In [1]:
```
if True:
    print("Hello")
```

```
Hello
```

In [2]:
```
if True:
print("Hello") # with out space it gets error
```

```
  Cell In[2], line 2
    print("Hello") # with out space it gets error
    ^
IndentationError: expected an indented block after 'if' statement on line 1
```

In [3]:
```
if True:
    print("Hello")
    print("Priyanka ")
```

```
Hello
Priyanka
```

In [4]:
```
if False:
    print("Hello")
    print("Priyanka")
```

In [5]:
```
if True:
    print('Data Science')

print('bye for now')
```

```
Data Science
bye for now
```

In [6]:
```
if True:
    print('Data Science')

else:
    print('bye for now')
```

```
Data Science
```

In [7]:
```
if False:
    print('Data Science')

else:
    print('bye for now')
```

```
bye for now
```

write python code to check wheater number is even or odd

In [8]:
```
x=4
r= x%2
if r== 0:
   print("Even Number")
```

```
Even Number
```

In [9]:
```
x=5
r= x%2
```

```
if r==0:
    print("Even Number")
```

In [10]:
```
x = 6

r = x % 2

if r == 0:
    print('Even number')

if r == 1:
    print('odd number')
```

```
Even number
```

In [11]:
```
x = 6
r = x % 2

if r == 0:
    print('Even number')
print('odd number')
```

```
Even number
odd number
```

In [12]:
```
x=6
r= x%2
if r== 0:
   print("Even Number")
else:
 print("Odd Number")
```

```
Even Number
```

In [13]:
```
x=4
r= x%2
if r== 0:
   print("Even Number")
else:
 print("Odd Number")
```

```
Even Number
```

In [14]:
```
x=5
r= x%2
if r== 0:
   print("Even Number")
else:
 print("Odd Number")
```

```
Odd Number
```

In [15]:
```
x = 10
r = x % 2

if r == 0:
    print('Even number')
if r == 1:
    print('odd number')
```

```
Even number
```

In [16]:
```
x = 9
r = x % 2

if r == 0:
    print('Even number')

if r != 0:
    print('odd number')
```

```
odd number
```

Nested if

In [17]:
```
x = 3
r = x % 2

if r == 0:
    print('Even number')
    if x>5:
        print('greater number')

else:
    print('Odd Number')
```

```
Odd Number
```

In [18]:
```
x = 6
r = x % 2

if r == 0:
    print('Even number')

    if x>5:
        print('greater number')
    else:
        print('smaller number')

else:
    print('Odd Number')
```

```
Even number
greater number
```

In [19]:
```
x = 2

if x == 1:
    print("one")
if x == 2:
    print("two")
if x == 3:
    print("three")
```

```
two
```

In [20]:
```
x = 1

if x == 1:
    print("one")
if x == 2:
    print("two")
```

```
if x == 3:
    print("three")
```

```
one
```

In [21]:
```
x = 2

if x == 1:
    print("one")
elif x == 2:
    print("two")
elif x == 3:
    print("three")
else:
    print("Number is not found")
```

```
two
```

In [22]:
```
x = 4

if x == 1:
    print("one")
elif x == 2:
    print("two")
elif x == 3:
    print("three")
else:
    print("Number is not found")
```

```
Number is not found
```

In [23]:
```
num = int(input("Enter a number: "))

if num > 0:
 print("Positive")
elif num < 0:
 print("Negative")
else:
 print("Zero")
```

```
Positive
```

In [24]:
```
i=1
while i<=5:
    print("Data science:",i)
    i=i+1
```

```
Data science: 1
Data science: 2
Data science: 3
Data science: 4
Data science: 5
```

In [25]:
```
i=5
while i>=1:
    print("Data science:",i)
    i=i-1
```

```
Data science: 5
Data science: 4
Data science: 3
Data science: 2
Data science: 1
```

In [26]:
```python
i = 1
while i <= 5:
    print("data science")
    j = 1
    while j <= 4:
        print("technology")
        j = j + 1
    i = i + 1
```

```
data science
technology
technology
technology
technology
data science
technology
technology
technology
technology
data science
technology
technology
technology
technology
data science
technology
technology
technology
technology
data science
technology
technology
technology
technology
```

In [27]:
```python
i = 1
while i <= 2:
    j = 0
    while j <= 2:
        print(i*j, end="")  # Print j values side by side
        j+=1
    print()  # Move to the next line
    i+= 1
```

```
012
024
```

In [28]:
```
i = 1
while i <= 4:
    j = 0
    while j <= 3:
        print(i*j, end="")  # Print j values side by side
        j+=1
    print()  # Move to the next line
    i+= 1
```

```
0123
0246
0369
04812
```

In [29]:
```
name='nit'
for j in name:
    print(j)
```

```
n
i
t
```

In [30]:
```
name1=[1,3.5,'hello']
for i in name1:
    print(i)
```

```
1
3.5
hello
```

In [31]:
```
range(5)
```

Out[31]:
```
range(0, 5)
```

In [32]:
```
for i in range(2,5):
    print(i)
```

```
2
3
4
```

In [33]:
```
for i in range(1,10,5):
    print(i)
```

```
1
6
```

In [34]:
```
for i in range(5):
    print(i)
```

```
0
1
2
3
4
```

In [35]:
```
for i in range(1,51):
    if i%5==0:
        print(i)
```

```
5
10
15
20
25
30
35
40
45
50
```

In [36]:
```
for i in range(1,31):
    if i%3==0:
        print(i)
```

```
3
6
9
12
15
18
21
24
27
30
```

In [37]:
```
for i in range(1,31):
    if i%3!=0:
        print(i)
```

```
1
2
4
5
7
8
10
11
13
14
16
17
19
20
22
23
25
26
28
29
```

In [38]:
```
for i in range(1,51):
    if i%5!=0:
        print(i)
```

1
2
3
4
6
7
8
9
11
12
13
14
16
17
18
19
21
22
23
24
26
27
28
29
31
32
33
34
36
37
38
39
41
42
43
44
46
47
48
49

In [39]:
```
x = int(input('How Many Chocolates You Want:? '))
i = 1
while i <= x:
    i += 1
```

In [40]:
```
ava=5
x = int(input('How Many Chocolates You Want:? '))
i = 1
while i <= x:
    print('choclet')
    i += 1
```

```
choclet
choclet
choclet
choclet
```

In [41]:
```
available_choclet = 5
x = int(input('How Many Chocolates You Want:? '))
```

```
i = 1
while i<=x:
    print("choclet")
    i += 1
    print("bye for now")
```

```
choclet
bye for now
choclet
bye for now
```

In [42]:
```
for i in range(1,11):
    print(i)
```

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

In [43]:
```
for i in range(1, 11):
    if i == 6:
        break
    print(i)
```

```
1
2
3
4
5
```

In [44]:
```
for i in range(1, 11):
    if i == 3:
        continue  # Skip printing when i is 3
    print(i)
```

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

In [45]:
```
for i in range(1, 11):
    if i == 6:
        continue
    print("Hello:", i)
```

```
Hello: 1
Hello: 2
Hello: 3
Hello: 4
Hello: 5
Hello: 7
Hello: 8
Hello: 9
Hello: 10
```

In [46]:
```
for i in range(1,11):
```

```
  Cell In[46], line 1
    for i in range(1,11):
                         ^
SyntaxError: incomplete input
```

In [47]:
```
for i in range(1, 11):
    pass
```

In [48]:
```
for i in range(1,51):

    if i%3 == 0:
        continue
    print(i)
print('end')
```

```
1
2
4
5
7
8
10
11
13
14
16
17
19
20
22
23
25
26
28
29
31
32
34
35
37
38
40
41
43
44
46
47
49
50
end
```

In [49]:
```python
for i in range(1,51):

    if i%3 == 0 or i%5 == 0:
        continue
    print(i)
#print('end')
```

```
1
2
4
7
8
11
13
14
16
17
19
22
23
26
28
29
31
32
34
37
38
41
43
44
46
47
49
```

In [50]:
```python
for i in range(1,50):
    if i%3 == 0 or i%5 == 0:
        continue
    print(i)
print('end')
```

```
1
2
4
7
8
11
13
14
16
17
19
22
23
26
28
29
31
32
34
37
38
41
43
44
46
47
49
end
```

In [51]:
```python
for i in range(1,51):

    if (i%2 == 0):
        #print('even')
        continue
    else:
        print(i)
print('bye')
```

```
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
49
bye
```

In [52]:
```
print('# # # #')
print('# # # #')
print('# # # #')
print('# # # #')
```

```
# # # #
# # # #
# # # #
# # # #
```

In [53]:
```
for i in range(1,5):
    i=i+1
    print('* * * *')
```

```
* * * *
* * * *
* * * *
* * * *
```

In [54]:
```
for i in range(1,5):
   if i<=5:
    print('* * * *')
```

```
* * * *
* * * *
* * * *
* * * *
```

In [55]:
```
for j in range(4):
    print('# # # #')
```

```
# # # #
# # # #
# # # #
# # # #
```

In [56]:
```
for j in range(4):
    print('#', end = " ")
```

```
# # # #
```

In [57]:
```
for j in range(4):
    print('#', end=" ")

for j in range(4):
    print('#', end=" ")
```

```
# # # # # # # #
```

In [58]:
```
for j in range(4):
    print('#', end=" ")

print()

for j in range(4):
    print('#', end=" ")
```

```
# # # #
# # # #
```

In [59]:
```
for j in range(4):
    print('#', end="  ")

print()

for j in range(4):
    print('#', end="  ")

print()

for j in range(4):
    print('#', end="  ")

print()

for j in range(4):
    print('#', end="  ")
```

```
#  #  #  #
#  #  #  #
#  #  #  #
#  #  #  #
```

In [60]:
```
for i in range(4):
    for j in range(4):
        print('#', end="  ")
    print()
```

```
#  #  #  #
#  #  #  #
#  #  #  #
#  #  #  #
```

In [61]:
```
for i in range(4):
    for j in range(i+1):
        print('#', end = " ")
    print()
```

```
#
# #
# # #
# # # #
```

In [62]:
```
for i in range(1,5):
    print("# "*i)
```

```
#
# #
# # #
# # # #
```

In [63]:
```
for i in range(1,5):
    for j in range(4):
        if i>j:
            print("#",end=" ")
    print()
```

```
#
# #
# # #
# # # #
```

In [64]:
```
list(range(5))
```

Out[64]: [0, 1, 2, 3, 4]

In [65]:
```
for i in range(4):
    for j in range(i):
        print('#', end="  ")
    print()
```

```
#
#  #
#  #  #
```

In [66]:
```
for i in range(4):
    for j in range(i+1):
        print('#', end="  ")
    print()
```

```
#
#  #
#  #  #
#  #  #  #
```

In [67]:
```
for i in range(4):
    for j in range(4-i):
        print('#', end="  ")
    print()
```

```
#  #  #  #
#  #  #
#  #
#
```

In [68]:
```
for i in range(1,5):
    print("# "*(5-i))
```

```
# # # #
# # #
# #
#
```

In [69]:
```
nums = [12,15,18,21,26, 30, 40]

for num in nums:
    if num % 5 == 0:
        print(num)
```

```
15
30
40
```

In [70]:
```
nums = [12,14,18,21,25,30,35]

for num in nums:
    if num % 5 == 0:
        print(num)
```

```
25
30
35
```

In [71]:
```
nums = [12,14,18,21,25,20]

for num in nums:
    if num % 5 == 0:
        print(num)
```

```
25
20
```

In [72]:
```
nums = [12,14,18,21,20,25]

for num in nums:
    if num % 5 == 0:
        print(num)
        break
```

```
20
```

In [73]:
```
nums = [12,14,18,21,20,25]

for num in nums:
    if num % 5 == 0:
        print(num)
        break
```

```
20
```

In [74]:
```
nums = [10,14,18,21,5,10]

for num in nums:
    if num % 5 == 0:
        print(num)
        break
```

```
10
```

In [75]:
```
nums = [7,14,18,21,23,27] #hear there is no number which is divisible by 5 we go

for num in nums:
    if num % 5 == 0:
        print(num)
        break
```

In [76]:
```
nums = [7,14,18,21,23,27,29] #hear there is no number which is divisible by 5 we

for num in nums:
    if num % 5 == 0:
        print(num)
        break
    else:
        print('Number Not Found')
```

```
Number Not Found
Number Not Found
Number Not Found
Number Not Found
Number Not Found
Number Not Found
Number Not Found
```

In [77]:
```
nums = [7,14] #hear there is no number which is divisible by 5 we got output as
for num in nums:
    if num % 5 == 0:
        print(num)
        break
    else:
        print('Number Not Found')
```

```
Number Not Found
Number Not Found
```

In [78]:
```
nums = [7,14,18,21,23,27] #hear there is no number which is divisible by 5 we go

for num in nums:
    if num % 5 == 0:
        print(num)
        break
else:
        print('Number Not Found')
```

```
Number Not Found
```

In [79]:
```
nums = [10,14,18,21,20,27] #hear there is no number which is divisible by 5 we g

for num in nums:
    if num % 5 == 0:
        print(num)
        break
else:
        print('Not Found')
```

```
10
```

In [80]:
```
nums = [10,14,18,21,20,27,30] #hear there is no number which is divisible by 5 w
```

```
for num in nums:
    if num % 5 == 0:
        print(num)
        #break
else:
        print('Not Found')
```

```
10
20
30
Not Found
```

In [81]:
```
nums = [10,14,18,21,20,27] #hear there is no number which is divisible by 5 we g
for num in nums:
    if num % 5 == 0:
        print(num)
        break
else:
        print('Not Found')
```

```
10
```

In [82]:
```
num = 14

for i in range(2,num):
    if num % i == 0:
        print('Not prime Number')
        break
else:
    print('Prime Number')
```

```
Not prime Number
```

In [83]:
```
num = 13

for i in range(2,num):
    if num % i == 0:
        print('Not prime Number')
        break
else:
    print('Prime Number')
```

```
Prime Number
```

In [84]:
```
from array import *

arr = array('i', [])  # 'i' is for signed integer

n = int(input('Enter the length of the array: '))

for i in range(n):
    x = int(input('Enter the next value: '))
    arr.append(x)

print("The array is:", arr)
```

```
The array is: array('i', [3, 1])
```

In [85]:
```
from array import *
arr = array('i',[])
n = int(input('Enter the length of the array'))
```

```
for i in range(5):
    x = int(input('Enter the next value'))
    arr.append(x)
print(arr)
```

```
array('i', [3, 3, 3, 3, 2])
```

In [87]:
```
from array import *

arr = array('i', [])  # Create an empty array of integers

n = int(input('Enter the length of the array: '))  # Convert to integer

for i in range(n):
    x = int(input('Enter the next value: '))  # Convert to integer
    arr.append(x)

print("The array is:", arr)
```

```
The array is: array('i', [2, 3, 1])
```

In [88]:
```
from numpy import *
arr = array([1,2,3,4,5])
print(arr)
type(arr)
```

```
[1 2 3 4 5]
```

Out[88]:
```
numpy.ndarray
```

In [89]:
```
print(arr.dtype)
```

```
int32
```

In [90]:
```
arr = array([1,2,3,4,5.9])
print(arr)
```

```
[1.  2.  3.  4.  5.9]
```

In [91]:
```
print(arr.dtype)
```

```
float64
```

In [92]:
```
arr2 = array([1,2,3,4,5.9],float)
arr2
```

Out[92]:
```
array([1. , 2. , 3. , 4. , 5.9])
```

In [93]:
```
arr3 = array([1,2,3,4,5.6],int)
arr3
```

Out[93]:
```
array([1, 2, 3, 4, 5])
```

In [94]:
```
import numpy as np
```

In [95]:
```
arr4 = np.linspace(0, 16, 10) # break the code between 10 spaces between 0 to 16
arr4
```

Out[95]:
```
array([ 0.        ,  1.77777778,  3.55555556,  5.33333333,  7.11111111,
        8.88888889, 10.66666667, 12.44444444, 14.22222222, 16.        ])
```

In [96]:
```
arr5 = np.arange(0,10,2) # arange - as range
arr5
```

Out[96]:
```
array([0, 2, 4, 6, 8])
```

In [97]:
```
arr6 = np.zeros(5)
arr6
```

Out[97]:
```
array([0., 0., 0., 0., 0.])
```

In [98]:
```
arr7 = np.ones(5)
arr7
```

Out[98]:
```
array([1., 1., 1., 1., 1.])
```

In [ ]:
```
import tkinter as tk
def on_button_click():
    label.config(text="Button clicked!")
root = tk.Tk()
root.title("Simple Tkinter App")
label = tk.Label(root, text="Hello, Tkinter!")
label.pack(pady=20)
button = tk.Button(root, text="Click Me", command=on_button_click)
button.pack(pady=20)
root.mainloop()
```

In [ ]:
```
import tkinter as tk
from tkinter import messagebox

# Function to be called when the button is clicked
def on_button_click():
    user_input = entry.get()
    messagebox.showinfo("Information", f"You entered: {user_input}")

# Create the main application window
root = tk.Tk()
root.title("Simple Tkinter App")

# Create a label widget
label = tk.Label(root, text="Enter something:")
label.pack(pady=10)

# Create a text entry widget
entry = tk.Entry(root, width=30)
entry.pack(pady=10)
button = tk.Button(root, text="Submit", command=on_button_click)
button.pack(pady=10)

# Run the application
root.mainloop()
```

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]: