type funtion and print

Double-click (or enter) to edit

```
x=1
y=2.3
z=2+4j
print(x)
print(y)
print(z)
print(type(x))
print(type(y))
print(type(z))
```

add string and integer

```
a=int(input("Enter 1st no."))
b=int(input("Enter 2nd no."))
sum=a+b
print("Sum is",sum)

a=input("Enter Your Name- ")
b=input("Enter Your Surname- ")
sum=a+b
print("Name is",sum)
```

gretest no. find and avg

```
a = int(input("Enter the 1st number in this comparison : "))
b = int(input("Enter the 2nd number in this comparison : "))
c = int(input("Enter the 3rd number in this comparison : "))
if (a >= b) and (a >= c):
        print("the largest number : ", a)
elif (b >= a) and (b >= c):
        print("the largest number : ", b)
else:
        print("the largest number : ", c)

avg = ( a+ b+ c ) / 3
print("sum of the there is : ", avg)
```

sum 10 value

```
sum = 0
for i in range (10):
  print(i)
  sum = sum + i
avg  = (sum ) / 10
print("avg of the number is ", avg)
```

```
0
1
2
3
4
5
6
7
8
9
avg of the number is  4.5
```

user define

```
sum = 0
for i in range (5):
  i = int(input("enter the number "))
  print(i)
  sum = sum + i
avg  = (sum ) / 5

print("avg of the number is ", avg)
```

If employee is female and her income is less than 2 lakhs per anumm then no tax. If income is between 2-5 lakhs then tax is 20%. If income is above 5 lakhs then tax is 30%.

```
b=int(input("Enter Income: "))
if b < 200000:
      print("No tax")
elif 200000 < b <500000:
      c = b*20/100
      print("Tax is ", c)
else:
      d = b*30/100
      print("tax is ",d)
```

```
Enter Income: 5555
No tax
```

input a no. and print its multiplication till 20.

```
a=int(input("Enter no."))
for i in range (a,a*21,a):
  print (i)
```

```
Enter no.5
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
```

10 to 30 print even

```
sum=0
for i in range(10,30,2):
  print(i)
  sum=sum+i
print("sum is :",sum)
```

```
10
12
14
16
18
20
22
24
26
```

```
28
sum is : 190
```

odd print 10 to 30

```
sum=0
for i in range(10,31,2):
  print(i-1)
  sum=sum+i
print("sum is :",sum)
```

even odd check

```
odd=0
even=0
for i in range (1,10):
     if (i%2==0):
          even= even+i;
     elif(i%2==1):
           odd= odd+i;

print("The sum of even number is ",even);
print("The sum of odd number is ",odd);
```

```
The sum of even number is  20
The sum of odd number is  25
```

factorial

```
num=int(input("enter no:"))
fact=1
if num<0:
  print("enter positive no.")
elif num==0:
    print("factorial is 1")
else:
    for i in range (1,num+1):
      fact=fact*i
print("factorial of ",num,"is:",fact)
```

```
enter no:5
factorial of  5 is: 120
```

palindrom no.

```
a=int(input("enter no. for palindrom:"))
x=a
rev=0
while (a>0):
 rev=(rev*10)+a%10
 a=a//10
print(rev)
if(x==rev):
 print(x,"is palindrom")
else:
 print("not palindrom")
```

```
enter no. for palindrom:123
321
not palindrom
```

armstrong

```
a=int(input("enter no for check armstrong:"))
x=a
rev=0
while(a>0):

 rev=rev+(a%10)*(a%10)*(a%10)
 a=a//10
```

```
if(x==rev):
 print("nomber is armstrom")
else:
 print("not a armstrong")
```

```
enter no for check armstrong:371
nomber is armstrom
```

check no. of upper lower vowel lower

```
s = input("Enter any string :")
vowel = consonent = uppercase = lowercase= 0
for i in s:
    if(i == 'a' or i == 'e' or i == 'i' or i == 'o' or i == 'u'or i == 'A' or i == 'E' or i == 'I' or i == 'O' or i == 'U'):
         vowel = vowel +1
    else:
         consonent = consonent + 1
    if i.isupper() :
        uppercase = uppercase + 1

    if i.islower():
        lowercase = lowercase + 1

print("Total number of vowel:",vowel)
print("Total number of consonent:",consonent)
print("Total number of uppercase letter:",uppercase)
print("Total number of lowercase letter:",lowercase)
```

```
Enter any string :manish
Total number of vowel: 2
Total number of consonent: 4
Total number of uppercase letter: 0
Total number of lowercase letter: 6
```

