

In [1]:

```
import heapq

def main():
    Listfac = []

    def NumFactor(n):
        global average
        count_fact = 0
        for i in range(1, n+1):
            if n % i == 0:
                print(i, end = ", ")
                Listfac.append(i)
                count_fact += 1
                heapq.nlargest(3, Listfac)
                average = round(sum(heapq.nlargest(3, Listfac ))/len(heapq.nlargest(3, Listfac )), 2)
        print("\nList = ", Listfac)
        return count_fact

    n = int(input("\nEnter a number: "))
    x = NumFactor(n)

    print("The count is:", x)

    if x < 10:
        print("This is too less. Do you want to continue?")
    if x > 10:
        print("The three highest factors are:", heapq.nlargest(3, Listfac))
        print("Their average =", average)
        print("Do you want to continue?")

    while True:
        m = input("Enter Y for another number or N to quit: ").upper()
        if m == "Y":
            main()
            break
        if m == "N":
            break

main()
```

```
Enter a number: 60
1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60,
List = [1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60]
The count is: 12
The three highest factors are: [60, 30, 20]
Their average = 36.67
Do you want to continue?
Enter Y for another number or N to quit: y
```

```
Enter a number: 30
1, 2, 3, 5, 6, 10, 15, 30,
List = [1, 2, 3, 5, 6, 10, 15, 30]
The count is: 8
This is too less. Do you want to continue?
Enter Y for another number or N to quit: Y
```

```
Enter a number: 72
1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72,
List = [1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72]
The count is: 12
The three highest factors are: [72, 36, 24]
Their average = 44.0
Do you want to continue?
Enter Y for another number or N to quit: n
```

In []:

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