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## Fibonacci\_Sequence Algorithm

- 1. Create a function called `fibonacci\_sequence` that takes an input parameter `n`, representing the number of terms in the Fibonacci sequence to generate.
- 2. Check if `n` is less than or equal to 0. If so, raise a `ValueError` with the message "n must be a non-negative integer" to indicate an invalid input.
- 3. If `n` is equal to 1, return a list containing just the value 0 since the Fibonacci sequence starts with 0.
- 4. If `n` is equal to 2, return a list containing the values 0 and 1 since the Fibonacci sequence includes the numbers 0 and 1.
- 5. If `n` is greater than 2, recursively call the `fibonacci\_sequence` function with the argument `n 1` to generate the Fibonacci sequence up to the (n-1)th term.
- 6. Store the result of the recursive call in a list called 'sequence'.
- 7. Append the next term to the `sequence` list by summing the last two elements of the `sequence` list, `sequence[-1]` and `sequence[-2]`. This represents the nth term of the Fibonacci sequence.
- 8. Return the 'sequence' list.
- 9. Prompt the user to enter a positive integer and store it in the variable `n`.
- 10. Print a message indicating the term up to which the Fibonacci sequence is generated.
- 11. Call the `fibonacci\_sequence` function with the input `n` as the argument and store the resulting Fibonacci sequence in the variable `result`.
- 12. Print the Fibonacci sequence by using the `print()` function.