In [2]:
```
#2
#a)
import numpy as np
myMean=np.array([[30,56],[202,1233]])
print("original array:")
print(myMean)
print("mean of each coloumn:")
print(myMean.mean(axis=0))
print("mean of each row:")
print(myMean.mean(axis=1))
print(np.median(myMean))
print(np.std(myMean))
print(np.var(myMean))
```

```
original array:
[[  30   56]
 [ 202 1233]]
mean of each coloumn:
[116.  644.5]
mean of each row:
[ 43.  717.5]
129.0
496.6811728865913
246692.1875
```

In [19]:
```
#2
def func light(1,2,3):
      light()
        if "STOP,your life is precious":
            return light
```

```
  File "<ipython-input-19-2b14b925d5ef>", line 1
    def func light(1,2,3):
              ^
SyntaxError: invalid syntax
```

In [21]:
```
#5
#a)
def text_match(text):
    method='ab{3}?'
    if re.search(method,text):
        return ('found the correct')
    else:
        return('not correct')
print(text_match("abbb"))
print(text_match("aabbbbbc"))
```

```
found the correct
found the correct
```

In [22]:
```
#5b
import re
def text_match(text):
    method='^[a-z]+_[a-z]+$'
    if re.search(method,text):
        return ('this is correct')
    else:
        return('this is not correct')
print(text_match("aab_cbbbcb"))
print(text_match("aab_ABbbcC"))
print(text_match("Aaabb_abbc"))
```

```
this is correct
this is not correct
this is not correct
```

In [31]:
```
#5c
import re
matches=['python','programm','string']
text='The python programm  is useful and string is used in it.'
for match in matches:
    print('searching for "%s" in "%s" ->'%(match,text),)
    if re.search(match,text):
        print('correct!')
    else:
        print('not correct')
```

```
searching for "python" in "The python programm  is useful and string is used in
it." ->
correct!
searching for "programm" in "The python programm  is useful and string is used
in it." ->
correct!
searching for "string" in "The python programm  is useful and string is used in
it." ->
correct!
```

In [25]:
```
#4
with open("myfile.txt","w")as mylife:
    mylife.write("My first file written from python\n")
    mylife.write("Hello,world!\n")
```

In [36]:
```
with open("myfile.txt","r")as mylife:
    all_lines=mylife.readlines()
    all_lines=[line.upper()for line in all_lines]

with open("sortedtest.txt","w")as output_file:
    for line in all_lines:
        output_file.write(line)
output_file.close()
show("sortedtest.txt")
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-36-058ba97da966> in <module>
      7         output_file.write(line)
      8 output_file.close()
----> 9 show("sortedtest.txt")

NameError: name 'show' is not defined
```

In [45]:
```
#1a
import math
list=[-1,-3,-4,5]
num={1,6,8,-7,-9}
print('cosine value of positive number=%.2f'%math.cos(10))
print('cosine calue of negative number=%.2f'%math.cos(-15))
```

```
cosine value of positive number=-0.84
cosine calue of negative number=-0.76
```

In [46]:
```
#1b
list=[2,35,56,92]
list=filter(lambda x:x%2==0,list)
for num in list:
    print(num,end="")
```

```
25692
```

In [ ]: