proj05: Functions and Lists

Part I:
Open proj05_01.py and proj05_test.py. You can test your functions by running the proj05_test file. This calls your functions in a separate file and prints out pass if the functions are working, and fail if they are not.

1. Create a function `divisors(num)` that returns the divisors of an integer stored in a list.

Example:

Calling divisors(8) should return [1, 2, 4, 8]. Therefore, if you write:

```
print divisors(8)
```

at the bottom of your program, the console should print:

```
[1,2,4,8]
```

2. Create a function `prime(num)` that returns True if the number is prime, and returns False if the number is not prime. Call the divisors function inside the prime function to help you solve the problem!

Example:

Calling prime(8) should return True. Therefore, if you write:

```
print prime(8)
```

at the bottom of your program, the console should print:

```
True
```

3. Create a function that takes two lists `intersection(lst1, lst2)`, say for example these two:

a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]
b = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]

and return a list that contains only the elements that are common between the lists (without duplicates). Make sure your program works on two lists of different sizes.

Example:

Calling intersection on the two lists defined above should return [1, 2, 5, 8, 13]. Therefore, if you write:

```
print intersection(a,b)
```

at the bottom of your program, the console should print:

```
[1,2,5,8,13]
```

Part II:
Open proj05_02.py and proj05_test.py.

Complete each task described in the comments of this file.

You can test your function from the end of this file by running the proj05_test file. This calls your functions in a separate file and prints out pass if the functions are working, and fail if they are not.