

Control Structures – For Loops

You've been assigned a biology project to determine the rate of growth of a particular type of bacteria. You suspect the bacteria population increases at the same rate as a Fibonacci sequence. In a Fibonacci sequence each number is equal to the sum of its two immediate predecessors. Therefore, the first few Fibonacci numbers are:

0, 1, 1, 2, 3, 5, 8, 13, 21...

Input:

- a) Prompt the user to enter the number of minutes the bacteria will be allowed to grow.

Processing Requirements:

- a) Assume a beginning bacteria count of one.
- b) Assume your bacterium will reproduce asexually once every minute.
- c) You'll want to use a **FOR...NEXT** loop to calculate the projected total number of bacteria.

Output:

- a) The number of bacteria at the end of this time should be displayed on screen similar to the following.

| OUTPUT SCREEN |
|--|
| <pre>Enter the number of minutes: 14 The total expected number of bacteria after 14 minutes is 987</pre> |