

Assignment

Control Flow

Problem 1: FizzBuzz

Write a Python function which iterates the integers from 0 to n. For multiples of three, print "Fizz" instead of the number, and for the multiples of five, print "buzz". For numbers which are multiples of both three and five, print "fizzbuzz".

```
def fizzbuzz(n):  
    # your code here  
    return
```

Here is what the output should look like:

```
> fizzbuzz(15)  
fizzbuzz  
1  
2  
fizz  
4  
buzz  
fizz  
7  
8  
fizz  
buzz  
11  
fizz  
13  
14  
fizzbuzz
```

Problem 2: Multiply without *

Write a Python function which multiplies two values (a and b) without using the multiplication symbol *. Use addition and a while loop to write your function.

```
def multiply(a, b):  
    return
```

Here is the example output:

```
> multiply(3, 5)  
15  
> multiply(-4, 5)  
-20  
> multiply(-4, -2)  
8
```

Problem 3: Output the first n prime numbers

Write a Python function that outputs the first n prime numbers:

```
def prime_numbers(n):  
    return
```

Here is the example output:

```
> prime_numbers(5)  
2  
3  
5  
7  
11  
> prime_numbers(7)  
2  
3  
5  
7  
11  
13  
17
```