

## ✓ for loop

```
# print 1 to 10
```

```
for i in range(1,10+1,1):  
    print(i)
```

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

```
# prints 1 to n numberrrs and sum and multiplication of it
```

```
num = int(input(print("enter your number here")))  
sum = 0  
mul = 1  
for i in range(1,num+1,1):  
    print(i)  
    sum = sum + i  
    mul = mul * i  
print("your sum is:",sum)  
print("your mul is:",mul)
```

```
→ enter your number here  
   None  
   5  
   1  
   2  
   3  
   4  
   5  
   your sum is: 15  
   your mul is: 120
```

## New Section

## ✓ New Section

```
# print 1 to n number in reverse order
```

```
num = int(input(print("enter your number here")))  
  
for i in range(num,1,-1):  
    print(i)
```

```
→ enter your number here  
   None  
   10  
   9  
   8  
   7  
   6  
   5  
   4  
   3  
   2
```

```
# prints odd numbers from 1 to n
```

```
num = int(input(print("enter your number here")))  
  
for i in range(1,num+1,1):  
    if(i%2!=0):  
        print("your odd numbers is:",i)
```

```
→ enter your number here  
   None  
   10  
   your odd numbers is: 1
```

```
your odd numbers is: 3
your odd numbers is: 5
your odd numbers is: 7
your odd numbers is: 9
```

```
# finds factors of a number
```

```
num = int(input(print("enter your number here")))

for i in range(1,num+1,1):
    if(num%i==0):
        print("your factors numbers is:",i)
```

```
↩ enter your number here
None6
your factors numbers is: 1
your factors numbers is: 2
your factors numbers is: 3
your factors numbers is: 6
```

```
# enters any numbers and print if it is a perfect number or not
```

```
num = int(input(print("enter your number here")))
sum = 0

for i in range(1,num,1):
    if(num%i==0):
        print("your factors numbers is:",i)
        sum = sum + i
print("your factors numbers sum is:",sum)

if(sum==num):
    print("your entered number is perfect number")
else:
    print("your entered number is not perfect number")
```

```
↩ enter your number here
None6
your factors numbers is: 1
your factors numbers is: 2
your factors numbers is: 3
your factors numbers sum is: 6
your entered number is perfect number
```

```
# checks if the number is prime or not
```

```
num = int(input(print("enter your number here")))

if(num>=2 and num>0 and num>1): # 0 to 1 is not prime numbers
    for i in range(2,num+1):
        if(num%i==0):
            print("no it's not a prime number",num)
            break
        else:
            print("yes,it's a prime number",num)
            break
    else:
        print("no it's not a prime number",num)
```

```
↩ enter your number here
None1
no it's not a prime number 1
```

## ✓ while loop

```
# print 1 to n numbers
```

```
i=1
while(i<10+1):
    print(i)
    i=i+1
```

```
↩ 1
2
3
4
```

5  
6  
7  
8  
9  
10

```
# print 1 to n numbers sum and multiplication of it
```

```
num = int(input(print("enter your number")))
```

```
sum=0  
mul=1
```

```
i=1  
while(i<num+1):  
    print(i)  
    sum=sum+i  
    mul=mul*i  
    i=i+1 # always at the last in while loop  
print("your sum is:",sum)  
print("your mul is:",mul)
```

```
↩ enter your number  
None5  
1  
2  
3  
4  
5  
your sum is: 15  
your mul is: 120
```

```
# print 1 to n numbers in reverse order
```

```
num = int(input(print("enter your number")))
```

```
i=num  
while(i+1>0):  
    print(i)  
    i=i-1
```

```
↩ enter your number  
None5  
5  
4  
3  
2  
1  
0
```

```
# odd numbers from 1 to n
```

```
num = int(input(print("enter your number")))
```

```
i=1  
while(i<num):  
    print(i)  
    i=i+2
```

```
↩ enter your number  
None10  
1  
3  
5  
7  
9
```

```
# finds factors of a number
```

```
num = int(input(print("enter your number")))
```

```
i=1  
while(i<num):  
    if(num%i==0):  
        print(i)  
    i=i+1
```

```
↩ enter your number  
None6  
1  
2  
3
```

```
# enters any number and prints if it is a perfect number or not (a number is said to be a perfect number if its is equal to the sum of its
# divisors)

num = int(input(print("enter your number")))

sum=0

i=1
while(i<num):
    if(num%i==0):
        print(i)
        sum=sum+i
        i=i+1

print("your sum is:",sum)

if(sum==num):
    print("your entered number is perfect number:",num)
else:
    print("your entered number is not perfect number:",num)
```

```
→ enter your number
None6
1
2
3
your sum is: 6
your entered number is perfect number: 6
```

```
# checks if the number is prime or not

num=int(input(print("enter your number")))

i=2
while(i<num):
    if(num%i==0):
        print("your entered number is not perfect number",num)
        break
    else:
        print("your entered number is perfect number",num)
        break
    i=i+1
```

```
→ enter your number
None8
your entered number is not perfect number 8
```

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