EXERCISE - 8
PROGRAM ON FUNCTIONS
Given two lists as auguments (marks and names), write a function to meturn a tuple containing the highest marks and the
names), write a function to vietnom a typle
containing the Shighest marks and the
corresponding name.
def Highest (marks, name):
il (len (marks) != len (name):
neturn "Number of necords munatch"
max-marks = max (marks)
index = []
clor i in grange (len (magks)):
if marks [i] == max marks:
index, append (i)
nes = []
la in index:
nes. append ((marks [i], name [i]))
return res
def enter (1, n, text = False):
hourt ("Enter the elements.")
for i in sange (n):
il (text):
l. append (input())
elle.
l. append (int (input ()))
NMIT

```
Output:
```

Enter the number of marks: 3

Enter the elements

96

59

70

Enter the elements

Ajay

Anima

[196', Ajay']

```
marks, names = [],[]
on - int (input ("Enter the number of mark:"))
enter (marks, n1)
nenter (names, ne, Touse)
pount (marks, names, sep: "\n")
pount (Highest (marks, names))
given a dict mohere values are not unique,
nohere the key is the value and the value
is concatenated keys of the original dict
and oction it.
def mod (d):
      for i in d:
      if d[i] not in res:
             res [d[i]] = []
             ves [d[i]].append(i)
             res[d[i]].append(i)
x = l'apple': 'feuit', 'cat': 'mammal', 'beans': 'veg',

'dog': 'mammal', 'mango': 'feuit', 'brinjal': 'veg',

'potato': 'veg', 'horse': 'mammal' y

pount ( mod (x))
```

Output:

l'iferent': ['mango', 'apple']

'manunal': ['cat', 'dog', 'horse']

'veg': ['locans', 'lorinjal', 'potato'] y

.3.	def is square (x): pass
	check nohether a given number is a perfect
	square
	def is - eigen (x): pass
	check wohether a given number is an
	leven number
	Find all the numbers between I and n
	which are both square and even.
	V
	det is equare (n):
,	def is equarie (n): if int(n x x 0.5) == n x x 0.5:
	retion True
	ele:
	return False
	def is-even (n):
	if nº1.2:
	return True
<i>Y</i>	ele:
	return False
	Land (enter 11000 s limit: "))
4	for i in range (2, n+1, 2): if is_even (i) and is_square(i): point (i, end = "')
-	It is even (i) and is -square(i):
	point (i end = " ")

Outhut: Enter upper Simit: 36

36

	EXERCISE - 9
	PROGRAM ON FILES AND MODULES
	Groen a file, create a new file with line
	numbers
	1 = open ("g1-Test. txt", 181)
	I g = open (" Q = Duthut. trt", 'w')
	for i, i in enumerate (f. readlines(), 1):
	fl. write (str(i) + " " + i)
	f= open ("g -Test. txt", 'r') f= open ("g -Dutput. txt", 'w') for i, j in enumerate (f. readlines(), 1): f . write (str(i) + " + j) f . close()
-	g.close()
1 1	
	The second secon

OUTPUT:

BI-Test, text:

Mello

welcome to NMIT

Have a good day

BI-Output. text:

- 1. Hello
- 2 Welcome to NMIT
- 3 Have a Good day

1	Compare given two files i) output union
- All	i) outhut union
	2) suffer interlection 1-00 2
	is that there in file and not in felt
	iii) output sweet difference.
	ii) output intersection iii) output intersection iii) output those in file! and not in file 2 iv) symmetric difference.
	point (" UNION - 1) as (2)
	with open (92, txt) as if per (1)
	yor i, j in sip. (1. f.2):
	if set (i. split ()) == set (j. split ()).
	print (" UNION") noith open ('q2. txt') as f1, open ('q1. txt') as f2: noith open ('q2. txt') as f1, open ('q1. txt') as f2: for i, j in zip (f1, f2): if set (i. split ()) == set (j. split ()): point (i. stoup())
	elie: point (i. storip (), j. storip())
	punta (
	DUINT (" TNTERSECTION")
	perint ("= TNTERSECTION) with open ('q2. txt') as f1, open ('q1. txt') as f2: for i, j in zip(f1, f2): if set (i. split()) == set (j. split()): perint (i. strip())
	with open (q2, ms) is gifty
1	1. for in 31/14();
1	if set (1, split (1) = set (1, split)
	print (1. strip())
	puint (" set 1 - set 2 ")
	with open ('92. txt') as flopen ('91. txt') as f2;
	Joh i, j in zip (+1, +2):
	if set(i.split()) = - set(j.split()):
	puint (" set - set 2 ') with open ('q2, txt') as fl, open ('q1, txt') as f2: for i, j in sip (f1, f2): if set (i.split()) = - set (j.split()): pals
	else:
	print (i. strip())
, ,	

