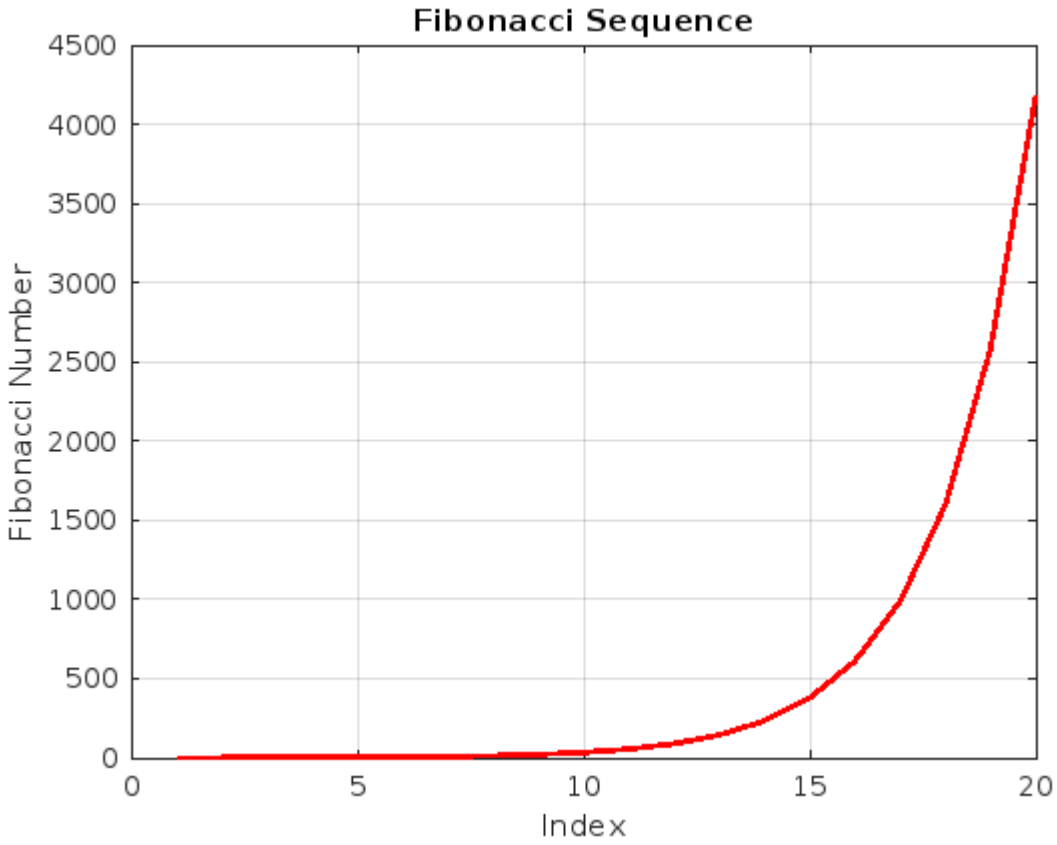
FIBONNACI Sequence – 0,1,1,2,3,5,8,13,21,34...

It is a series of numbers where a number is the sum of the preceding 2 numbers, starting with 0 and 1. NOTE: 10th Fibonacci number is 34.

```
Nth_fib = 20;
fib_array = [0,1];
for i = 3:Nth_fib
    fib_array(i) = fib_array(i-1) + fib_array(i-2);
end
disp(fib_array);

% Display the Nth Fibonacci Number:
disp(['The ', num2str(Nth_fib), 'th Fibonacci Number is ',
num2str(fib_array(end))]);

% Plot the Fibonacci Sequence on a graph:
figure;
plot(1:Nth_fib, fib_array, 'red', 'LineWidth', 2);
title('Fibonacci Sequence');
xlabel('Index');
ylabel('Fibonacci Number');
grid on;
```

```
  Columns 1 through 6

           0           1           1           2           3           5

  Columns 7 through 12

           8          13          21          34          55          89

  Columns 13 through 18

         144         233         377         610         987        1597

  Columns 19 through 20

        2584        4181

The 20th Fibonacci Number is 4181
```



Errors in MATLAB:

1. Syntax Errors – When there is a violation of the language's rules, and MATLAB will usually point these out immediately when you try to run the code. 2. Runtime Errors – If during the execution of the code, MATLAB encounters an operation that is impossible to perform, often leading to an error meassage. 3. Logical Errors: These are the trickiest to find because the code runs without any error messages, but the results are not as expected. These errors require a thorough understanding of the intended code.

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