1. Write a function that takes an argument n, and loops over all numbers from 1 to n and prints the following:

If the number is divisible by 3, prints fizz, if divisible by 5, prints buzz, if divisible by both, it prints fizzbuzz, else it prints the number itself.

For example fun(15) prints the following



- 2. Write a function is_prime(x) that returns true if and only if x is prime. A prime number is a number (greater than 2) that is only divisible by 1 and itself. By definition 1 is not prime.
- 3. Use the function $is_prime(x)$ above to print all primes less than 100.
- 4. Write a function

def union(list1, list2):

that takes two lists as arguments and returns a list containing the union of the two lists. The union should only contain unique elements even if the two lists contain common elements or any list contains duplicate elements.

union([1, 2, 2, 3], [1, 2, 5]) returns [1, 2, 3, 5]

5. Write a function

def flatten(list1):

that takes a list of lists and flattens it to one big list.

flatten([[1, 2, 2, 3], [1, 2, 2, 5]]) returns ([1, 2, 2, 3, 1, 2, 2, 5]

6. Write a function

def prefix(list1, list2):

that checks if list1 is a prefix of list2.

prefix([1, 2, 2, 3], [1, 2, 3, 4]) returns False

prefix([1, 2, 3], [1, 2, 3, 4]) returns True