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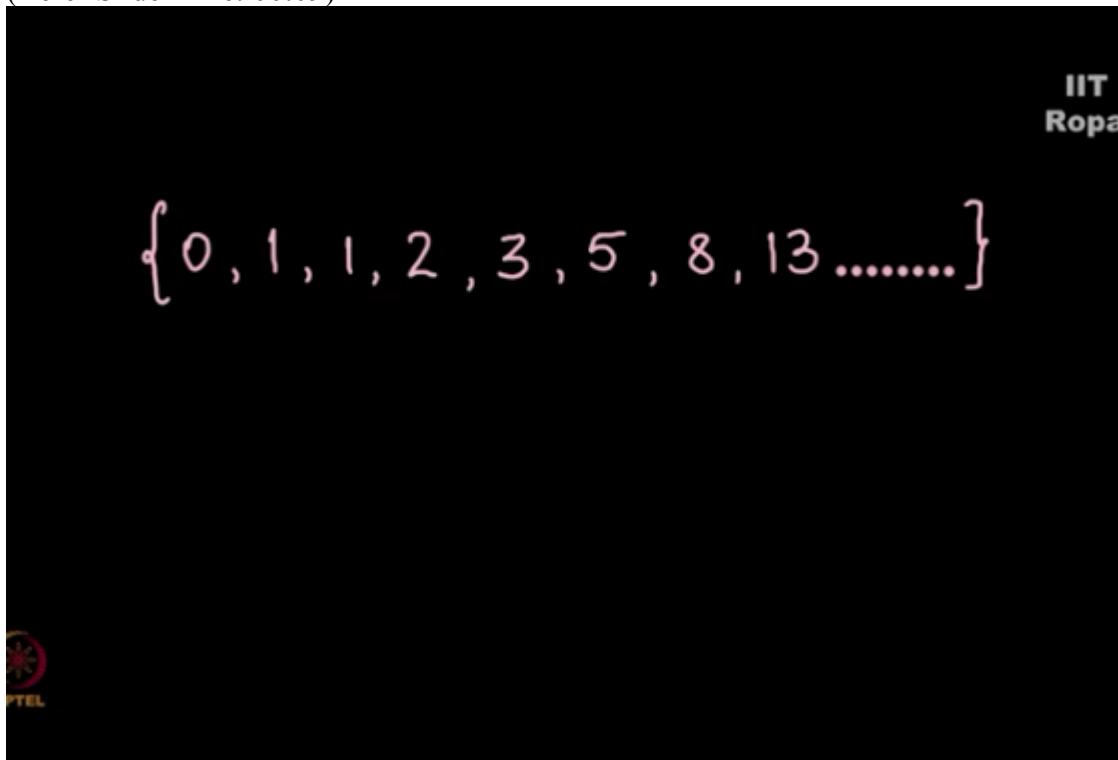
**NPTEL ONLINE CERTIFICATION COURSE**

**Discrete Mathematics  
Recurrence Relation**

**Introduction to Fibonacci sequence**

**By  
Prof. S.R.S Iyengar  
Department of Computer Science  
IIT Ropar**

The sequence 0, 1, 1, 2, 3, 5, 8, 13 and so on  
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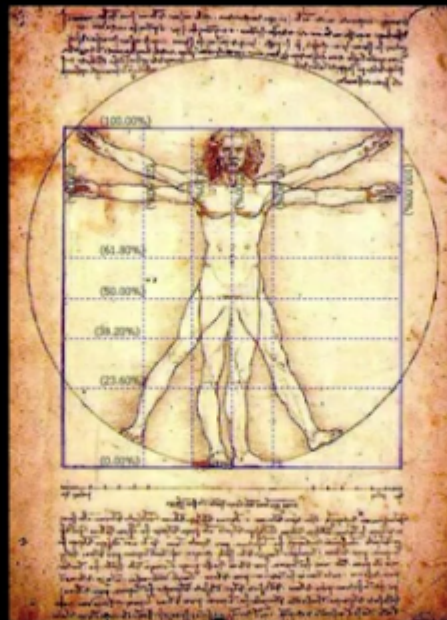
as you can see you start from 0, 1, and then keep adding the consecutive two numbers to get the next number, right, and this sequence is popularly called the Fibonacci sequence,  
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$\{0, 1, 1, 2, 3, 5, 8, 13, \dots\}$