Double-click (or enter) to edit

```
city=['goa',"pune","vizag"]
print(city)
city.append("basna")

print(city)
print(city.count("vizag"))
print(city)
```

```
['goa', 'pune', 'vizag']
['goa', 'pune', 'vizag', 'basna']
1
['goa', 'pune', 'vizag', 'basna']
```

```
a=[]
for i in range(5):
  x=int(input("enter value:"))
  y=a.insert(i,x)
  print("enter value which youy want to search:")
```

```
enter value:5
enter value:6
enter value:3
enter value:2
enter value:1
```

```
l1=[11,50,70,49,8]
print(l1[2])
print(l1[-1])
print(l1[1:3])
```

```
70
8
[50, 70]
```

```
a=int(input("enter no. for check prime no.:"))
n=a
primes=[]
for i in range(2,n):
   for j in range(2,int(i**0.5)+1):
      if i%j==0:
        break
      else:
           primes.append(i)
print(primes)
```

```
     enter no. for check prime no.:15
     [5, 7, 9, 11, 11, 13, 13]
```

```
user=[]
primenum=[]
for i in range(0,4):
  num=int(input("enter element for check prime or not:"))
  user.insert(i,num)
  print(user)
  for i in user:
    num1=i
    print(num1)
    p=0
    p1=0
    for j in range(2,num1):

      if(num1%j==0):
        p=p+1
      else:
        p1=p1+1

        if(p1==num1-2):
          primenum.append(num1)
print(primenum)
```

```
     enter element for check prime or not:12
     [12]
     12
     enter element for check prime or not:13
     [12, 13]
     12
     13
     enter element for check prime or not:44
     [12, 13, 44]
     12
     13
     44
     enter element for check prime or not:77
     [12, 13, 44, 77]
     12
     13
     44
     77
     [13, 13, 13]
```

```
list=[]
for _ in range (3):
   list.append(int(input("enter element:")))
   print(list)
search=int(input("enter elemet for search:"))
if search in list:
  print("element exist")
else:
    print("doesnt exist:")
```

```
     enter element:1
     [1]
     enter element:2
     [1, 2]
     enter element:3
     [1, 2, 3]
     enter elemet for search:2
     element exist
```

```
list=[]
print("enter the number ")
```

```
for i in range(3):
   list.append(int(input()))
print(list)
max=0
min=list[1]
for i in list:
  if max<i:
     max=i
  if min>i:
    min=i
print("max number of list :"+str(max))
print("min number of list :"+str(min))
```

```
     enter the number
     1
     2
     3
     [1, 2, 3]
     max number of list :3
     min number of list :1
```

```
def binary_search(arr,size,key):
  i=0
  j=size-1
  flag=0
  while i<=j and flag==0:
    mid=(i+j)//2
    if arr[mid]==key:
      pos=mid+1
      flag=1
    if  arr[mid]<key:
      i=mid+1
    if  arr[mid]>key:
      j=mid-1
  if flag==1:
    print("enter number found at:",pos,"position")
  else:
     print("element not found")
#main
size=int(input("enter size of the list"))
arr=[]
for i in range (size):
   val=int(input("enter no.s"))
   arr.append(val)
key=int(input("enter no. for search:"))
binary_search(arr,size,key)
```

```
     enter size of the list3
     enter no.s1
     enter no.s2
     enter no.s3
     enter no. for search:3
     enter number found at: 3 position
```

set quetion

```
set2={11,"aram",(1,2,3)}
print(set2)
```

```
     {(1, 2, 3), 11, 'aram'}
```

```
s1={1,2}
s1.add(33155)
print(s1)
s1.update({"manish"},[55,33],{10,12})
print(s1)
s1.discard(1)
s1.remove(55)
print(s1)
```

```
     {1, 2, 33155}
     {1, 2, 33155, 33, 10, 'manish', 12, 55}
     {2, 33155, 33, 10, 'manish', 12}
```

```
set union
```

Double-click (or enter) to edit

```
a={11,12,13,44}
b={11,44,66,20}
#union method
#c=a.union(b)
print(a|b)
print(a&b)
print(a-b)
#symnmetric diff
print(a^b)
#$print(c)
```

```
{66, 11, 12, 13, 44, 20}
{11, 44}
{12, 13}
{66, 12, 13, 20}
```

```
s={1,2,3,4,55,555}
p={11,555,55,5}
s.update(p)
print(s)
pp={"a","b","c"}
ppp={"x","y","z","c","b","a"}
xx=pp.issubset(ppp)
print(xx)
xn=pp.issuperset(ppp)
print(xn)
m={"nit","bit","cit"}
m.pop()
print(m)
m.remove("cit")
print(m)
```

```
{1, 2, 3, 4, 5, 555, 11, 55}
True
False
{'cit', 'bit'}
{'bit'}
```

dictrionmoryy

```
student={
    "name":"manish",
    "class":4,
    "yob":2012,
    "dob":["17","jaunuary",2012]
}
print(student)
```

```
{'name': 'manish', 'class': 4, 'yob': 2012, 'dob': ['17', 'jaunuary', 2012]}
```

write a program to create marklsheet of particular student dispaly marksheet

```
student={
    "name":"manish",
    "class":"mca",
    "yob":1857,
    "dob":["17","jaunuary",1857]

}
print(student)
```

```
{'name': 'manish', 'class': 'mca', 'yob': 1857, 'dob': ['17', 'jaunuary', 1857]}
```

```
a=dict(name="manish",
       country="BANKOK",
       age=45
       )
```

```
print(a['name'])
```

```
manish
```

```
d={0:'a',1:'b',2:'c'}
d[0]
```

```
'a'
```

```
person={}
type(person)
#person['frame']=input("enter name")
person['iname']='tithi'
person['fra']='man'
person['me']=['ish','kasis','collectionj']
person['pets']={'kum','scobby'}
person
#person.clear()
```

```
{'iname': 'tithi',
 'fra': 'man',
 'me': ['ish', 'kasis', 'collectionj'],
 'pets': {'kum', 'scobby'}}
```

```
a=(input("enter student name:"))
b=int(input("enter student rollno:"))
c=(input("enter student branch name :"))
print("entert marks for all subjects")
d=int(input("hindi:                                    "))
e=int(input("english:                                  "))
f=int(input("python:                                   "))
g=int(input("cpp:                                      "))
h=int(input("maths:                                    "))
print("_____________________________")
print("name :    ",a)
print("roll no:  ",b)
print("branch    ",c)
print("(subject):                                  (marks:)")
print("_____________________________________________________")
print("hindi:                                       ",d)
print("_____________________________________________________")
print("english:                                     ",e)
print("_____________________________________________________")
print("python:                                      ",f)
print("_____________________________________________________")
print("cpp:                                         ",g)
print("_____________________________________________________  ")
print("maths:                                       ",h)
print("_____________________________________________________")
print("           total marks of the student: out of 500",)
print("total:                                       ",d+e+f+g+h)
```

```
enter student name:manish sao
enter student rollno:33
enter student branch name :MCA
entert marks for all subjects
hindi:                                    90
english:                                  80
python:                                   90
cpp:                                      89
maths:                                    90

_____________________________
name :     manish sao
roll no:   33
branch     MCA
(subject):                                   (marks:)
_____________________________________________________
hindi:                                          90
_____________________________________________________
english:                                        80
_____________________________________________________
python:                                         90
_____________________________________________________
cpp:                                            89
_____________________________________________________
maths:                                          90
_____________________________________________________
```

```
                total marks of the student: out of 500
     total:                                          439
```

```
d={'a':10,'b':20,'c':30}
m={'n':22,'m':55,'j':88}
#list(d.items())[1][0]
#key
#list(d.values())
#d.pop('c')
d.update(m)
d
```

```
     {'a': 10, 'b': 20, 'c': 30, 'n': 22, 'm': 55, 'j': 88}
```

