In [1]:
```
for i in range(1,15,5):
    print(i,end=" ")
```

```
1 6 11
```

In [3]:
```
for k in range(20,30,-2):
    print(k)
```

In [9]:
```
#program to check vowels in that name
m=input("Enter your name")
for i in m:
    if i=='a' or i=='e' or i=='i' or i=='o' or i=='u':
        print(i,end= " ")
```

```
Enter your namerushi
u i
```

- WAP to print all factors of a given number.

    i/p: enter a number: 18
    o/p: 1 2 3 6 9 18

In [11]:
```
# task-1
n = int(input("Enter a number: "))
for i in range(1,n+1):
    if n%i==0:
        print(i,end=" ")
```

```
Enter a number: 200
1 2 4 5 8 10 20 25 40 50 100 200
```

In [14]:
```
# even factors
n = int(input("Enter a number: "))
for i in range(1,n+1):
    if n%i==0 and i%2==0:
        print(i,end=" ")
```

```
Enter a number: 10
2 10
```

In [15]:
```
m = int(input("Enter first value: "))
n = int(input("Enter second value: "))
for i in range(m,n+1):
    print(i)
```

```
Enter first value: 1
Enter second value: 7
1
2
3
4
5
6
7
```

Tasks

- WAP to print common factors for given two numbers
- WAP to print all consonants in a given string
- WAP to print multiplication table for a given number
- WAP to print all odd numbers in a given range.
- WAP to print sum of all even factors of a given number.
- WAP to count number of factors of a given number.
- WAP to print sum of all factors of a given number.
- WAP to print factorial value of a given number.
- WAP to number of vowels and consonants in a given string.
- prime number program
- abundant or excessive number

```
12 --> 1 2 3 4 6 = 16
sum > given num ==> abundant number
else excessive number
```

In [21]:
```
# Task-1
a = int(input())
b = int(input())
if a>b:n = b
else:n = a
for i in range(1,n+1):
    if a%i==0 and b%i==0:
        print(i)
```

```
19
11
1
```

In [ ]:
```
100 --> 1 2 4 5 10 20 25 50 100
200 --> 1 2 4 5 8 10 20 25 40 50 100 200
```

In [ ]:
```
18 --> 1 2 3 6 9 18
12 --> 1 2 3 4 6 12
```

In [24]:
```
# Task-2
s = input("Enter ur name")
for i in s:
    if i!='a' and i!='e' and i!='i' and i!='o' and i!='u':
        print(i)
```

```
Enter ur nameRUSHI
R
U
S
H
I
```

In [27]:
```
s = input("Enter ur name")
for i in s:
    if i not in 'aeiouAEIOU':
        print(i)
```

```
Enter ur namevisvoDaYA
v
s
v
D
Y
```

In [29]:
```
# WAP to print sum of all even factors of a given number.
a = int(input("Enter a number: "))
efs=0
for i in range(1,a+1):
    if a%i==0 and i%2==0:
        efs += i
print(efs)
```

```
Enter a number: 18
26
```

In [32]:
```
# WAP to print multiplication of all odd factors
#of a given number.
b = int(input("Enter a number: "))
ofm=1
for i in range(1,b+1):
    if b%i==0 and i%2==1:
        ofm *= i
print(ofm)
```

```
Enter a number: 15
225
```

In [34]:
```
# factors count
n = int(input("Enter a number: "))
c = 0
for i in range(1,n+1):
    if n%i==0:
        c += 1
print(c)
```

```
Enter a number: 200
12
```

In [36]:
```
# factors sum
n = int(input("Enter a number: "))
s = 0
for i in range(1,n):
    if n%i==0:
        s += i
print(s)
```

```
Enter a number: 10
8
```

In [8]:
```
# perfect number
# 6 --> 1 2 3
# 28 --> 1 2 4 7 14

n = int(input("Enter a number: "))
s = 0
for i in range(1,n//2+1):
    if n%i==0:
        s += i
if n==s:
    print("Perfect number")
else:
    print("Not a perfect number")
```

```
Enter a number: 6
Perfect number
```

While loop

- based on a condition if we want to repeat the execution of one or more statements then we use while loop.

```
var initialization
while condition:
  statements
  incre/decre
```

In [ ]:
```
for i in range(11):
    print(i)
```

In [2]:
```
# 1 to 10 number using while loop
i=1
while i<11:
    print(i,end=" ")
    i += 1
```

```
1 2 3 4 5 6 7 8 9 10
```

```
20 19 18 17 16 15 14 13 12 11 10
```

In [3]:
```
# 10 to 20 numbers in reverse order using while loop
i=20
while i>=10:
    print(i)
    i -= 1
```

```
20
19
18
17
16
15
14
13
12
11
10
```

In [1]:
```
# factors
m = int(input("Enter a number: "))
i = 1
while i<=m:
    if m%i==0:
        print(i,end=" ")
    i += 1
```

```
Enter a number: 14
1 2 7 14
```

- Practice all examples with while loop

Loop control Statements

- break
  - to terminate or close the entire loop based on a condition.
- continue
  - to skip the iteration at a particular condition.
- pass

- to write a empty loops or conditions.

In [3]:
```
for i in range(10,50):
    if i==26:
        break
    print(i,end=" ")
```

```
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
```

In [5]:
```
for i in range(10,30):
    if i%4==0 and i%6==0:
        continue
    print(i,end=" ")
```

```
10 11 13 14 15 16 17 18 19 20 21 22 23 25 26 27 28 29
```

In [7]:
```
for i in range(1,10):
    pass
```

- wap to skip all the values which are divible by 3 and not by 6

In [ ]:
```

```