In [11]:
```
#LIST COMPREHENSION
num=[num for num in range(1,101) if num%2==0]
print("Numbers divisible by 2 are:")
print(num,'\n')
num=[num for num in range(1,101) if num%3==0]
print("Numbers divisible by 2 are:")
print(num)
```

```
Numbers divisible by 2 are:
[2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40,
42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78,
80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100]

Numbers divisible by 2 are:
[3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 6
0, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99]
```

In [13]:
```
#Reverse LIST
num=[num for num in range(100,0,-1)]
print(num,'\n')
num=[num for num in range(100,0,-1) if num%7==0]
print("Numbers divisible by 7 are:")
print(num)
```

```
[100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87, 86, 85, 84, 83, 8
2, 81, 80, 79, 78, 77, 76, 75, 74, 73, 72, 71, 70, 69, 68, 67, 66, 65, 64, 6
3, 62, 61, 60, 59, 58, 57, 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 4
4, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 2
5, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6,
5, 4, 3, 2, 1]

Numbers divisible by 7 are:
[98, 91, 84, 77, 70, 63, 56, 49, 42, 35, 28, 21, 14, 7]
```

In [15]:
```
square=[square*square for square in range(0,11) if square%2==0]
print("Squares of even numbers are:")
print(square)
```

```
Squares of even numbers are:
[0, 4, 16, 36, 64, 100]
```

In [24]:
```
#CREATE A DICTIONARY
n=int(input("Enter number of keys"))
print("Keys are:")
keys=[input() for keys in range(n)]
print("Values are:")
values=[int(input()) for values in range(n)]
dict1={keys[i]:values[i] for i in range(n)}
print(dict1)
```

```
Enter number of keys4
Keys are:
a
b
c
d
Values are:
1
2
3
```

```
4
{'a': 1, 'b': 2, 'c': 3, 'd': 4}
```

In [4]:

```
#CREATE A DICTIONARY OF SQUARES
n=int(input("Enter number of keys"))
print("Keys are:")
keys=[int(input()) for keys in range(n)]
dict1={keys:keys**2 for keys in range(len(keys))}
print(dict1)
```

```
Enter number of keys5
Keys are:
1
2
3
4
5
{0: 0, 1: 1, 2: 4, 3: 9, 4: 16}
```

In [10]:

```
#CREATE A DICTIONARY OF SQUAREROOTS
import math
dict1={x:math.sqrt(x) for x in range(100,0,-1)}
print(dict1)
```

```
{100: 10.0, 99: 9.9498743710662, 98: 9.899494936611665, 97: 9.84885780179610
4, 96: 9.797958971132712, 95: 9.746794344808963, 94: 9.695359714832659, 93:
9.643650760992955, 92: 9.591663046625438, 91: 9.539392014169456, 90: 9.48683
2980505138, 89: 9.433981132056603, 88: 9.38083151964686, 87: 9.3273790530888
16, 86: 9.273618495495704, 85: 9.219544457292887, 84: 9.16515138991168, 83:
9.1104335791443, 82: 9.055385138137417, 81: 9.0, 80: 8.94427190999916, 79:
8.888194417315589, 78: 8.831760866327848, 77: 8.774964387392123, 76: 8.71779
7887081348, 75: 8.660254037844387, 74: 8.602325267042627, 73: 8.544003745317
53, 72: 8.48528137423857, 71: 8.426149773176359, 70: 8.366600265340756, 69:
8.306623862918075, 68: 8.246211251235321, 67: 8.18535277187245, 66: 8.124038
40463596, 65: 8.06225774829855, 64: 8.0, 63: 7.937253933193772, 62: 7.874007
874011811, 61: 7.810249675906654, 60: 7.745966692414834, 59: 7.6811457478686
08, 58: 7.615773105863909, 57: 7.54983443527075, 56: 7.483314773547883, 55:
7.416198487095663, 54: 7.3484692283495345, 53: 7.280109889280518, 52: 7.2111
02550927978, 51: 7.14142842854285, 50: 7.0710678118654755, 49: 7.0, 48: 6.92
8203230275509, 47: 6.855654600401044, 46: 6.782329983125268, 45: 6.708203932
499369, 44: 6.6332495807108, 43: 6.557438524302, 42: 6.48074069840786, 41:
6.4031242374328485, 40: 6.324555320336759, 39: 6.244997998398398, 38: 6.1644
14002968976, 37: 6.082762530298219, 36: 6.0, 35: 5.916079783099616, 34: 5.83
0951894845301, 33: 5.744562646538029, 32: 5.656854249492381, 31: 5.567764362
8300215, 30: 5.477225575051661, 29: 5.385164807134504, 28: 5.29150262212918
1, 27: 5.196152422706632, 26: 5.0990195135927845, 25: 5.0, 24: 4.89897948556
6356, 23: 4.795831523312719, 22: 4.69041575982343, 21: 4.58257569495584, 20:
4.47213595499958, 19: 4.358898943540674, 18: 4.242640687119285, 17: 4.123105
625617661, 16: 4.0, 15: 3.872983346207417, 14: 3.7416573867739413, 13: 3.605
551275463989, 12: 3.4641016151377544, 11: 3.3166247903554, 10: 3.16227766016
83795, 9: 3.0, 8: 2.8284271247461903, 7: 2.6457513110645907, 6: 2.4494897427
83178, 5: 2.23606797749979, 4: 2.0, 3: 1.7320508075688772, 2: 1.414213562373
0951, 1: 1.0}
```

In [3]:

```
#CREATE A DICTIONARY OF DEVELOPERS
developers={'Jane': 'Python', 'Jade': 'Javascript', 'John': 'Python', 'Doe
print("Developers having Python are:")
dict2={key:developers[key] for key in developers if developers[key]=='Pytho
print(dict2)
```

```
Developers having Python are:
{'Jane': 'Python', 'John': 'Python'}
```

{ Jane : Python , John : Python }

In [8]:

```
#CREATE A DICTIONARY OF ADMINS
admins={'Alice': 'Ubuntu', 'Bob': 'Windows', 'Charlie': 'Ubuntu', 'David':
print("Ubuntu Admins are:")
```