#to accept name and wish

```
n=input("Enter your name....")
print("Good morning "+n)
print("Good morning %s"%n)
print("Good morning {0}".format(n))
print("Good morning ",n)
```

#to add 2 numbers

```
a=int(input("Enter first number: "))
b=int(input("Enter second number: "))
print("Total:",a+b)
```

"""to check even or odd"""

```
a=int(input("Enter a number: "))
if a%2==0:
    print("Number you have entered")
    print("is Even")
else:
    print("Number you have typed")
    print("is Odd")
print("Thank you")
```

#multiple branching

```
#To compare 2 numbers
a=int(input("Enter first number: "))
b=int(input("Enter second number: "))
if a>b:
    print("%d is greater than %d."%(a,b))
elif b>a:
    print("%d is greater than %d."%(b,a))
else:
    print("Both %d and %d are the same."%(a,b))
print("Thank you")
```

#nested if

```
#Largest of three numbers
a=int(input("Enter first number: "))
b=int(input("Enter second number: "))
c=int(input("Enter Third number: "))
if a>b:
```

```
    if a>c:
        l=a
    else:
        l=c
else:
    if b>c:
        l=b
    else:
        l=c
print("Largest: ",l)
print("Largest: ",max(a,b,c))
```

#to print your name 5 times

```
for i in range(5):
    print("Mice")
print("thank you")

print("\nMice"*5)
```

#to check whether the number is prime or not

```
a=int(input("Enter the number: "))
for d in range(2,a):
    if a%d==0:
        print("Not prime")
        break
else:
    print("Number is prime.")

print("Thank you")
```

#to accept name and print without vowels

```
n=input("Enter the name: ")
m=""
for l in n:
    if l=="a"or l=="e"or l=="i" or l=="o" or l=="u":
        continue
    m+=l
print(m)
```

#to check grade of student

```
m=int(input("Enter the mark: "))
if m>=80:
    print("Distinction")
```

```
elif m>=60:
    print("First class")
elif m>=50:
    print("Second class")
elif m>=35:
    print("Pass")
else:
    print("Fail")
print("Thank you")
```

#to check whether the number is from 10 to 20

```
n=int(input("Enter a number: "))
if n>10 and n<20:
    print("The number is in between 10 and 20")
else:
    print("The number is not in between 10 and 20")
print("Thank you")
print (n in range(10,21))
```

#to calculate factorial

```
n=int(input("Enter a number: "))
p=1
for i in range(n,1,-1):
    p=p*i
print("Factorial: ",p)
```

to print multiplication table

```
n=int(input("Enter a number: "))
for i in range(1,11):
    print("%d x %3d = %3d"%(n,i,n*i))
print("Thank you")
```

#to reverse the given number

```
n=int(input("Enter a number: "))
r=0
while n>0:
    l=n%10      l=123%10=3      l=12%10=2
    r=r*10+l    r=3         r=32
    n=n//10     n=123//10=12    n=12//10=1
else:
    print ("Reverse number is ",r)
print("end of program")
```

to sum up individual units

```
n=int(input("Enter a number:"))
s=0
while n>0:
    s+=n%10
    n=n//10
print("Total: ",s)
```

#to print armstrong number

```
for no in range(100,1000):
    n=no
    r=0
    while n>0:
        l=n%10
        r=r+l**3
        n//=10
    if r==no:
        print(no)
print("Thank you")
```

153= 1^3 +5^3 + 3^3
153= 1 +125 +27

#to accept 5 numbers and sort

```
l=list(input("Enter 5 numbers seperated by comma:").split(","))
l=[int(x) for x in l]
l.sort()
print("Sorted list:",l)
```

#to search the number in the list of 5 numbers

```
l=list(input("Enter 5 numbers: ").split())
n=input("Enter the number to search: ")
if n in l:
    print("%s is in the list."%n)
else:
    print("%s is not in the list."%n)
```

to find largest of three numbers

```
n1,n2,n3=input("Enter three numbers: ").split()
print("Largest : ",max(int(n1),int(n2),int(n3)))
```

#to take 2 set of numbers. combine them and remove duplicates

```
a=set(input("Enter the first set: " ).split())
b=set(input("Enter the second set: " ).split())
print("Combined and removed duplicates: ",a |b)
```

to print even and odd numbers upto 10

```
def even():
    for n in range (2,11,2):
        print(n)

def odd():
    for n in range (1,10,2):
        print(n)

print("Even numbers: ")
even()
print("Odd numbers: ")
odd()
```

to print stars-parameter

```
*
**
***
****
*****
def star(n):
    print("*"*n)
star(1)
star(2)
star(3)
star(4)
star(5)
```

#to find largest of 2 numbers using function

```
def large(a,b):
    if a>b:
       return a
    else:
       return b
x,y=input("Enter 2 numbers: ").split()
z=large(x,y)
print("Largest: ",z)
```

#to find largest& smallest of 2 numbers using function

```
def larsma(a,b):
    if a>b:
       return a,b
    else:
       return b,a
x,y=input("Enter 2 numbers: ").split()
p,q=larsma(x,y)
print("Largest: ",p)
print("Smallest:",q)
```

