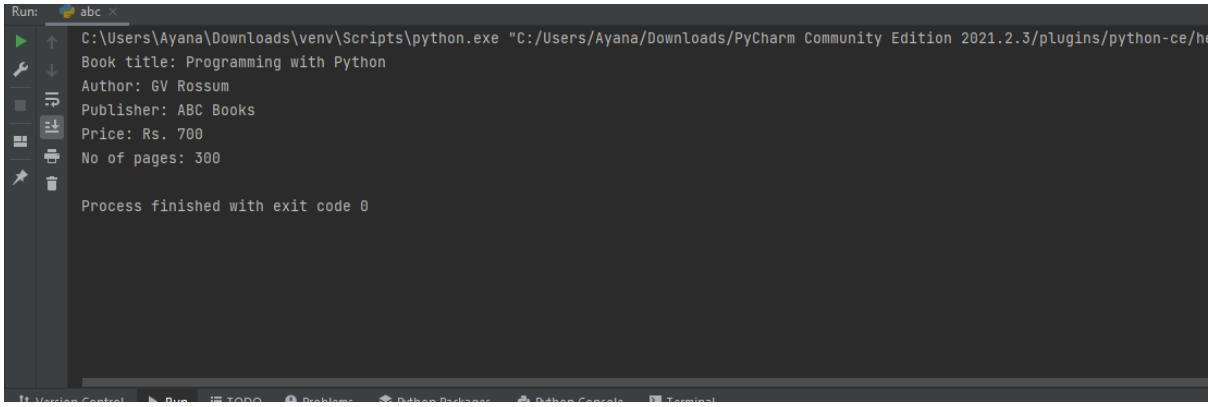
Program no:36

Aim: Create a class Publisher (name). Derive class Book from Publisher with attributes title and author. Derive class Python from Book with attributes price and no_of_pages. Write a program that displays information about a Python book. Use base class constructor invocation and method overriding.

Source Code:

```
class Publisher:
    def __init__(self,name1):
        self.name=name1
    def show(self):
        pass
class Book(Publisher):
    def __init__(self,title1,author1,name1):
        self.title=title1
        self.author=author1
        Publisher.__init__(self,name1)
    def show(self):
        pass
class Python(Book):
    def __init__(self,p,no,title1,author1,name1):
        self.price=p
        self.no_of_pages=no
        Book.__init__(self,title1,author1,name1)
    def show(self):
        print('Book title:',self.title)
        print('Author:',self.author)
        print('Publisher:',self.name)
        print('Price: Rs.',self.price)
        print('No of pages:',self.no_of_pages)
P1=Python(700,300,'Programming with Python','GV Rossum','ABC Books')
P1.show()
```

Output:


Run:
abc
C:\Users\Ayana\Downloads\venv\Scripts\python.exe "C:/Users/Ayana/Downloads/PyCharm Community Edition 2021.2.3/plugins/python-ce/h
Book title: Programming with Python
Author: GV Rossum
Publisher: ABC Books
Price: Rs. 700
No of pages: 300
Process finished with exit code 0

Program no:37

Aim: Write a Python program to read a file line by line and store it into a list.

Source Code:

demo.txt

Python

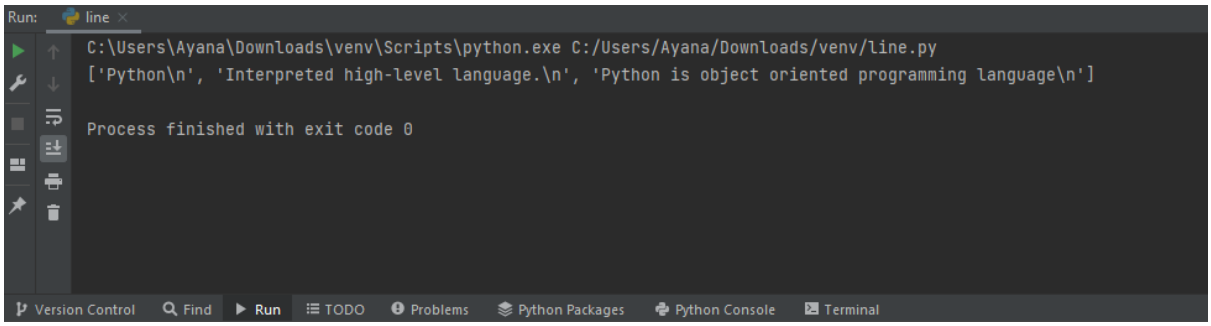
Interpreted high-level language.

