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8051 Program to find 10 fibonacci numbers and store it an array.

Program to find 10 fibonacci numbers and store it an array.

In this article let's learn how to find fibonacci numbers and store it in an array. Basically fibonacci number is a series where each term is the sum of previous two numbers.

Algorithm:

1)Store the memmory address in R0 and counter in R3.
2)Store first two numbers that is 0 and 1 in memory space.
3)Add the previous two numbers and store in an memory space.
4)Exchange the registers and store the previous two numbers.
5)Repeat the steps 2,3 and 4 till the counter value becomes zero.

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Code goes here:

```
ORG 0000h
LJMP MAIN
ORG 40h
MAIN:  MOV R0,#40H    ;Memory space where all t
       MOV R3,#8      ; Move number of fibonacc
       MOV R1,#00H
       MOV @R0,#0H    ;Move the first number in
       INC R0
       MOV @R0,#01H   ;Move the second number i
       MOV R2,#01H
```

```
LABEL2:INC R0
       MOV A,R1
       ADD A,R2       ; add the previous two nu
       MOV @R0,A      ;store the fibonacci numb
       MOV B,R2       ;exchange n store the pre
       MOV R1,B
       MOV R2,A
       DJNZ R3,LABEL2 ;keep the track of counte
       END
```

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