1)wap to program to print highest lowestg value in dicstionaory. 2)create a dics with the roll no name and marks of n student in a class and display the name of student who have marks above 75. 3)input in atuple of elemt ND SEARCH given element in that the tuple . 4)input a list of number and swap element of even location with the element at the odd location (take even no. of elemnet that list).

```
no_of_std = int(input("Enter number of students: "))

result = {}

for i in range(no_of_std):

   print("Enter Details of student No.", i+1)

   roll_no = int(input("Roll No: "))

   std_name = input("Student Name: ")

   marks = int(input("Marks: "))

   result[roll_no] = [std_name, marks]

print(result)

# Display names of students who have got marks more than 75

for student in result:

   if result[student][1] > 75:

       print("Student's name who get more than 75 marks is/are:==",(result[student][0]))
```

```
Enter number of students: 2
Enter Details of student No. 1
Roll No: 12
Student Name: mmmm
Marks: 90
Enter Details of student No. 2
Roll No: 33
Student Name: jjjjjjjj
Marks: 55
{12: ['mmmm', 90], 33: ['jjjjjjjj', 55]}
Student's name who get more than 75 marks is/are mmmm
```

wap to program to print highest lowestg value in dicstionaory.

```
d={'a':10,'b':20,'c':30,'d':40}
#p=max(d.values())
s=max(d.values())
print(s)
s
p=min(d.values())
p
```

```
     40
     10
```

3)input in a tuple of elemt ND SEARCH given element in that the tuple .

```
input_tuple=eval(input("enter element in tuple:"))
manish=int(input("enter no. which u search:"))
f=0
for i in input_tuple:
  if i==manish:
    print("waah didi wahh mil gya thanxx")
    f=1
    break
if f==0:
    print("so sorry dear nii mila fir se try kro")
```

```
 enter element in tuple:(11,22,33)
 enter no. which u search:33
 waah didi wahh mil gya thanxx
```

```
input_list=eval(input("enter element in list:"))
manish=int(input("enter no. which u search:"))
tt=input_list.count(manish)
if tt==0:
  print("not found didi...wahh didi wahh")
else:
  print("mil gya re baba...chill bro")
```

```
 enter element in list:[11,22,33,44,66]
 enter no. which u search:44
 mil gya re baba...chill bro
```

input a list of number and swap element of even location with the element at the odd location (take even no. of elemnet that list).

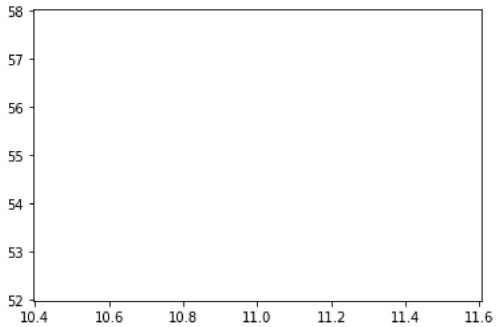
```
val=eval(input("Enter a list "))
print("Original List is:",val)
s=len(val)
if s%2!=0:
    s=s-1
for i in range(0,s,2):
    val[i],val[i+1]=val[i+1],val[i]
print("List after swapping :",val)
```

```
 Enter a list [11,22,44,66]
 Original List is: [11, 22, 44, 66]
 List after swapping : [22, 11, 66, 44]
```

```
import matplotlib
print(matplotlib.__version__)
```

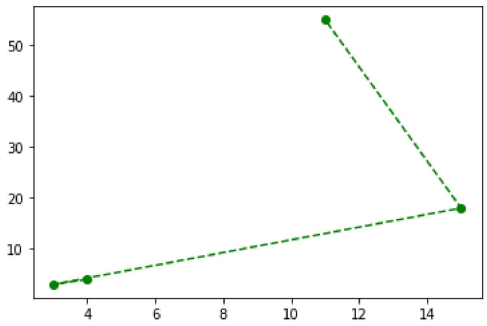
```
 3.2.2
```

```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array(11)
ypoints=np.array(55)
plt.plot(xpoints,ypoints)
plt.show()
```