Python is object oriented programming language

line.py

```
def fread(fname):
    with open(fname) as f:
        c = f.readlines()
    print(c)
fread("demo.txt")
```

Output:



Program no:38

Aim: Python program to copy odd lines of one file to other

Source Code:

demo.txt

Python

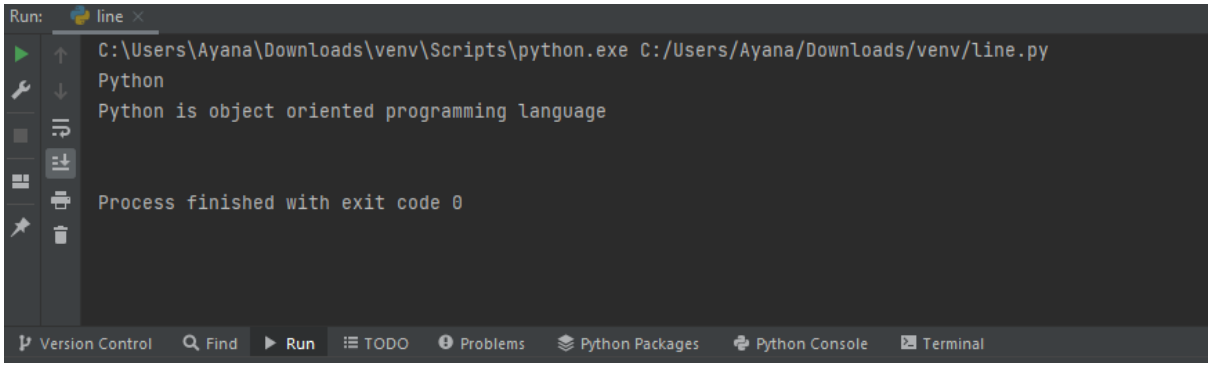
Interpreted high-level language.

Python is object oriented programming language

line.py

```
a = open("demo.txt", "r")
b = open("t", "w")
c = a.readlines()
d = len(c)
for i in range(0, d):
    if i % 2 == 0:
        b.write(c[i])
    else:
        pass
b.close()
b = open("t", "r")
e = b.read()
print(e)
a.close()
b.close()
```

Output:

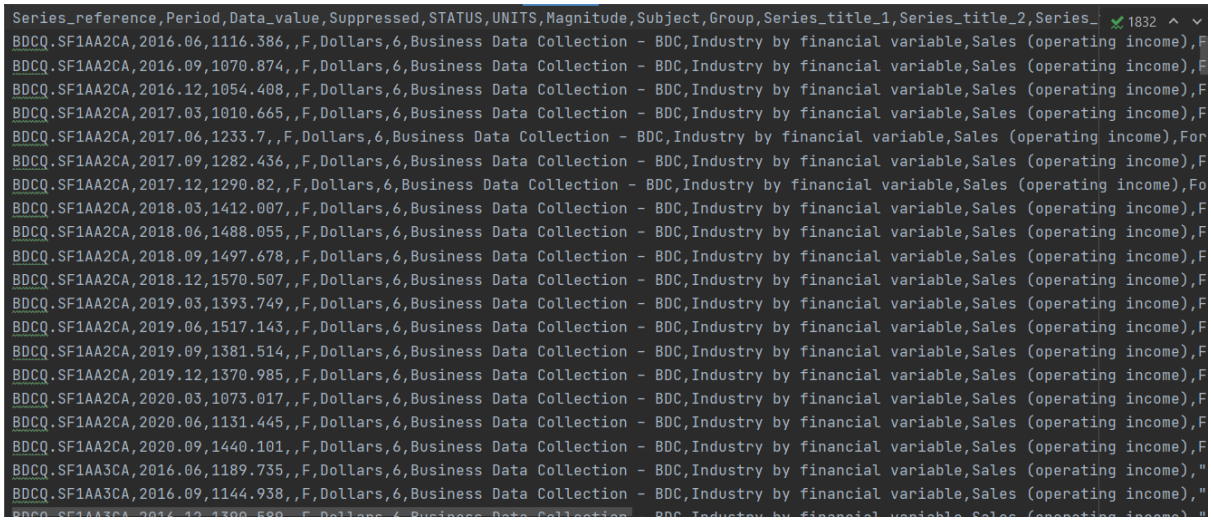

Run:
line
C:\Users\Ayana\Downloads\venv\Scripts\python.exe C:/Users/Ayana/Downloads/venv/line.py
Python
Python is object oriented programming language
Process finished with exit code 0
Version Control
Find
Run
TODO
Problems
Python Packages
Python Console
Terminal

