In [10]:
```
print("Hellooo")
print("Hellooo")
print("Hellooo")
print("Hellooo")

## instead of repeating many times, we can use a while loop - block of code that do

i = 3                    ##initial value, how many times you want to print Hello
while i != 0:            ##loop continues as long as i is not 0.
    print("Hello")
    i = i - 1            ##decrease i by 1. and the loop stops when i becomes 0.

##other way of doing
i = 0
while i < 3:           ##loop continues as long as i is less than 3.
    print("Hi")
    i += 1
```

```
Hellooo
Hellooo
Hellooo
Hellooo
Hello
Hello
Hello
Hi
Hi
Hi
```

In [12]:
```
for i in [0,1,2]:
    print("Hii")

##other way of doing
for i in range(3):   ## range -generates numbers [0, 1, 2] ## loop runs 3 times, on
    print("Hello")   ##prints "Hello" each iteration.
```

```
Hii
Hii
Hii
Hello
Hello
Hello
```

In [16]:
```
while True:
    n = int(input())
    if n > 0 :
        break

for greetings in range(n):
    print("Hi! How are you?")


## What  if the user gives a negative value??
while True:
    n = int(input())
```

```
    if n < 0 :
        continue    ### If n is negative, ask again
    else:
        break       #### If n is non-negative, exit the loop

for greetings in range(n):
    print("Hi! How are you?")
```

```
Hi! How are you?
Hi! How are you?
Hi! How are you?
Hi! How are you?
Hi! How are you?
Hi! How are you?
```

In [23]:
```
##Using def function
def main():
    number = get_number()
    Hi(number)

def get_number():
    while True:
         n = int(input())
         if n > 0 :
              break
    return n

def Hi(n):
    for _ in range(n):
        print("Hi")

main()
```

```
Hi
Hi
Hi
Hi
Hi
```

In [27]:
```
## Lists
students = ["Jim" , "Kavin" , "John" , "Padma" , "Ray"]
print(students[3])   ##you want to get the specific student name - say Padma
print(students[0:4])

##using for loop we can do the same thing
for student in students:
    print(student)
```

```
Padma
['Jim', 'Kavin', 'John', 'Padma']
Jim
Kavin
John
Padma
Ray
```

In [33]:
```
students = ["Jim" , "Kavin" , "John" , "Padma" , "Ray"]

for i in range(len(students)):
    print(i)

for i in range(len(students)):   ##generates numbers from 0 to len(students)
    print(students[i])

for i in range(len(students)):   ## if we want to get the rank list say
    print(i+1 , students[i])
```

```
0
1
2
3
4
Jim
Kavin
John
Padma
Ray
1 Jim
2 Kavin
3 John
4 Padma
5 Ray
```

In [39]:
```
##Dictionaries
students = ["Jim", "Kavin", "John"]
houses = ["Hongasandra", "Begur", "BTM"]
##when you want students with a house

Information = {"Jim" : "Hongasandra",
               "Kavin" : "Begur",
               "John" :  "BTM"
              }
print(Information["Jim"])
print(Information["Kavin"])
```

```
Hongasandra
Begur
```

In [42]:
```
Information = {"Jim" : "Hongasandra",
               "Kavin" : "Begur",
               "John" :  "BTM"}

for student in Information:
    print(student)

for student in Information:
    print(student,Information[student] , sep = ":")
```

```
Jim
Kavin
John
Jim:Hongasandra
Kavin:Begur
John:BTM
```

In [45]:
```python
##List of Dictionaries
Information = [
    {"name" : "Jim" , "house" : "Hongasandra" , "age" : "34"},
    {"name" : "Kavin" , "house" : "Begur" , "age" : "24"},
    {"name" : "John" , "house" : "BTM" , "age" : None}
]
print(Information)
```

```
[{'name': 'Jim', 'house': 'Hongasandra', 'age': '34'}, {'name': 'Kavin', 'house': 'Begur', 'age': '24'}, {'name': 'John', 'house': 'BTM', 'age': None}]
```

In [48]:
```python
for student in Information:
    print(student["name"])

for student in Information:
    print(student["age"])

for student in Information:
    print(student["name"],student["house"],student["age"],sep = ":")
```

```
Jim
Kavin
John
34
24
None
Jim:Hongasandra:34
Kavin:Begur:24
John:BTM:None
```

Coding Exercises

In [52]:
```python
##Display the multiplication table of a given number using a `for` loop.
number = int(input())

for i in range(10):
    multiplication = number * i
    print(f" {number} * {i} = {multiplication}")

print("-" * 30)

for i in range(1,10):
    multiplication = number * i
    print(f" {number} * {i} = {multiplication}")
```

```
6 * 0 = 0
6 * 1 = 6
6 * 2 = 12
6 * 3 = 18
6 * 4 = 24
6 * 5 = 30
6 * 6 = 36
6 * 7 = 42
6 * 8 = 48
6 * 9 = 54
------------------------------
6 * 1 = 6
6 * 2 = 12
6 * 3 = 18
6 * 4 = 24
6 * 5 = 30
6 * 6 = 36
6 * 7 = 42
6 * 8 = 48
6 * 9 = 54
```

In [65]:
```python
##Write a program to find the sum of digits of a given number using a `for` loop.

# Input number
number = input("Enter a number: ")

# Initialize sum
sum_digits = 0

for digit in number:
    sum_digits += int(digit)

print("Sum of digits:", sum_digits)
```

```
Sum of digits: 14
```

In [1]:
```python
##Write a program to compute the sum of all natural numbers less than 100 using a `

total_sum = 0
i = 1
while i < 100:
    total_sum += i
    i += 1

print("Sum of natural numbers:", total_sum)
```

```
Sum of natural numbers: 4950
```

In [2]:
```python
##Write a loop that keeps asking the user to enter a number until they enter zero.

while True:
    n = int(input())
    if n > 0:
        continue
    else:
```

```
        break

print("wow you entered zero")
```

```
wow you entered zero
```

In [3]:
```
##other way
while True:
    n = int(input())
    if n == 0:
        print("wow you entered zero")
        break
```

```
wow you entered zero
```

In [9]:
```
##(5) Print all numbers from 1 to 20 except those divisible by 3. Use  `continue`.

for i in range(1, 21):
    if i % 3 == 0:
        continue
    print(i)
```

```
1
2
4
5
7
8
10
11
13
14
16
17
19
20
```

Implement a program that prompts users to input a fruit and then outputs the number of calories in one portion of that fruit, per the FDA's poster for fruits, which is also available as text. Capitalization aside, assume that users will input fruits exactly as written in the poster (e.g., strawberries, not strawberry). Ignore any input that isn't a fruit.

In [ ]:
```

```

In [6]:
```
fruit_calories = {
    "apple": 130,
    "avocado": 50,
    "banana": 110,
    "cantaloupe": 50,
    "grapefruit": 60,
    "grapes": 90,
    "honeydew melon": 50,
    "kiwifruit": 90,
    "lemon": 15,
    "lime": 20,
    "nectarine": 60,
```

```
    "orange": 80,
    "peach": 60,
    "pear": 100,
    "pineapple": 50,
    "plums": 70,
    "strawberries": 50,
    "sweet cherries": 100,
    "tangerine": 50,
    "watermelon": 80,
}

fruits = input("Item : ").lower()

for fruit in fruit_calories:
    if fruit == fruits:
        print(f"calories : {fruit_calories[fruit]}")
```

```
calories : 130
```

Implement a program that prompts the user for a str of text and then outputs that same text but with all vowels (A, E, I, O, and U) omitted, whether inputted in uppercase or lowercase.

In [13]:
```
def main():
    # Get input from the user
    _input = input("Input: ")
    # Call the function to remove vowels
    text_without_vowels = remove_vowels(_input)
    # Print the final output
    print({text_without_vowels})

def remove_vowels(text):
    ###Removes vowels from a string.
    vowels = "aeiouAEIOU"
    result = ""

    for word in text:
        if word not in vowels:
            result += word

    return result

main()
```

```
{'DT SCNC'}
```