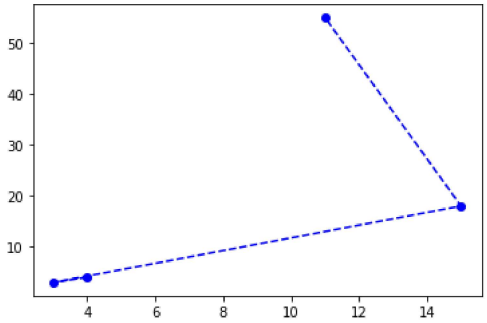



```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([4,3,15,11])
ypoints=np.array([4,3,18,55])
```

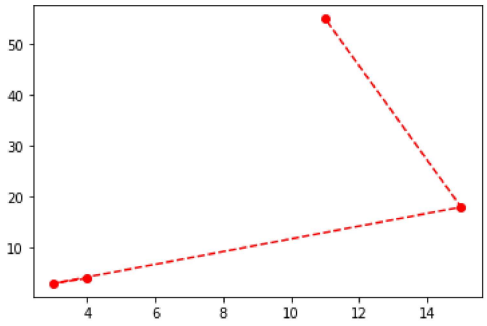
```
plt.plot(xpoints,ypoints,'og--')
plt.show()
```




```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([4,3,15,11])
ypoints=np.array([4,3,18,55])
plt.plot(xpoints,ypoints,'ob--')
plt.show()
```

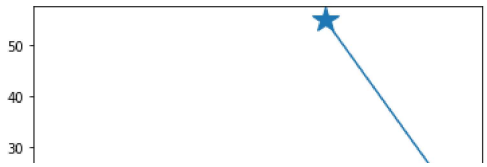



```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([4,3,15,11])
ypoints=np.array([4,3,18,55])
plt.plot(xpoints,ypoints,'or--')
plt.show()
```



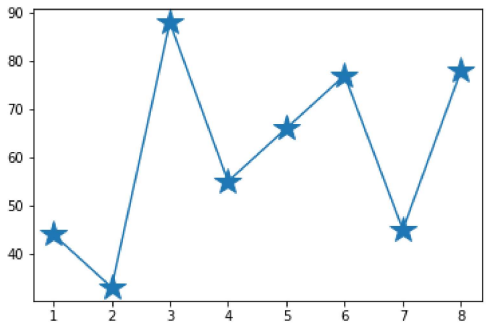
Double-click (or enter) to edit

```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([4,3,15,11])
ypoints=np.array([4,3,18,55])
plt.plot(xpoints,ypoints,marker='*',ms=20)
plt.show()
```

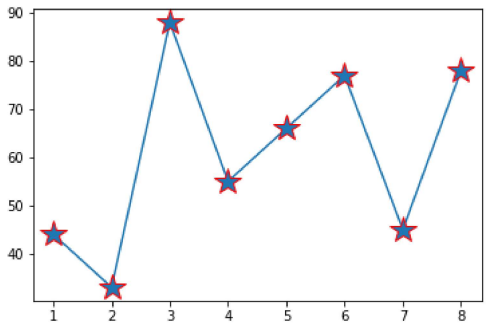


draw graph for result of student the graph should show the variation percentage student first sem to 8 sem

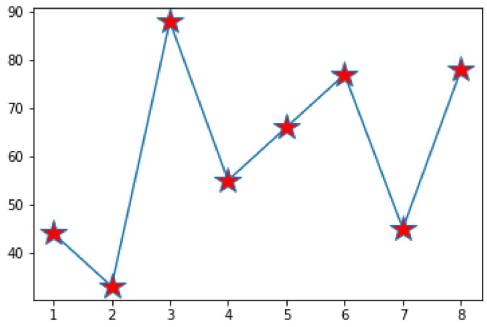
```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([1,2,3,4,5,6,7,8])
ypoints=np.array([44,33,88,55,66,77,45,78])
plt.plot(xpoints,ypoints,marker='*',ms=20)
plt.show()
```