Program no:39

Aim: Write a Python program to read each row from a given csv file and print a list of strings.

Source Code:

csv



```
Series_reference,Period,Data_value,Suppressed,STATUS,UNITS,Magnitude,Subject,Group,Series_title_1,Series_title_2,Series_
BDCQ.SF1AA2CA,2016.06,1116.386,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2016.09,1070.874,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2016.12,1054.408,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
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BDCQ.SF1AA2CA,2017.09,1282.436,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2017.12,1290.82,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),Fo
BDCQ.SF1AA2CA,2018.03,1412.007,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
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BDCQ.SF1AA2CA,2018.09,1497.678,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2018.12,1570.507,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.03,1393.749,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.06,1517.143,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.09,1381.514,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.12,1370.985,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2020.03,1073.017,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2020.06,1131.445,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2020.09,1440.101,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA3CA,2016.06,1189.735,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),"
BDCQ.SF1AA3CA,2016.09,1144.938,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),"
```
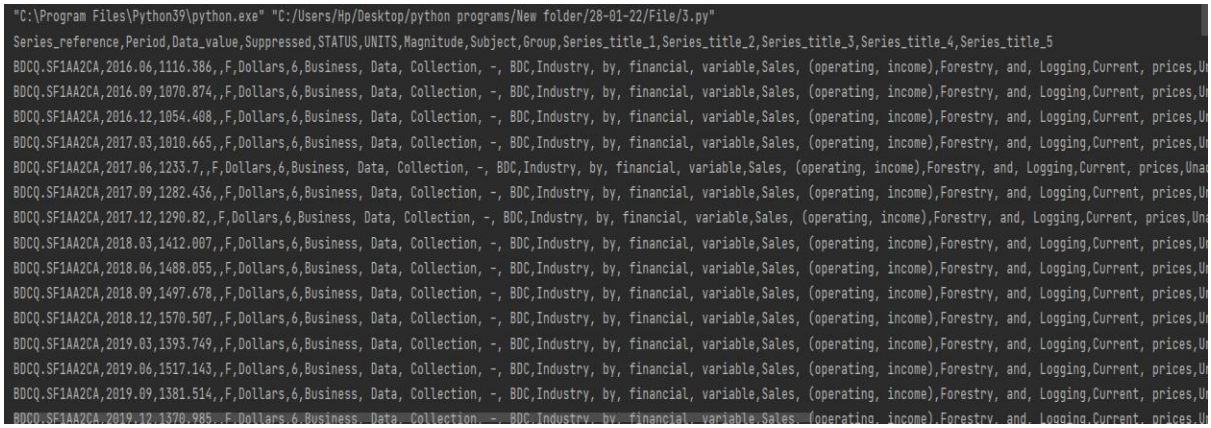

line.py

```
import csv
with open("csv", newline='') as csvfile:
    d = csv.reader(csvfile, delimiter=' ', quotechar='|')
    for i in d:
        print(', '.join(i))
```

Output:



