Programming Assignment 4-1

For this exercise, you will write your own exponential function. Use the fact that for any (real number) x and any natural number $n > 0$,

$$x^n = x * x^{n-1}$$

to write a recursive function

```
double power(double x,int n)
```

that returns x^n and that uses only multiplication (and addition and subtraction if necessary) for its computation. (For this exercise, do **not** use the `Math` function `pow(x,n)`.) Enclose the function in a class called `Exponential`.

Demonstrate that your method works by doing the following: In the `main` method, create an instance of `Exponential`, and, from this instance, call `power(2,10)`, and print the result to the console.