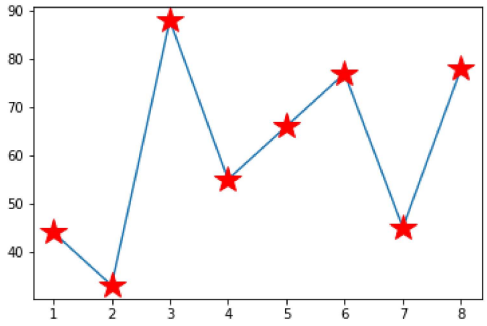

```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([1,2,3,4,5,6,7,8])
ypoints=np.array([44,33,88,55,66,77,45,78])
plt.plot(xpoints,ypoints,marker='*',ms=20,mec='r')
plt.show()
```



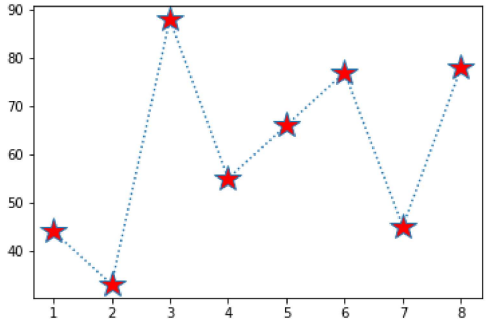

```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([1,2,3,4,5,6,7,8])
ypoints=np.array([44,33,88,55,66,77,45,78])
plt.plot(xpoints,ypoints,marker='*',ms=20,mfc='r')
plt.show()
```



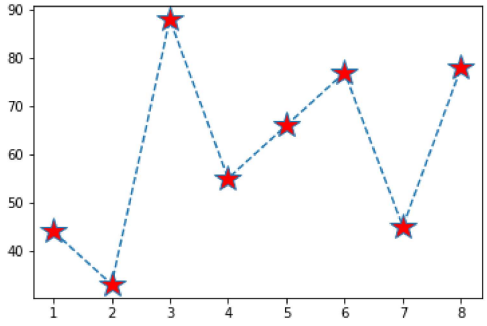
```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([1,2,3,4,5,6,7,8])
ypoints=np.array([44,33,88,55,66,77,45,78])
plt.plot(xpoints,ypoints,marker='*',ms=20,mec='r',mfc='r')
plt.show()
```




```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([1,2,3,4,5,6,7,8])
ypoints=np.array([44,33,88,55,66,77,45,78])
plt.plot(xpoints,ypoints,linestyle='dotted',marker='*',ms=20,mfc='r')
plt.show()
```




```
import numpy as np
import matplotlib.pyplot as plt
xpoints=np.array([1,2,3,4,5,6,7,8])
ypoints=np.array([44,33,88,55,66,77,45,78])
plt.plot(xpoints,ypoints,linestyle='dashed',marker='*',ms=20,mfc='r')
plt.show()
```

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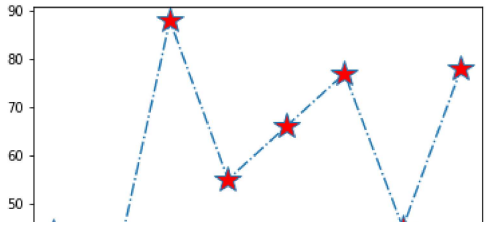
plt.show()
```

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ypoints=np.array([44,33,88,55,66,77,45,78])
plt.plot(xpoints,ypoints,linestyle='dashed',marker='*',ms=20,mfc='r')
plt.xlabel("semester")
plt.ylabel("percentage")
plt.show()
```

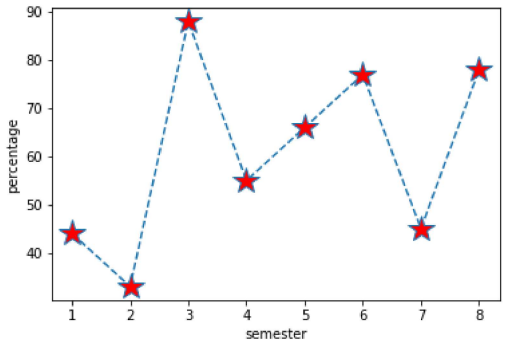


```
font1={'family':'serif','color':'blue','size':30}
font1={'family':'serif','color':'darkred','size':30}
plt.title("sport wtch data",fontdict=font1,loc='left')
#plt.title("sport watch data",loc='left')
plt.xlabel("average pulse",fontdict=font2)
plt.ylabel("calorie burnage ",fontdict=font2)
```

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