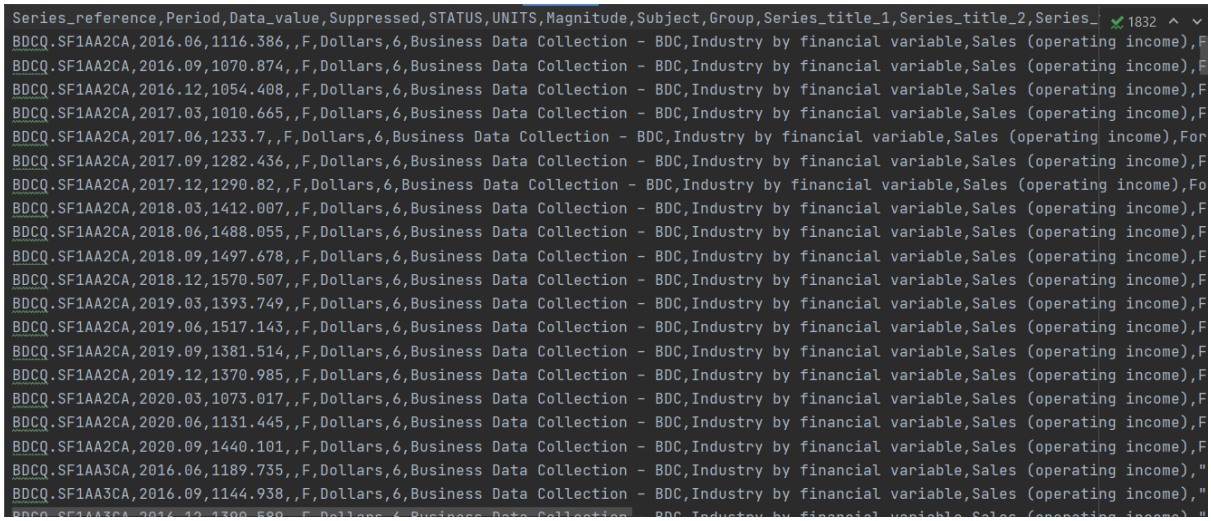
```
"C:\Program Files\Python39\python.exe" "C:/Users/Hp/Desktop/python programs/New folder/28-01-22/File/3.py"
Series_reference,Period,Data_value,Suppressed,STATUS,UNITS,Magnitude,Subject,Group,Series_title_1,Series_title_2,Series_title_3,Series_title_4,Series_title_5
BDCQ.SF1AA2CA,2016.06,1116.386,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2016.09,1070.874,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2016.12,1054.408,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2017.03,1010.665,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2017.06,1233.7,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Una
BDCQ.SF1AA2CA,2017.09,1282.436,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2017.12,1290.82,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Una
BDCQ.SF1AA2CA,2018.03,1412.087,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2018.06,1488.055,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2018.09,1497.678,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2018.12,1570.507,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2019.03,1393.749,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2019.06,1517.143,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2019.09,1381.514,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
BDCQ.SF1AA2CA,2019.12,1370.985,,F,Dollars,6,Business, Data, Collection, -, BDC,Industry, by, financial, variable,Sales, (operating, income),Forestry, and, Logging,Current, prices,Un
```

Program no:40

Aim: Write a Python program to read specific columns of a given CSV file and print the content of the columns.

Source Code:

csv



```
Series_reference,Period,Data_value,Suppressed,STATUS,UNITS,Magnitude,Subject,Group,Series_title_1,Series_title_2,Series_
BDCQ.SF1AA2CA,2016.06,1116.386,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2016.09,1070.874,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2016.12,1054.408,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2017.03,1010.665,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2017.06,1233.7,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),For
BDCQ.SF1AA2CA,2017.09,1282.436,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2017.12,1290.82,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),Fo
BDCQ.SF1AA2CA,2018.03,1412.007,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2018.06,1488.055,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2018.09,1497.678,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
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BDCQ.SF1AA2CA,2019.06,1517.143,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.09,1381.514,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.12,1370.985,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2020.03,1073.017,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2020.06,1131.445,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2020.09,1440.101,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA3CA,2016.06,1189.735,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),"
BDCQ.SF1AA3CA,2016.09,1144.938,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),"
```

line.py

```
import csv
with open("csv", newline='') as csvfile:
    d = csv.DictReader(csvfile)
    print("Period       Subject")
    print("--------------------")
    for i in d:
        print(i['Period'], i['Subject'])
```

Output:

