In [2]:

```python
# A Simple Python3 program to
# find count of all numbers
# that multiples
# Returns count of all numbers
# multples of 3
def countMultiples(n):
    res = 0;
    for i in range(1, n + 1):
        if (i % 3 == 0 ):
            res += 1;

    return res;

print("Count =", countMultiples(200));


```

Count = 66

In [3]:

```python
#print the nos only divisable by 5 and 7 between 1000 and 2000 using a list

nl=[]
for x in range(1000, 2000):
    if (x%7==0) and (x%5==0):
        nl.append(str(x))
print (','.join(nl))
```

1015,1050,1085,1120,1155,1190,1225,1260,1295,1330,1365,1400,1435,1470,1505,1
540,1575,1610,1645,1680,1715,1750,1785,1820,1855,1890,1925,1960,1995

In [8]:

```python
# Add the n number of names in a list and print them alphabetically and reverse
#alphabetically.

my_str = []

# To take input from the user
my_str = input("Enter a string: ")

# breakdown the string into a list of words
words = my_str.split()

# sort the list
words.sort()

# display the sorted words

print("The sorted words are:")
for word in words:
    print(word)

# Reversing a list using reversed()
def Reverse(word):
    return [word for word in reversed(words)]

# display the reverse words

print(Reverse(my_str))

```

```
Enter a string: hello this is an example with cascade letters
The sorted words are:
an
cascade
example
hello
is
letters
this
with
['with', 'this', 'letters', 'is', 'hello', 'example', 'cascade', 'an']
```

In [11]:

```python
#Print perfect squares and divisible by 5 between 500 and 1000 (both inclusive)
#using list comprehension


def perfectSquares(l,r):

    # For every element from the range
    for i in range(l,r):

        # If current element is
        # a perfect square
        if (i**(.5) == int(i**(.5))):
            print(i, end=" ")

# Driver code
l = 500
r = 1000

perfectSquares(l, r)

```

529 576 625 676 729 784 841 900 961

In [1]:

```python
#Calculate the Average of the numbers in a List by getting the elements of list from
#keyboard .

n=int(input("Enter the number of elements to be inserted: "))
a=[]
for i in range(0,n):
    elem=int(input("Enter element: "))
    a.append(elem)
avg=sum(a)/n
print("Average of elements in the list",round(avg,2))
```

Enter the number of elements to be inserted: 2
Enter element: 1
Enter element: 2
Average of elements in the list 1.5

In [3]:

```python
# Print lists of odd,even and multiples of 5 numbers from 1 to 1000 using list
#comprehension

def main():
        high = int(input('Enter the high integer for the range: ')) # Enter the high i
        low = int(input('Enter the low integer for the range: '))   # Enter the lower
        num = int(input('Enter the integer for the multiples: '))   # Enter integer to

        def show_multiples():
                # Find the multiples of integer
                # and print them on same line
                for x in range(high, low, -1):
                        if (x % num) == 0:
                                print(x, end=' ')

                def isEven(x):
                        count = 0
                        total = 0
                        for count in range():
                                if (x % 5) == 0:
                                        count = count + 1
                                else:
                                        count = count + 1

                        print(count, 'even numbers total to')
                        print(count, 'odd numbers total to')
                isEven(x)
        show_multiples()
```

In [4]:

```python
#Python Program to Create a List of Tuples with the First Element as the Number and Sec
#Element as the Square of the Number

l_range=int(input("Enter the lower range:"))
u_range=int(input("Enter the upper range:"))
a=[(x,x**2) for x in range(l_range,u_range+1)]
print(a)
```

```
Enter the lower range:5
Enter the upper range:10
[(5, 25), (6, 36), (7, 49), (8, 64), (9, 81), (10, 100)]
```

