

```
int mySqrt(int x) {
    int64_t left;
    int64_t right;
    int64_t middle;

    left = 0;
    right = x;

    while(left <= right)
    {
        middle = left + (right - left)/2;

        if( (middle*middle) <= x && x < (middle +1)*(middle +1) )
        {
            break;
        }else if((middle +1)*(middle +1) <= x)
        {
            left = middle +1;
        }else
        {
            right = middle - 1;
        }
    }

    return middle;
}
```