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PWA1 Research Paper

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3/26/15

The Fibonacci sequence

The topic I chose to write about for my research paper is Fibonacci sequences. Before I discuss its relevance to java allow me to define this term. The Fibonacci sequence is a set of numbers that starts with a one or a zero, followed by a one, and proceeds based on the rule that each number is equal to the sum of the preceding two numbers. This may have been a concept in your middle school or high school curriculum if this brings back any memories. Now I will be discussing its relevance in the world of java programming.

Generally speaking, A Fibonacci sequence isn’t very hard to write if you just practice it. To start, creating one would involve creating 2 series elements and a variable for the limit at which you want your series to reach and/or stop at. Next, you would create a “for” loop to make the Fibonacci series and then store that into an array. Lastly, you would simply print out the Fibonacci series numbers and your output of the series would be a Fibonacci series up to your limit variable. That is its relevance to java but aside from that I have yet to find a practical use for this concept. Even so, it never hurts to polish your coding skills with advanced concepts.

Next, I will be speaking about Fibonacci’s history to bring some light to this concept’s origin. The phrase Fibonacci refers to a sequence of numbers studied by an Italian man by the name of “Leonardo Of Pisa,” which consequently ended up getting him the nickname “Fibonacci.” He was known as the first Italian person to study this concept and he was also the one who spread the sequence’s system through Europe in the early 13th century. He continued to make the sequence well known by publishing his book called *Liber Abaci*. To this very day he is still known as one of the greatest mathematicians of the middle Ages.

The Fibonacci sequence can also be found in nature surprisingly. It actually appears everywhere in Nature, from the leaf arrangement in plants, to the patterns of characteristics on flowers. Fibonacci numbers can be applied to the growth of all living things on this earth and even all of mankind. As you can see in Nikhat Parveen’s article “Fibonacci in Nature,” there are many different examples of Fibonacci numbers that you can find in many different living organisms. The remarkable thing about these organisms is that they don’t live to abide by or stick to the sequence at all. They simply grow in the most efficient way that’s possible at the time. This just goes to show how useful and truly revolutionary Fibonacci’s findings were on this subject as it is a part of many organisms’ every day lives.

Cited Sources:

<http://jwilson.coe.uga.edu/emat6680/parveen/fib_nature.htm>

<http://www.java-examples.com/fibonacci-series-java-example>

<http://www.barcodesinc.com/articles/fibonacci-numbers.htm>