Exercise: Integer Square Root
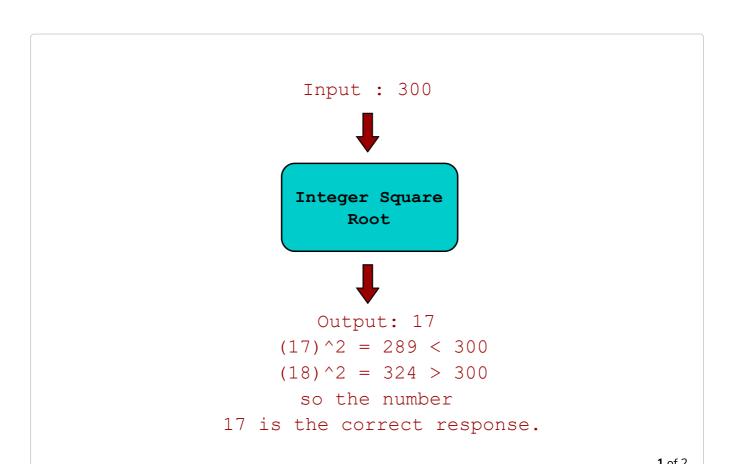
Challenge yourself with an exercise in which you'll have to return the largest integer whose square is less than or equal to the given integer.

> **We'll cover the following** ⌃
>
> - Problem
> - Coding Time!

Problem

You are required to write a function that takes a non-negative integer, `k`, and returns the largest integer whose square is less than or equal to the specified integer `k`.

Let's have a look at some examples:

Input : 300

Integer Square Root

Output: 17
(17)^2 = 289 < 300
(18)^2 = 324 > 300
so the number
17 is the correct response.

Coding Time!

Your task is to return the largest integer whose square is less than or equal to the `k` from the function `integer_square_root(k)` given in the code widget below. The input parameter `k` is a non-negative integer. Make use of a binary search strategy in your solution.

Good luck!

```python
def integer_square_root(k):
    pass
```