Approach for this Problem:

1. If x is 0, return 0.
2. Initialize first to 1 and last to x.
3. While first is less than or equal to last, do the following:
   a. Compute mid as first + (last - first) / 2.
   b. If mid * mid equals x, return mid.
   c. If mid * mid is greater than x, update last to mid - 1.
   d. If mid * mid is less than x, update first to mid + 1.
4. Return last.

Time Complexity and Space Complexity:

- Time complexity: **O(logn)**
- Space complexity: **O(1)**