# Python Coding Challenge Answers

18-06-2025

## Section A: List

Q1: Remove all duplicates from a list without using the set() function

def remove\_duplicates(lst):  
 result = []  
 for item in lst:  
 if item not in result:  
 result.append(item)  
 return result

Q2: Find the second highest unique number in a list

def second\_highest\_unique(lst):  
 unique\_numbers = list(set(lst))  
 unique\_numbers.sort(reverse=True)  
 if len(unique\_numbers) >= 2:  
 return unique\_numbers[1]  
 return None

Q3: Rotate a list to the right by k positions

def rotate\_list\_right(lst, k):  
 k = k % len(lst)  
 return lst[-k:] + lst[:-k]

## Section B: Tuple

Q4: Multiply the elements of each tuple in a list of tuples

def multiply\_tuples(tuples\_list):  
 return [a \* b for a, b in tuples\_list]

Q5: Count how many times each element occurs in a tuple

def count\_elements(tup):  
 count\_dict = {}  
 for item in tup:  
 count\_dict[item] = count\_dict.get(item, 0) + 1  
 return count\_dict

## Section C: Dictionary

Q6: Count the frequency of each character in a string using a dictionary

def char\_frequency(string):  
 freq = {}  
 for char in string:  
 freq[char] = freq.get(char, 0) + 1  
 return freq

Q7: Merge two dictionaries with summed values for common keys

def merge\_dicts\_sum(dict1, dict2):  
 result = dict1.copy()  
 for key, value in dict2.items():  
 result[key] = result.get(key, 0) + value  
 return result

Q8: Print name(s) of student(s) with the highest marks

def top\_students(marks\_dict):  
 max\_score = max(marks\_dict.values())  
 return [name for name, score in marks\_dict.items() if score == max\_score]

## Section D: Set

Q9: Find all common elements among three lists using set operations

def common\_elements(lst1, lst2, lst3):  
 return set(lst1) & set(lst2) & set(lst3)

Q10: Extract and display all unique words from a sentence using a set

def unique\_words(sentence):  
 words = sentence.split()  
 return set(words)