Solution Review: Lists of Even and Odd Numbers

This lesson gives a detailed review of how to print the list of even and odd numbers using the list comprehension.

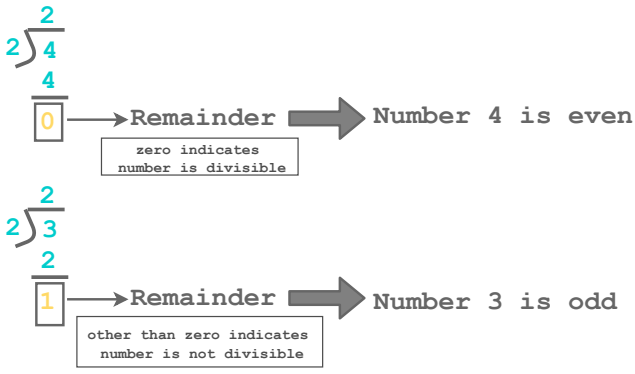
WE'LL COVER THE FOLLOWING

Solution 1: List Comprehension With Predicate

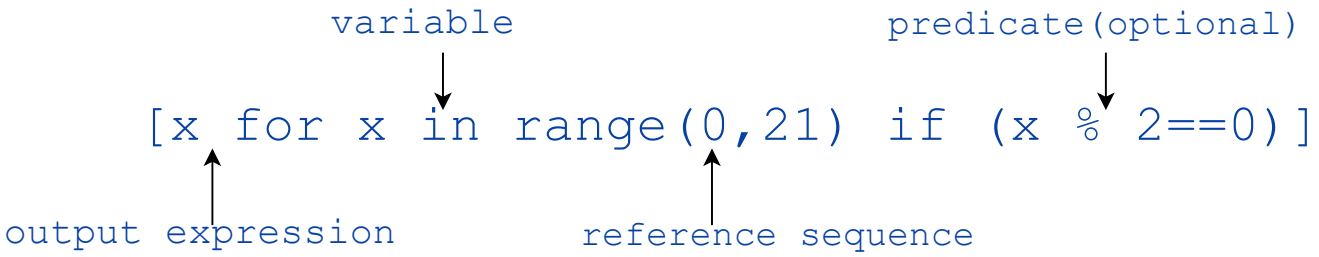
As we have already seen in the previous exercise, list comprehensions allow for in-place list creation using a range that mathematical operations can be done on; this solution uses the same approach.

- Use a list comprehension l1 that iterates over a range of 0-21 and puts an even number in the list if the value is divisible by 2 (using modulus operator). Additionally, use a list comprehension l2 that iterates over a range of 0-21 and puts an odd number in the list if the value is not divisible by 2.

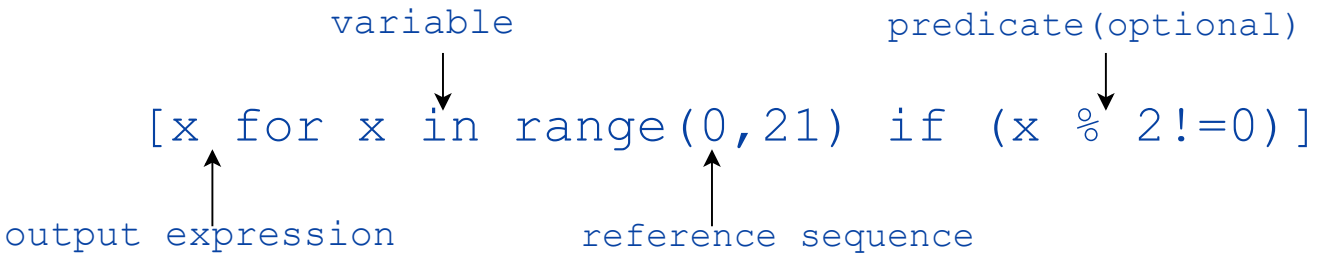
> **Note:** The statement `a % b` evaluates to the **remainder** of the division of variable `a` by variable `b`.



List of even numbers



List of odd numbers

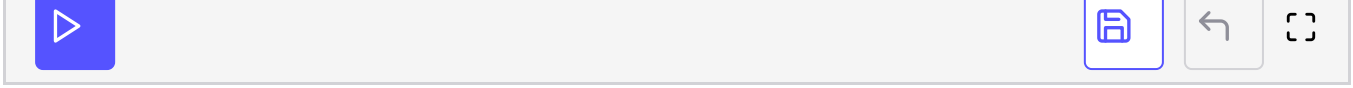



```
def ListofEvenOdds():
  l1 = []
  l2 = []
  l1 = [x for x in range(0, 21) if (x % 2 == 0)]
  l2 = [x for x in range(0, 21) if (x % 2 != 0)]
  return[l1, l2]

print(ListofEvenOdds())
```

Solution 2: List Comprehension

- Use a list comprehension l1 that iterates over a range of 0-21 and puts an even number in the list if the value is divisible by 2 (using modulus operator). Additionally, use a list comprehension l2 that iterates over a range of 0-21 and puts an odd number in the list if the value is not in l1.

```
def ListofEvenOdds():
  l1 = []
  l2 = []
  l1 = [x for x in range(0, 21) if (x % 2 == 0)]
  l2 = [x for x in range(0, 21) if (x not in l1)]
  return[l1, l2]

print(ListofEvenOdds())
```



Now, let’s check your knowledge about list comprehension in the next challenge.