#my functions

```
def addition(a,b):
    print(a+b)
def subtract(a,b):
    print(a-b)

from fun import addition
import fun
#Key word argument
def sub(a,b):
    print(a-b)
#passing list or set or dictionary as parameter
def addlist(n):
    print(sum(n))
#variable argument
def add(*n):
    print (sum(n))
#Variable keyword argument
def show(**d):
    print(d['id'],d['name'])
#default parametre
def wish(m="good morning"):
    print(m)
#anonymous function lambda function
total=lambda a,b,c:a+b+c
#recursive function
def fac(n):
    return( 1 if n==1 else n* fac(n-1))

sub(10,5)  #Normal function call
sub(b=5,a=10) #keyword argument
l=[1,2,3,4]
addlist(l)  #passing list to function
#Variable keyword argument
show(id="101",Name="Mice")
```

```
add(10,20)
add(10,20,30,40,50) #variable argument
wish("Welcome to mice")
wish("Hi")
wish()
print(total(10,20,30))
print(fac(5))
#calling function from other module
addition(5,6)
fun.subtract(10,5)
```

#command line

```
import sys
t=0
for n in range(1,len(sys.argv)):
    t+=int(sys.argv[n])
print("Total: ",t)
```

#to find average of n numbers

```
def avg(*n):
    s=sum(n)
    l=len(n)
    print(s/l)
avg(50,60,70)
```

#to reverse string

```
def rev(s):
    print(s[::-1])
rev("udupi")
```

#to print number from 1 to 100

```
fo=open("num.txt","w")
for n in range(1,101):
   fo.write("%d\n"%n)
print("num.txt file is created")
fo.close()
```

#to display the content of the file

```
from os.path import exists
n=input("enter a file name:")
if exists(n):
```

```
    fo=open(n,"r")
    r=fo.read()
    print(r)
    p=r.count("\n")
    print("Number of lines: ",p)
    fo.close()
else:
    print("file not found")
```

#to display the content of the file

```
n=input("enter a file name:")
fo=open(n,"r")
for l in fo:
    print (l,len(l))
fo.close()
```

#to copy one file to another file

```
f1=open("p2.py","r")
f2=open("f2.py","w")
f2.write(f1.read())
f1.close()
f2.close()
```

#File position

```
fo=open("mice.txt","r")
str=fo.read(10)
print("read string is:",str)
position=fo.tell()
print("current file position:",position)
position=fo.seek(0,0)
str=fo.read(10);
print("again read string is:",str)
fo.close()
```

#Student file

```
from os.path import exists
if exists("Student.csv"):
    fh=open("student.csv","a")
else:
    fh=open("student.csv","w")
while True:
    record=[]
    record.append(input("Student Id: "))
```

```
    if not record [0]:
        break
    record.append(input("Student Name: "))
    record.append(input("Phone number: "))
    record.append(input("Email: "))
    fh.write(",".join(record)+"\n")
fh.close()
fh=open("student.csv","r")
search=input("Student Name: ")
for line in fh:
    l=line.split(",")
    if search=="" or (search.lower()in l[1].lower() or
search.lower() in l[0]):
        print("Student Id: %s\nStudent name: %s\nPhone Number:
%s\nEmail: %s"%(l[0],l[1],l[2],l[3]))
fh.close()
```

#create shelve module

```
import shelve
s=shelve.open("std.dat")
record=0
while True:
    l=[]
    l.append(input("Student Id: "))
    if not l[0]:
        break
    l.append(input('Student Name: '))
    record+=1
    s[str(record)]=l
    print("One record stored.")
s.close()
```

#read shelve module

```
import shelve
s=shelve.open("std.dat")
record=1
while True:

    l=s[str(record)]
    if not l[0]:
        break
    print("Id numbers: ",l[0])
    print("Name: ",l[1])
    record+=1
s.close()
```

#using exception

```
def convert1(var):
    print(int(var))
convert1("12")
convert1("abc")


def convert2(var):
 try:
    print( int(var))
 except ValueError as arg:
    print("The argument does not contain numbers\n",arg)
 else:
     print("Sucessful run")
 finally:
     print("Thank you!")
 print("i am last line")

convert2("12")
convert2("abc")
```

#Exception

```
try:
    fh=open("mice.txt","r")
    fh.write("This is my test file for exception handling!")
except IOError:
    print("Error:Can\'t find file or read data.")
else:
    print("Written content in this file sucessfully.")
    fh.close()
print("File closed.")
```

#Own exception

```
def functionName(level):
    if level ==0:
        raise Exception ("Invalid Level!",level)
    elif level==5:
        raise Exception ("penta error",level)
    else:
        print("Success")
try:
  functionName(3)
  functionName(0)
  functionName(5)
```

```
except Exception as e:
    print("BIG ERROR",str(e))
else:
    print("Ok")
```

#testing assertion

```
print(1)
print(2)
print(3)
assert (False),"you reached three"
print(4)
assert (False),"you reached four"
print(5)
```

#Assertion

```
def kelvintofarenheit(temp):
    assert(temp>=0),"Colder than absolute zero!"
    return((temp-273)*1.8)+32
print(kelvintofarenheit(273))
print(kelvintofarenheit(-5))
print(kelvintofarenheit(5))
```

#debug/trace

```
import logging
logging.basicConfig(level=logging.DEBUG,format='%(asctime)s-
%(levelname)s- %(message)s')
def factorial(n):
    logging.info('Start of factorial(%s%%)'%(n))
    total=1
    for i in range(1,n+1):
        total*=i
        logging.debug('i is '+str(i)+',total is'+str(total))
    logging.debug('End of factorial(%s%%)'%(n))
    return total
logging.warning("start of program")
print(factorial(5))
logging.debug("End of program.")
```