CS1050 – Prelab 5
Fall 2021

Concepts to Practice
- User-written functions
- math.h

Description
For the prelab assignment, you are to write a function called myPow() to calculate the result of raising a positive integer to a positive power. **You may not call any function from math.h in your implementation of the myPow() function**. However, you can call functions in math.h (such as the pow() function) in your main() for testing purposes. In your main, you should show that raising each integer from 1 to 6 to the powers 0 to 5 gives the same result in your function as the result given by the pow() function. See sample output below.

Functions You Must Write
You may write any functions you wish to implement this program, in **addition** to the following functions. However, you **must** implement the following functions:

- **int myPow(int x, int y)** – This function returns x raised to the y power.
- **int main(void)** – Of course, you need to write a main().

Hint
If you want the result of the pow() function to be an integer, you can "cast" it. For example:

```
int x = (int)pow(2,3);
```

This code takes the result of the pow() function and casts it to an int using "(int)". This way, you can compare the result of pow() directly to your myPow() function.

Sample Output

```
jimr@JimRArea51:~/CS1050/FS2021/labs/lab5$ compile prelab5.c
jimr@JimRArea51:~/CS1050/FS2021/labs/lab5$ ./a.out
myPow(1,0)=1    pow(1,0)=1
myPow(1,1)=1    pow(1,1)=1
myPow(1,2)=1    pow(1,2)=1
myPow(1,3)=1    pow(1,3)=1
myPow(1,4)=1    pow(1,4)=1
myPow(1,5)=1    pow(1,5)=1
myPow(2,0)=1    pow(2,0)=1
myPow(2,1)=2    pow(2,1)=2
myPow(2,2)=4    pow(2,2)=4
myPow(2,3)=8    pow(2,3)=8
myPow(2,4)=16   pow(2,4)=16
myPow(2,5)=32   pow(2,5)=32
myPow(3,0)=1    pow(3,0)=1
myPow(3,1)=3    pow(3,1)=3
myPow(3,2)=9    pow(3,2)=9
myPow(3,3)=27   pow(3,3)=27
myPow(3,4)=81   pow(3,4)=81
myPow(3,5)=243  pow(3,5)=243
myPow(4,0)=1    pow(4,0)=1
myPow(4,1)=4    pow(4,1)=4
myPow(4,2)=16   pow(4,2)=16
myPow(4,3)=64   pow(4,3)=64
myPow(4,4)=256  pow(4,4)=256
myPow(4,5)=1024 pow(4,5)=1024
myPow(5,0)=1    pow(5,0)=1
myPow(5,1)=5    pow(5,1)=5
myPow(5,2)=25   pow(5,2)=25
myPow(5,3)=125  pow(5,3)=125
myPow(5,4)=625  pow(5,4)=625
myPow(5,5)=3125 pow(5,5)=3125
myPow(6,0)=1    pow(6,0)=1
myPow(6,1)=6    pow(6,1)=6
myPow(6,2)=36   pow(6,2)=36
myPow(6,3)=216  pow(6,3)=216
myPow(6,4)=1296 pow(6,4)=1296
myPow(6,5)=7776 pow(6,5)=7776
```