In [4]:
```
# print multiples of 3 upto 200 using a list
a=[]
for i in range(0,200):
    a.append(i)
a=[i for i in range(0,200) if(i%3==0)]
print(a)
```

```
[0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 5
4, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99, 102, 10
5, 108, 111, 114, 117, 120, 123, 126, 129, 132, 135, 138, 141, 144, 14
7, 150, 153, 156, 159, 162, 165, 168, 171, 174, 177, 180, 183, 186, 18
9, 192, 195, 198]
```

In [5]:
```
#print the nos only divisable by 5 and 7 between 1000 and 2000 using a
a=[]
for i in range(1000,2000):
    a.append(i)
a=[i for i in range(1000,2000) if(i%5==0 | i%7==0)]
print(a)
```

```
[1015, 1050, 1085, 1120, 1155, 1190, 1225, 1260, 1295, 1330, 1365, 140
0, 1435, 1470, 1505, 1540, 1575, 1610, 1645, 1680, 1715, 1750, 1785, 1
820, 1855, 1890, 1925, 1960, 1995]
```

In [17]:
```
#Add the n number of names in a list and print them alphabetically and
a=[]
n = int(input('enter the n'))
for x in range(0,n):
    n=input()
    a.append(n)
str2=sorted(a)

print(sorted(a))
print(str2[::-1])
```

```
enter the n2
madan
gudigar
['gudigar', 'madan']
['madan', 'gudigar']
```

In [22]:
```
#Print perfect squares and divisible by 5 between 500 and 1000 (both in
import math
a=[]

for i in range(500,1000):
    a.append(i)
a=[i for i in range(500,1000) if i%5==0 and (math.sqrt(i)-math.floor(ma
print(a)
```

```
[625, 900]
```

In [26]:
```
#Calculate the Average of the numbers in a List by getting the elements
sume = 0
a=[]
n = int(input('enter the n'))
for x in range(n):
    name=int(input())
    a.append(name)
    sume = sume+name
su=sume/n
print(su)
```

```
enter the n2
10
20
15.0
```

In [32]:
```
#Print lists of odd,even and multiples of 5 numbers from 1 to 1000 using
a=[]
for i in range(1,1000):
    a.append(i)
a=[i for i in range(1,1000) if(i%2!=0) ]
print(a)
b=[i for i in range(1,1000) if(i%2==0) ]
print(b)
c=[i for i in range(1,1000) if(i%5==0) ]
print(c)
```

```
[1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 3
7, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 7
1, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103,
105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131,
133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159,
161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187,
189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215,
217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243,
245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271,
273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299,
301, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327,
329, 331, 333, 335, 337, 339, 341, 343, 345, 347, 349, 351, 353, 355,
357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383,
385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405, 407, 409, 411,
413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 439,
441, 443, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 465, 467,
469, 471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495,
497, 499, 501, 503, 505, 507, 509, 511, 513, 515, 517, 519, 521, 523,
525, 527, 529, 531, 533, 535, 537, 539, 541, 543, 545, 547, 549, 551,
553, 555, 557, 559, 561, 563, 565, 567, 569, 571, 573, 575, 577, 579,
581, 583, 585, 587, 589, 591, 593, 595, 597, 599, 601, 603, 605, 607,
609, 611, 613, 615, 617, 619, 621, 623, 625, 627, 629, 631, 633, 635,
637, 639, 641, 643, 645, 647, 649, 651, 653, 655, 657, 659, 661, 663,
665, 667, 669, 671, 673, 675, 677, 679, 681, 683, 685, 687, 689, 691,
693, 695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719,
721, 723, 725, 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747,
749, 751, 753, 755, 757, 759, 761, 763, 765, 767, 769, 771, 773, 775,
777, 779, 781, 783, 785, 787, 789, 791, 793, 795, 797, 799, 801, 803,
805, 807, 809, 811, 813, 815, 817, 819, 821, 823, 825, 827, 829, 831,
833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853, 855, 857, 859,
861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885, 887,
889, 891, 893, 895, 897, 899, 901, 903, 905, 907, 909, 911, 913, 915,
917, 919, 921, 923, 925, 927, 929, 931, 933, 935, 937, 939, 941, 943,
945, 947, 949, 951, 953, 955, 957, 959, 961, 963, 965, 967, 969, 971,
973, 975, 977, 979, 981, 983, 985, 987, 989, 991, 993, 995, 997, 999]
[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, 7
2, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104,
106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132,
134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160,
162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188,
190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216,
```

```
218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244,
246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272,
274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300,
302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328,
330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356,
358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384,
386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412,
414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440,
442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468,
470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496,
498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524,
526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552,
554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580,
582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608,
610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636,
638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664,
666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692,
694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720,
722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748,
750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776,
778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804,
806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832,
834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860,
862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888,
890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916,
918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944,
946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972,
974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998]
[5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 9
0, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 16
0, 165, 170, 175, 180, 185, 190, 195, 200, 205, 210, 215, 220, 225, 2
30, 235, 240, 245, 250, 255, 260, 265, 270, 275, 280, 285, 290, 295,
300, 305, 310, 315, 320, 325, 330, 335, 340, 345, 350, 355, 360, 365,
370, 375, 380, 385, 390, 395, 400, 405, 410, 415, 420, 425, 430, 435,
440, 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505,
510, 515, 520, 525, 530, 535, 540, 545, 550, 555, 560, 565, 570, 575,
580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645,
650, 655, 660, 665, 670, 675, 680, 685, 690, 695, 700, 705, 710, 715,
720, 725, 730, 735, 740, 745, 750, 755, 760, 765, 770, 775, 780, 785,
790, 795, 800, 805, 810, 815, 820, 825, 830, 835, 840, 845, 850, 855,
860, 865, 870, 875, 880, 885, 890, 895, 900, 905, 910, 915, 920, 925,
930, 935, 940, 945, 950, 955, 960, 965, 970, 975, 980, 985, 990, 995]
```