OUTPUT:

91. stxt

Hello

Welcome to NMIT

Please collect your ID card in the counter

IN CIVIL HOD SHARING

92. txt

Hello

flave a good day

11 Output:

- UNION -

Hello

Have a good day welcome to NMIT

-- INTERSECTION -

Hello

-- set1-set2-

Have a good day

	_D D M M Y Y Y Y
	-point (" SYMMETOTA DECESSION IN
	with spen ('02 ++1)
	100 100 100 100 100 (gl. txt') as 12:
	3ip (fl, fs).
	-point ("
	paes
	else:
	pount (i chap 1) in 12
	pount (i. Strip (), j. Strip())
-	

---- SYMMETRIC DIFFERENCE ---Have a good day welcome to NMIT

HONE THAT IN THE BUT TO HAVE

3.	Input file is a python program with function definitions. i) Identify the leaders and write them to another file ii) Identify the functions and gount them.
	function definitions.
	i) Identify the leaders and write them to
	another file
1	ii) Identify the functions and gount them.
	अवश्रीत स्वतानम् । प्राप्तानम् अस्ता
	-out = open ('leaders. txt', 'w')
	out = open ('leaders.txt', 'w') out writelines ('Leaders are \n hine No \t
	Code Snippet \n'')
	with open ("9b, pu", 'r') of TP.
	if i. Strip(). endwith (":"): out. writelines (str(j)+'\t'+i. strip()
	if i. strip(), endwith (":"):
	vout. y pritelines (str(i)+'\t'+i. Ltout ()
	$\Gamma:-\Pi'+'\setminus n'$
	out. close()
	out = open ("Functions, txt", 'w')
4	out = open ("Functions, txt", 'w') out, writelines ("Functions are: \n hine no \t
	Line of Coole \n")
	with open ("9b.py", 'or') as IP:
	for i, i in enumerate (IP,1):
1	for i, j in enumerate (IP, 1): if j. strip(). endswith ("def"): out. writelines (str(i)+'\t'+j. strip()
, , , , , , , , , , , , , , , , , , ,	out writelines (str (i) + '\t' + i strip ()
	$\Gamma:-\Pi+(\lambda n')$
	out. close ()

_h	Sereate a module called util py. Add functions
	for the following into this file. a) Convert temperature in Centigrade to Tahrendeit
	The state of the s
	b) Convert temperature in Fahrenheit to
	Contiguade
	S="""
	def c_to_f (Selsius): Farenheit - ((9/5) * Selsius) + 32
	netwn Fancheit
1	def f-to-c (Fagenheit): Celsius-((5/9) X Fagenheit -32))
	retron Celsius
·	north open ("util.py", 'x+') as Module:
	north open ("intil.py", 'x+') as Module: Module. woritelines(s)
<u> </u>	

```
Outfut:

util.py:

def c_to_f (Celsius):
Foorenheit = ((9/5) * Celsius) + 32

oretwin Farenheit

def f_to_c (Farenheit):

Celsius = ((5/9) * (Fareheit - 32))

retwin Celsius
```

5.	Create a module called MyStat.py. Support
	functions:
	functions: -sun - average - standard deviation
	import util as U
	1 and 11 Chair as MC
	c = int (input ("Enter temp un celsius:"))
	to the compact confidence to the confidence to t
	point (U. c.to.f(c)) f = int (input ("Enter temp in famenheit:")) point (U. f. to.c(f))
	J = cint (conjust (knies stemp tot gard
	Sporint (0. f-to-C(f))
i e.	
. 1	n= int (input ("Enter lize of list:")) point ("Enter elements:")
	point ("Enter elements:")
	for i in sange (n): I. append (int (input ()))
	I append (int (input ()))
	point(l)
	point (!) point ("Sum of all elements:", MS. Sum(!))
\.	Journal Store of Invegor " MS Argerage (2))
	pount ("Average I mean: ", MS. Average (l)) pount ("Standard deviation: ", MS. Standard
	Deviation (1)
	Deciation (s)
-	