

FOR LOOP VS WHILE LOOP

- Both is for repetition jobs but what are differences
- For loop
 - When the number of iterations is known
 - Linear search
 - Process all number in an array
- While loop
 - When the number of iterations is unknow
 - Validation

FOR LOOP VS WHILE LOOP

- Some cases you can use “while loop” instead of “for loop”

1. Using a `for` loop:

```
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# Using for loop  
for number in range(1, 6):  
    print(number)
```

1. Using a `while` loop:

```
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# Using while loop without number += 1  
number = 1  
while number <= 5:  
    print(number)  
    number = number + 1
```

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```
1  
2  
3  
4  
5
```

FOR LOOP VS WHILE LOOP

- But for validation methods, while loop is only single option because we don't know how many time the user will input acceptable data

```
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# Example with a while loop using "and" for range validation  
lower_limit = 1  
upper_limit = 10  
  
user_input = int(input("Enter a number: "))  
  
while not (lower_limit <= user_input and user_input <= upper_limit):  
    print("The entered number is outside the range.")  
    user_input = int(input("Enter a number: "))  
  
print("The number is within the range.")
```

Can you write this program using "for loop"?