In [17]:

```python
#Write python program to have a list of words to sort them from shortest to longest usi
#tuples

def Sort_Tuple(tup):

    # getting length of list of tuples
    lst = len(tup)
    for i in range(0, lst):

        for j in range(0, lst-i-1):
            if (tup[j][1] > tup[j + 1][1]):
                temp = tup[j]
                tup[j]= tup[j + 1]
                tup[j + 1]= temp
    return tup

# Driver Code
tup =[('hi', 24), ('is', 10), ('and', 28),
    ('give', 5), ('ok', 20), ('a', 15)]

print(Sort_Tuple(tup))

def Sort_Tuple(tup):

    # getting length of list of tuples
    lst = len(tup)
    for i in range(lst,0):

        for j in range(0, lst-i-1):
            if (tup[j][1] > tup[j + 1][1]):
                temp = tup[j]
                tup[j]= tup[j + 1]
                tup[j + 1]= temp
    return tup

# Driver Code
tup =[('im', 24), ('is', 10), ('hellos', 28),
    ('hihi', 5), ('and', 20), ('a', 15)]

print(Sort_Tuple(tup))
```

```
[('give', 5), ('is', 10), ('a', 15), ('ok', 20), ('hi', 24), ('and', 28)]
[('im', 24), ('is', 10), ('hellos', 28), ('hihi', 5), ('and', 20), ('a', 1
5)]
```

In [33]:

```python
# Write python program to get a list of tuples of Rollno,Name for 5 students through ke
#sort them Rollno wise ascending order

def Sort_Tuple(tup):


    return(sorted(tup, key = lambda x: x[1]))

# Driver Code
tup = [('rishav', 10), ('akash', 5), ('ram', 20), ('gaurav', 15), ('rashi',25)]

# printing the sorted list of tuples
print(Sort_Tuple(tup))


```

```
[('akash', 5), ('rishav', 10), ('gaurav', 15), ('ram', 20), ('rashi', 25)]
```

In [32]:

```python
#.Write python program to get a list of tuples of Rollno,Name for 5 students through ke
#sort them by Name wise ascending order


def SortTuple(tup):

    n = len(tup)

    for i in range(n):
        for j in range(n-i-1):

            if tup[j][0] > tup[j + 1][0]:
                tup[j], tup[j + 1] = tup[j + 1], tup[j]
    return tup

# Driver's code

tup = [("Amana", 28), ("Zenat", 30), ("Abhishek", 29),
        ("Nikhil", 21), ("zhiva", "10")]

print(SortTuple(tup))



```

```
[('Abhishek', 29), ('Amana', 28), ('Nikhil', 21), ('Zenat', 30), ('zhiva',
'10')]
```

In [30]:

```python
#.Write python program to get a list of tuples of Rollno,Name for 5 students through ke
#sort them by Name wise descendind order

def SortTuple(tup):

    n = len(tup)

    for i in range(n):
        for j in range(n-i-1):

            if tup[j][0] > tup[j + 1][0]:
                tup[j], tup[j + 1] = tup[j + 1], tup[j]

    return tup

# Driver's code

tup = [("Amana", 28), ("Zenat", 30), ("Abhishek", 29),
       ("Nikhil", 21), ("zhiva", "190")]


new_tuple_reverse = (sorted (tup, reverse=True))
print(new_tuple_reverse)
```

```
[('zhiva', '190'), ('Zenat', 30), ('Nikhil', 21), ('Amana', 28), ('Abhishe
k', 29)]
```

In [35]:

```python
# Write python program to get a list of tuples of Rollno,Name for 5 students through ke
#sort them Rollno wise descending order

def Sort_Tuple(tup):


    return(sorted(tup, key = lambda x: x[1]))

# Driver Code
tup = [('rishav', 50), ('akash', 5), ('ram', 20), ('gaurav', 15), ('rashi',25)]


new_tuple_reverse = (sorted (tup, reverse=True))
print(new_tuple_reverse)
```

```
[('rishav', 50), ('rashi', 25), ('ram', 20), ('gaurav', 15), ('akash', 5)]
```

In [ ]:

```python

```