To find the biggest of three numbers

```
>>> num1=float(input("Enter First Number:"))
Enter First Number:10
>>> num2=float(input("Enter Second Number:"))
Enter Second Number:20
>>> num3=float(input("Enter Third Number:"))
Enter Third Number:30
>>> if(num1>num2) and (num1>num3):
 largest=num1
elif(num2>num1) and (num2>num3):
 largest=num=2
else:
 largest=num3
>>> print("The largest number is",largest)
The largest number is 30.0
```

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

```
>>> color_list_1 = set(["White", "Black", "Red","Orange","Blue","Yellow","Brown"])
>>> color_list_2 = set(["Red", "Green","white"])
>>> print(color_list_1.difference(color_list_2))
{'Orange', 'Brown', 'Black', 'Blue', 'Yellow', 'White'}
```

Generate positive list of numbers from a given list of integers

```
>>> NumList = []
```

```
>>> Number = int(input("Please enter the Total Number of List Elements: "))
Please enter the Total Number of List Elements: 5
>>> for i in range(1, Number + 1):
        value = int(input("Please enter the Value of %d Element : " %i))
        NumList.append(value)
Please enter the Value of 1 Element : 10
Please enter the Value of 2 Element : 14
Please enter the Value of 3 Element : -22
Please enter the Value of 4 Element : -12
Please enter the Value of 5 Element : 18
>>> print("\nPositive Numbers in this List are : ")
Positive Numbers in this List are :
>>> for j in range(Number):
        if(NumList[j] >= 0):
            print(NumList[j], end = '   ')
10   14   18
```

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

```
>>> color_list = ["Red","Orange","Yellow" ,"Green"]
>>> print( "%s %s"%(color_list[0],color_list[-1]))
Red Green
```

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

```
>>> import calendar
```

```
>>> def loop_year(year, number_of_years):
    leap_year_counter = 0
    while leap_year_counter < number_of_years:
        if calendar.isleap(year):
            print('{} is a leap year!'.format(year))
            leap_year_counter += 1
        year += 1
>>> loop_year(2016, 20)
2016 is a leap year!
2020 is a leap year!
2024 is a leap year!
2028 is a leap year!
2032 is a leap year!
2036 is a leap year!
2040 is a leap year!
2044 is a leap year!
2048 is a leap year!
2052 is a leap year!
2056 is a leap year!
2060 is a leap year!
2064 is a leap year!
2068 is a leap year!
2072 is a leap year!
2076 is a leap year!
2080 is a leap year!
```

2084 is a leap year!

2088 is a leap year!

2092 is a leap year!

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

```
>>> s = '2134'
>>> def swap(c, i, j):
        c = list(c)
        c[i], c[j] = c[j], c[i]
        return ''.join(c)

>>> swap(s, 0, 1)
'1234'
```

Graphics

```
from graphics import *
   Win = GraphWin()
   win.up()
   pt = Point(100, 50)
   pt.draw(win)
   cir = Circle(pt, 25)
   cir.draw(win)
   cir.setOutline('red')
   cir.setFill('blue')
   line = Line(pt, Point(150, 100))
```

```
    line.draw(win)
    rect = Rectangle(Point(20, 10), pt)
    rect.draw(win)
    line.move(10, 40)
win.close()
print('cir:', cir)
print('line:', line)
print('rect:', rect)
```

Book

```
class book():
   def __init__(self):
        self.title = title
        sel.author = author
   def show(self,title,author):
        print(self.title);
        print(self.author);
class b(book):
    def __init__(self):
        self.price = price
        self.no_of_pages = no_of_pages
   def show(self):
        print(self.price)
        print(self.no_of_pages)
o1=book()
```

```
o2=b()
```

compare the area of 2 rectangles

```
class Rectangle:
    def __init__(self, length, breadth):
        self.length = length
        self.breadth = breadth

    def __lt__(self, otherrect):
        if (self.length < otherrect.breadth):
            return "ob1 is lessthan ob2"
        else:
            return "ob2 is less than ob1"

        def __eq__(self, otherrect):
            if (self.a == other.a):
                return "Both are equal"
            else:
                return "Not equal"



a = int(input("Enter length of rectangle: "))
b = int(input("Enter breadth of rectangle: "))
#obj = Rectangle(a, b)
#print("Area of rectangle:", obj.Rectangle(a,b))
```

```
ob1 = Rectangle(2,4)
ob2 = Rectangle(3,2)
print(ob1 < ob2)

ob3 = Rectangle(4,4)
ob4 = Rectangle(4,2)
print(ob1 == ob2)
```

Time

```
class time:
   def __init__(self, hour, minute,second):
      self.hour = hour
      self.minute = minute
      self.second = second
  def __abs__(self):
      return (self.hour  + self.minute  - self.second )
time = time(3, 4, 4)
abs(time)

import datetime as dt
t1 = dt.datetime.strptime('12:00:00', '%H:%M:%S')
t2 = dt.datetime.strptime('02:00:00', '%H:%M:%S')
time_zero = dt.datetime.strptime('00:00:00', '%H:%M:%S')
print((t1 - time_zero + t2).time())
```

14:00:00

Bank

```
class Bank_Account:
   def __init__(self):
      self.balance = 0
   def deposit(self):
      amount = float(input("Enter amount to be Deposited: "))
      self.balance += amount
      print("\n Amount Deposited:", amount)
 def withdraw(self):
      amount = float(input("Enter amount to be Withdrawn: "))
      if self.balance >= amount:
         self.balance -= amount
         print("\n You Withdrew:", amount)
      else:
         print("\n Insufficient balance  ")
s = Bank_Account()
s.deposit()
s.withdraw()
```

```
Enter amount to be Deposited: 20000
 Amount Deposited: 20000.0
Enter amount to be Withdrawn: 10000
You Withdrew: 10000.0
```

To find area and perimeter of a rectangle

```
class Rectangle:
    def __init__(self, length, breadth):
        self.length = length
        self.breadth = breadth
  def area(self):
        return self.length * self.breadth
    def perimeter(self):
        return self.length+self.breadth*2
a = int(input("Enter length of rectangle: "))
b = int(input("Enter breadth of rectangle: "))
obj = Rectangle(a, b)
print("Area of rectangle:", obj.area())
print("perimeter of a rectangle",obj.area())
```

```
Enter length of rectangle: 5
Enter breadth of rectangle: 6
Area of rectangle: 30
perimeter of a rectangle 30
```