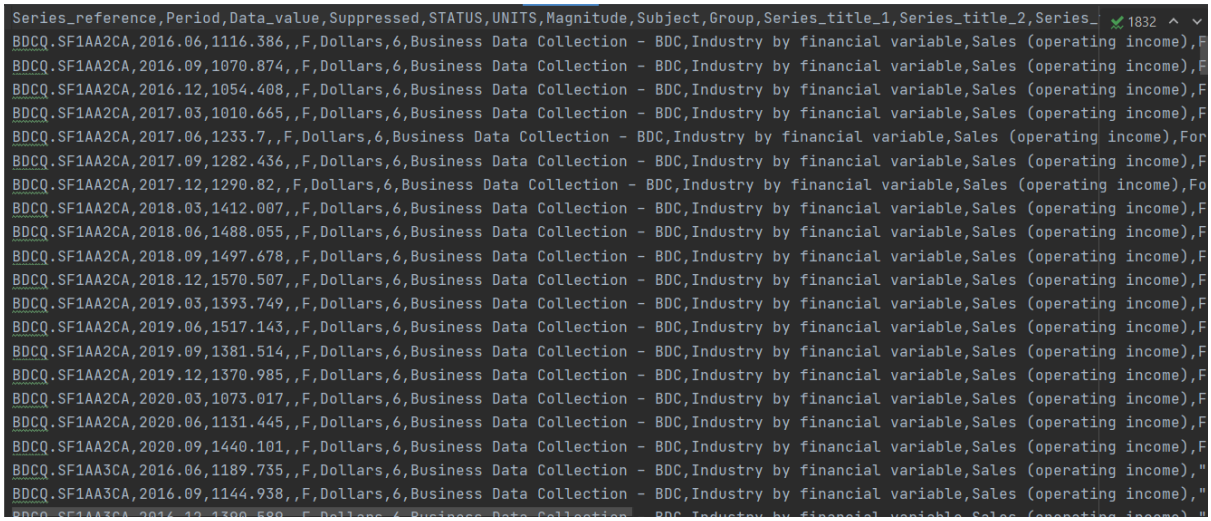
```
Period       Subject
--------------------
2016.06 Business Data Collection - BDC
2016.09 Business Data Collection - BDC
2016.12 Business Data Collection - BDC
2017.03 Business Data Collection - BDC
2017.06 Business Data Collection - BDC
2017.09 Business Data Collection - BDC
2017.12 Business Data Collection - BDC
2018.03 Business Data Collection - BDC
2018.06 Business Data Collection - BDC
```

Program no:41

Aim: Write a Python program to write a Python dictionary to a csv file. After writing the CSV file read the CSV file and display the content.

Source Code:

csv



```
Series_reference,Period,Data_value,Suppressed,STATUS,UNITS,Magnitude,Subject,Group,Series_title_1,Series_title_2,Series_
BDCQ.SF1AA2CA,2016.06,1116.386,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2016.09,1070.874,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2016.12,1054.408,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2017.03,1010.665,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2017.06,1233.7,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),For
BDCQ.SF1AA2CA,2017.09,1282.436,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2017.12,1290.82,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),Fo
BDCQ.SF1AA2CA,2018.03,1412.007,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2018.06,1488.055,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2018.09,1497.678,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2018.12,1570.507,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.03,1393.749,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.06,1517.143,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.09,1381.514,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2019.12,1370.985,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2020.03,1073.017,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2020.06,1131.445,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA2CA,2020.09,1440.101,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),F
BDCQ.SF1AA3CA,2016.06,1189.735,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),"
BDCQ.SF1AA3CA,2016.09,1144.938,,F,Dollars,6,Business Data Collection - BDC,Industry by financial variable,Sales (operating income),"
```

line.py

```
import csv
field_name = ['No', 'Company', 'Car Model']
car = [{'No': 1,'Company':'Ferrari','Car Model':'GH'},
      {'No': 2,'Company':'BMW','Car Model':'X5'},
      {'No': 3,'Company':'Maruti Suzuki','Car Model': 'Swift'},
      {'No': 4,'Company':'Audi', 'Car Model':'RS7'},
      {'No': 5,'Company':'Toyota', 'Car Model':'Fortuner'}]
with open('b.csv', 'w') as csvfile:
   write = csv.DictWriter(csvfile, fieldnames=field_name)
   write.writeheader()
```

```
    write.writerows(car)
with open('b.csv', newline='') as csvfile:
    d = csv.reader(csvfile, delimiter='|')
    for r in d:
        print(','.join(r))
```

Output:

```
No,Company,Car Model
1,Ferrari,GH
2,BMW,X5
3,Maruti Suzuki,Swift
4,Audi,RS7
5,Toyota,Fortuner

Process finished with exit code 0
```