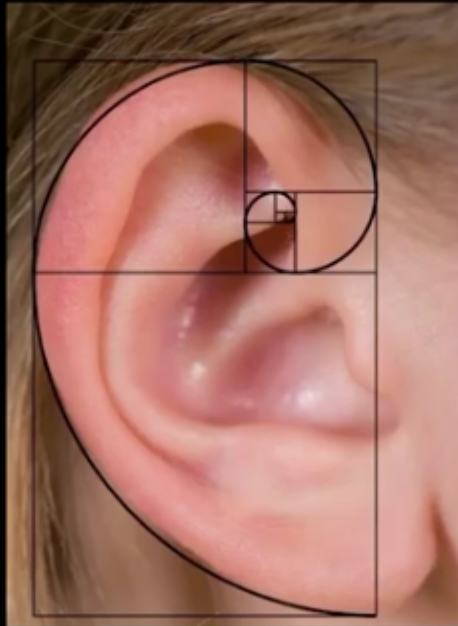
Fibonacci Sequence



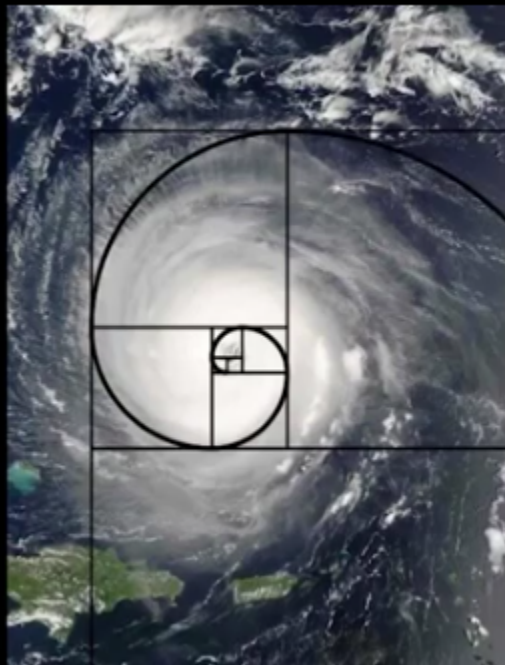
and it is found everywhere from your arm to your ears to your feet  
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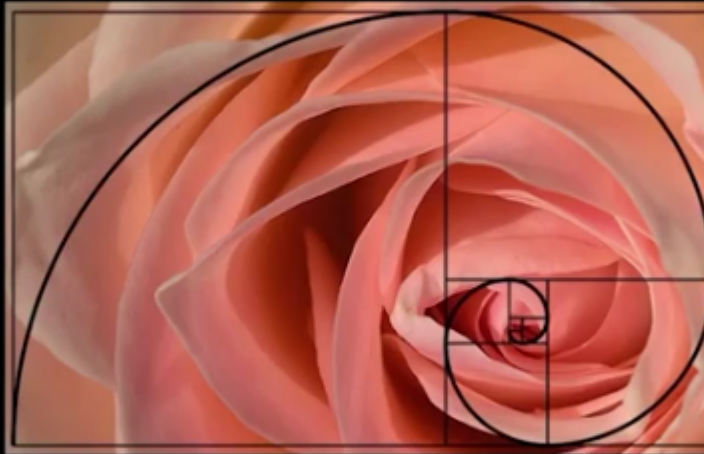


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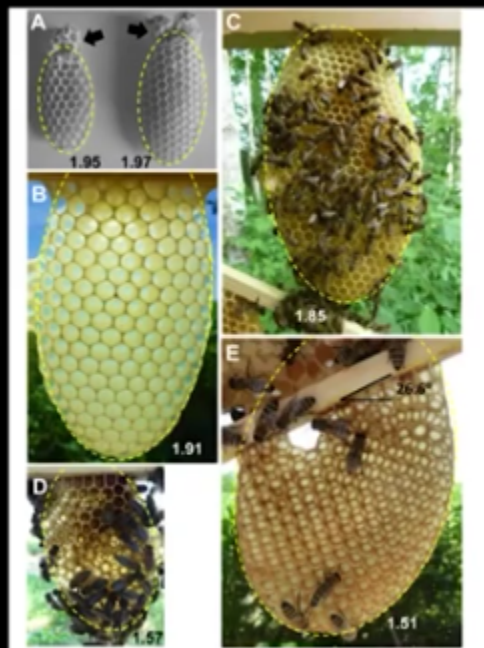


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to hurricane's, to petals in the flower, to a honeycomb, you will see Fibonacci numbers and what is called the golden ratio appearing everywhere, golden ratio is basically the ratio between successive two Fibonacci sequence numbers, this happens to be close to 1.61 and this ratio is found everywhere.

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