

# LIST PROBLEMS

In [8]:

```
1 print(* range(3,200,3))
```

```
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78 81 8
4 87 90 93 96 99 102 105 108 111 114 117 120 123 126 129 132 135 138 141 144 14
7 150 153 156 159 162 165 168 171 174 177 180 183 186 189 192 195 198
```

In [40]:

```
1 print([x for x in range(1000, 2000)if x%7==0 and x%5==0])
2
```

```
[1015, 1050, 1085, 1120, 1155, 1190, 1225, 1260, 1295, 1330, 1365, 1400, 1435,
1470, 1505, 1540, 1575, 1610, 1645, 1680, 1715, 1750, 1785, 1820, 1855, 1890, 1
925, 1960, 1995]
```

In [15]:

```
1 a=[]
2 n=int(input("Enter the Number of Elements"))
3 for x in range(0,n):
4     b=str(input("Enter The List"))
5     a.append(b)
6 a.sort()
7 print("Alphabetically",a)
8 print()
9 a.reverse()
10 print("ReverseAlphabetically",a)
11
12
13
```

Enter the Number of Elements2

Enter The ListNachi

Enter The ListPranv

Alphabetically ['Nachi', 'Pranv']

ReverseAlphabetically ['Pranv', 'Nachi']

In [37]:

```
1 import math
2 print([x for x in range(500, 1000)if(x%5==0 and x==math.isqrt(x) ** 2)])
3
```

[625, 900]

```
In [38]: 1 a=[]
2 n=int(input("Enter number of elements:"))
3 for i in range(1,n+1):
4     b=int(input("Enter element:"))
5     a.append(b)
6 print("the element of the list are",a)
7 print("averageof the number in the list is",sum(a)/len(a))
```

```
Enter number of elements:5
Enter element:20
Enter element:21
Enter element:22
Enter element:23
Enter element:24
the element of the list are [20, 21, 22, 23, 24]
averageof the number in the list is 22.0
```

```
In [1]: 1 print([x for x in range(1000)if x%2==0 and x%5==0])
2 print()
3 print([x for x in range(1000)if x%2==1 and x%5==0])
4
```

```
[0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170,
180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330,
340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490,
500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650,
660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810,
820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970,
980, 990]
```

```
[5, 15, 25, 35, 45, 55, 65, 75, 85, 95, 105, 115, 125, 135, 145, 155, 165, 175,
185, 195, 205, 215, 225, 235, 245, 255, 265, 275, 285, 295, 305, 315, 325, 335,
345, 355, 365, 375, 385, 395, 405, 415, 425, 435, 445, 455, 465, 475, 485, 495,
505, 515, 525, 535, 545, 555, 565, 575, 585, 595, 605, 615, 625, 635, 645, 655,
665, 675, 685, 695, 705, 715, 725, 735, 745, 755, 765, 775, 785, 795, 805, 815,
825, 835, 845, 855, 865, 875, 885, 895, 905, 915, 925, 935, 945, 955, 965, 975,
985, 995]
```

## TUPLE PROBLEMS

```
In [52]: 1 n, m = [int(x) for x in input("Enter two value: ").split()]
2 print([(x,x**2) for x in range(n,m+1)])
```

```
Enter two value: 2 10
[(2, 4), (3, 9), (4, 16), (5, 25), (6, 36), (7, 49), (8, 64), (9, 81), (10, 100)]
```

In [54]:

```
1 t=[]
2 a=[]
3 n=int(input("enter num of students: "))
4 for i in range(0,n):
5     e=int(input("enter rollnum: "))
6     j=input("enter name: ")
7     t.append(e)
8     a.append(j)
9 m = [(t[i], a[i]) for i in range(0, len(t))]
10 print("input: ",m)
11 m.sort(key = lambda x:x[1])
12 print("output",m)
```

```
enter num of students: 1
enter rollnum: 11
enter name: Nachi
input: [(11, 'Nachi')]
output [(11, 'Nachi')]
```

In [55]:

```
1 t=[]
2 a=[]
3 n=int(input("enter num of students: "))
4 for i in range(0,n):
5     e=int(input("enter rollnum: "))
6     j=input("enter name: ")
7     t.append(e)
8     a.append(j)
9 m = [(t[i], a[i]) for i in range(0, len(t))]
10 print("input: ",m)
11 m.sort(key = lambda x:x[0])
12 print("output",m)
```

```
enter num of students: 2
enter rollnum: 11
enter name: Nachi
enter rollnum: 12
enter name: Pranav
input: [(11, 'Nachi'), (12, 'Pranav')]
output [(11, 'Nachi'), (12, 'Pranav')]
```

In [56]:

```
1 t=[]
2 a=[]
3 n=int(input("enter num of students: "))
4 for i in range(0,n):
5     e=int(input("enter rollnum: "))
6     j=input("enter name: ")
7     t.append(e)
8     a.append(j)
9 m = [(t[i], a[i]) for i in range(0, len(t))]
10 print("input: ",m)
11 m.sort(key = lambda x:x[1], reverse=1)
12 print("output",m)
```

```
enter num of students: 2
enter rollnum: 11
enter name: Nachi
enter rollnum: 12
enter name: Pranav
input: [(11, 'Nachi'), (12, 'Pranav')]
output [(12, 'Pranav'), (11, 'Nachi')]
```

In [57]:

```
1 t=[]
2 a=[]
3 n=int(input("enter num of students: "))
4 for i in range(0,n):
5     e=int(input("enter rollnum: "))
6     j=input("enter name: ")
7     t.append(e)
8     a.append(j)
9 m = [(t[i], a[i]) for i in range(0, len(t))]
10 print("input: ",m)
11 m.sort(key = lambda x:x[0], reverse=1)
12 print("output",m)
```

```
enter num of students: 2
enter rollnum: 11
enter name: Nachi
enter rollnum: 12
enter name: Pranav
input: [(11, 'Nachi'), (12, 'Pranav')]
output [(12, 'Pranav'), (11, 'Nachi')]
```

In [2]:

```
1 txt = 'this is aiet in mijar'
2 words = txt.split()
3 t = list()
4 for word in words:
5     t.append((len(word), word))
6     t.sort()
7     res = list()
8 for length, word in t:
9     res.append(word)
10 print(res)
```

```
['in', 'is', 'aiet', 'this', 'mijar']
```

In [ ]:

1