**Programming Assignment Unit 6.**

Hello Professor Kristina, I hope that you are doing well.

Below are my solutions to this unit 6 programming Assignment. I have explained my code using the comments.

(a)

# ## Create a list of 10 employees’ names

employee\_list = [“Alice”, “Bob”, “Charlie”, “David”, “Emily”, “Frank”, “Grace”, “Harry”, “Ivy”, “Jack”]

# ## Divide the list into two equal parts and store them in subList1 and subList2

subList1 = employee\_list[:5] # First half of the list

subList2 = employee\_list[5:] # Second half of the list

# ## Add a new employee named “Kriti Brown” to the end of subList2

subList2.append(“Kriti Brown”)

# ## Remove the name of the second employee (“Bob”) from subList1

del subList1[1]

# ## Combine subList1 and subList2 into a new list called merged\_list

merged\_list = subList1 + subList2

# ## Assume there is another list called salaryList that stores the salary of each employee in the same order as employee\_list

salaryList = [50000, 55000, 60000, 65000, 70000, 75000, 80000, 85000, 90000, 95000]

# ## Increase the salary of each employee by 4% and update the salaryList

salaryList = [salary \* 1.04 for salary in salaryList] # Use list comprehension to multiply each salary by 1.04

# ## Sort the salaryList in descending order

salaryList.sort(reverse=True)

# ## Extract the top 3 salaries from the sorted salaryList and store them in a new list called top\_3\_salaries

top\_3\_salaries = salaryList[:3]

# ## Display the results of the operations

print(“SubList1:”, subList1) # Print the names in the subList1

print(“SubList2:”, subList2) # Print the names in the subList2

print(“Merged List:”, merged\_list) # Print the names in the merged\_list

print(“Updated SalaryList:”, salaryList) # Print the salaries in salaryList

print(“Top 3 Salaries:”, top\_3\_salaries) # Print the salaries in top\_3\_salaries­­­­­­­­­­­­

(b)

Here is the solution to the second question in the programming assignment.

def reverse\_word\_list(sentence):

words = sentence.split() # Split sentence into a list of words by whitespace reversed\_words = list(reversed(words)) # Create a new list with the words in reverse order return reversed\_words # Return the reversed word list

# The code in action:

input\_sentence = “The quick brown fox jumps over the lazy dog” # A pangram sentence that contains all the letters of the English alphabet

reversed\_word\_list = reverse\_word\_list(input\_sentence) # here I call the function to reverse the word list

output = ' '.join(reversed\_word\_list) # Join the reversed word list with spaces 🡺 form a new sentence

print(“Original Sentence:”, input\_sentence) # Print the original sentence print(“Reversed Word List:”, output) # Print the new sentence ( in reversed word order)

**References:**

W3Schools. (n.d.). Python Lists. Retrieved from <https://www.w3schools.com/python/python_lists.asp>

Dr. Chuck [YouTube username]. (2020, 27th Feb). Python Lists [Video]. YouTube. <https://youtu.be/Y0cvfDpYC_c?si=6F2b2hYcA20jsHcc>