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69. Sqrt(x)

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Given a non-negative integer x , return *the square root of x rounded down to the nearest integer*. The returned integer should be **non-negative** as well.

You **must not use** any built-in exponent function or operator.

- For example, do not use `pow(x, 0.5)` in c++ or `x ** 0.5` in python.

Example 1:

Input: $x = 4$

Output: 2

Explanation: The square root of 4 is 2, so we return 2.

Example 2:

Input: $x = 8$

Output: 2

Explanation: The square root of 8 is 2.82842..., and since we round it down to the

Constraints:

- $0 \leq x \leq 2^{31} - 1$

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Java ▾



```
1 class Solution {
2     public int mySqrt(int x) {
3         long start=1,end=x,ans=0;
4         while(start<=end){
5             long mid=(start+end)/2;
6
7             if(mid*mid==x){
8                 return (int)mid;
9             }
10            else if(mid*mid<x){
11                start = mid + 1;
12                ans=mid;
13            }
14            else{
15                end = mid - 1;
16            }
17        }
18        return (int)ans;
19    }
20 }
21
22 }
```

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