

Lab Assignment 2 (Practice Lab)

Topic Coverage: Python

1. Create a python script to print hello, world! four times.
2. Write a function “duplicate” to find all duplicates in the list.
3. Use Python Built-in Functions ‘open’, ‘read’, “readline”, ‘write’, ‘writeline’ to work with files.
4. Write a program reverse.py to print lines of a file in reverse order.
5. Python provides a built-in function map that applies a function to each element of a list. Provide an implementation for map using list comprehensions.
6. Python provides a built-in function filter(f, a) that returns items of the list a for which f(item) returns true. Provide an implementation for filter using list comprehensions.
7. Write a function triplets that takes a number n as argument and returns a list of triplets such that sum of first two elements of the triplet equals the third element using numbers below n. Please note that (a,b, c) and (b, a, c) represent same triplet.
8. Write a python function parse_csv to parse csv (comma separated values) files.
 - a) Generalize the above implementation of csv parser to support any delimiter and comments.
 - b) Generalize the above implementation of csv parser to support any delimiter and comments.
9. Write a function mutate to compute all words generated by a single mutation on a given word. A mutation is defined as inserting a character, deleting a character, replacing a character, or swapping 2 consecutive characters in a string. For simplicity consider only letters from a to z.
10. Write a program to find anagrams in a given list of words. Two words are called anagrams if one word can be formed by rearranging letters of another. For example ‘eat’, ‘ate’ and ‘tea’ are anagrams.

Additional help document: Lab 2 help file