assignment_00_solution

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To find the Fibonacci sequence for a given value n, tried to write two following functions:

1. `arbitrary_element_of(n)`: Both input and output are `int` type. Use a conditional loop `if` to check input value n is equal to zero or one, then assign the formula.

2. `fibonacci_sequence_of(n)`: This function used the first function (`arbitrary_element_of(n)`) from one to n'times . Which returnes the Fibonacci Sequence as a `list`.

Then print the sequences by using the function `fibonacci_sequence_of(n)` with `print()` function.

```python
[1]: """Functions"""

def  arbitrary_element_of(n):
    """
    Computes arbitrary elements of the parameter n of the Fibonacci sequence.

    Parameters
    ----------
    n : 'int' type
      Numbers

    Returns
    -------
    number : 'int' type

    """

    """
    Checking the input(n) is equal to zero or one, otherwise using the
    formula.

    """
    if n in {0,1}:
        return n
    else:
        return arbitrary_element_of(n-1) + arbitrary_element_of(n-2)
```

```python
"""Main Script"""

"""
    We will write a function by using the function arbitrary_element_of(n) to␣
 ↪find the
    Fibonacci sequence.

"""

"""
  Write a  function which returns the Fibonacci sequence starts from one.

"""

def fibonacci_sequence_of(n):

    """
    Compute Fibonacci sequence of the parameter n.

    Parameters
    ----------
    n :  'int' type
       Numbers

    Returns
    -------
    Series of numbers :  'list' type

    """

    """
    Using for loop to acces every value from 1 to n.

    """
    return [arbitrary_element_of(i) for i in range(1,n+1)]

"""Print the sequences"""

print("Fibonacci Sequence when n is 5,\nF5 is: ",fibonacci_sequence_of(5))
print("\nFibonacci Sequence when n is 6,\nF6 is: ",fibonacci_sequence_of(6))
print("\nFibonacci Sequence when n is 7,\nF7 is: ",fibonacci_sequence_of(7))
print("\nFibonacci Sequence when n is 25,\nF25 is: ",fibonacci_sequence_of(25))
print("\nFibonacci Sequence when n is 40,\nF40 is: ",fibonacci_sequence_of(40))
```

```
Fibonacci Sequence when n is 5,
F5 is:  [1, 1, 2, 3, 5]
```

```
Fibonacci Sequence when n is 6,
F6 is:  [1, 1, 2, 3, 5, 8]

Fibonacci Sequence when n is 7,
F7 is:  [1, 1, 2, 3, 5, 8, 13]

Fibonacci Sequence when n is 25,
F25 is:  [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597,
2584, 4181, 6765, 10946, 17711, 28657, 46368, 75025]

Fibonacci Sequence when n is 40,
F40 is:  [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597,
2584, 4181, 6765, 10946, 17711, 28657, 46368, 75025, 121393, 196418, 317811,
514229, 832040, 1346269, 2178309, 3524578, 5702887, 9227465, 14930352, 24157817,
39088169, 63245986, 102334155]
```