In [33]:
```
#Python Program to Create a List of Tuples with the First Element as th
t = list()
[t.append((i,i**2)) for i in range(10)]
print(t)
```

```
[(0, 0), (1, 1), (2, 4), (3, 9), (4, 16), (5, 25), (6, 36), (7, 49),
(8, 64), (9, 81)]
```

In [34]:
```
#Write python program to have a list of words to sort them from shortes
lst = ['words','sentence','word','cat','dog']
t = list()
for word in lst:
  t.append((len(word),word))
t.sort()
for len,word in t:
  print(word,end=" ")
```

```
cat dog word words sentence
```

In [35]:
```
#Write python program to get a list of tuples of Rollno,Name for 5 stude
t = list()
for i in range(5):
  t.append((input("Enter the Rollno : "),input("Enter the Name : ")))
t.sort()
print(t)
```

```
Enter the Rollno : 4al17cs048
Enter the Name : madan
Enter the Rollno : 4al17cs089
Enter the Name : sathvik
Enter the Rollno : 2
Enter the Name : omkar\
Enter the Rollno : 6
Enter the Name : rohan
Enter the Rollno : 7
Enter the Name : namit
[('2', 'omkar\\'), ('4al17cs048', 'madan'), ('4al17cs089', 'sathvik'),
('6', 'rohan'), ('7', 'namit')]
```

In [36]:
```
#Write python program to get a list of tuples of Rollno,Name for 5 stude
t = list()
for i in range(5):
  t.append((input("Enter the Rollno : "),input("Enter the Name : ")))
t.sort(reverse=True)
print(t)
```

```
Enter the Rollno : 1
Enter the Name : madan
Enter the Rollno : 2
Enter the Name : sathvik
Enter the Rollno : 3
Enter the Name : omkar
Enter the Rollno : 4
Enter the Name : rohan
Enter the Rollno : 5
Enter the Name : namit
[('5', 'namit'), ('4', 'rohan'), ('3', 'omkar'), ('2', 'sathvik'),
('1', 'madan')]
```

In [37]:
```
#Write python program to get a list of tuples of Rollno,Name for 5 stude
t = list()
for i in range(5):
  t.append((input("Enter the Name : "),input("Enter the Rollno : ")))
t.sort()
print(t)
```

```
Enter the Name : madan
Enter the Rollno : 1
Enter the Name : 2
Enter the Rollno : omkar
Enter the Name : 3
Enter the Rollno : satvik
Enter the Name : 4
Enter the Rollno : dhurvil
Enter the Name : 4
Enter the Rollno : 5
[('2', 'omkar'), ('3', 'satvik'), ('4', '5'), ('4', 'dhurvil'), ('mada
n', '1')]
```

In [38]:
```
#Write python program to get a list of tuples of Rollno,Name for 5 stude
t = list()
for i in range(5):
  t.append((input("Enter the Name : "),input("Enter the Rollno : ")))
t.sort(reverse=True)
print(t)
```

```
Enter the Name : madan
Enter the Rollno : 1
Enter the Name : satvik
Enter the Rollno : 2
Enter the Name : omkar
Enter the Rollno : 3
Enter the Name : namit 4
Enter the Rollno : 4
Enter the Name : dhurvil
Enter the Rollno : 5
[('satvik', '2'), ('omkar', '3'), ('namit 4', '4'), ('madan', '1'),
('dhurvil', '5')]
```

In [ ]: