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.

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 nearest integer, 2 is returned.

Constraints:
0 <= x <= 231 – 1

Solution:-

```
class Solution {
    public int mySqrt(int x)
    {
        long start=1;
        long end=x;
        long ans=0;
        while(start<=end)
    {
        long mid=start +( end-start)/2;
        if(mid*mid==x)
        {
            ans=(int)mid;
            break;

        }
        else if(mid*mid<x)
        {
            start=mid+1;
            ans=mid;
        }
        else
        {


            end=mid-1;
        }
    }
  return (int) ans;

    }
}
```