Python Lab Assignment - 1

1. Write a prime generator program using only primes and using python loops.
2. Write a discount coupon code using dictionary in Python with different rate coupons for each day of the week.
3. Print first 10 odd and even numbers using iterators and compress.
4. Print the permutations of ABCDE using iterators.
5. Write a matrix multiplication function to compute.
6. Create list of servers, IP addresses and ports using variable positional and keyword arguments.
7. Compute sorted five numbers using keyword-only arguments.
8. Create a list of all the numbers up to N=50 which are multiples of five using anonymous function.
9. Use map and zip to find the element-wise maximum amongst sequences of student list, subject list and marks list.
10. Filter out the odd squares using map, filter, list.
11. Let's find all Pythagorean triples whose short sides are numbers smaller than 10. use filter and comprehension.
12. Enumerate the sequence of all lowercase ASCII letters, starting from 1, using enumerate.
13. Create a dictionary with comprehension with keys = the letters in the string of your name, and values of the same letters, but with the case swapped.
14. Write a python program to
    1. read lines from a file, break into tokens and convert the tokens to unique numerical values using python dictionary.
    2. Convert lines of different lengths into lines of same length (maximum length). Use padding if and when required.
15. Write a python program to identify and extract numerical chunks from a text file and convert them into words; e.g.; 1992 → "*nineteen hundred and ninety two*".