1)Write a program to count word frequencies in a given text

SOL: from collections import Counter

def count\_word\_frequencies(text):

# Split the text into words

words = text.split()

# Use Counter to count word frequencies

word\_count = Counter(words)

return word\_count

def main():

user\_input = input("Enter the text: ")

word\_frequencies = count\_word\_frequencies(user\_input)

# Print word frequencies

print("Word Frequencies:")

for word, count in word\_frequencies.items():

print(f"{word}: {count}")

if \_\_name\_\_ == "\_\_main\_\_":

main()

2) Mini Project: Develop a basic to-do list program using functions and data structures add features like adding tasks in the to-do list, display the tasks and quitting the loop

SOL: def display\_list(todo\_list):

if not todo\_list:

print("Your to-do list is empty.")

else:

print("To-Do List:")

for i, task in enumerate(todo\_list, start=1):

print(f"{i}. {task}")

def add\_task(todo\_list, task):

try:

todo\_list.append(task)

print(f"Task '{task}' added to your to-do list.")

except Exception as e:

print(f"An error occurred: {e}")

def remove\_task(todo\_list, task\_index):

try:

if 1 <= task\_index <= len(todo\_list):

removed\_task = todo\_list.pop(task\_index - 1)

print(f"Task '{removed\_task}' removed from your to-do list.")

else:

print("Invalid task index. Please enter a valid task index.")

except Exception as e:

print(f"An error occurred: {e}")

def main():

todo\_list = []

while True:

print("\nMenu:")

print("1. Display To-Do List")

print("2. Add Task")

print("3. Remove Task")

print("4. Quit")

choice = input("Enter your choice: ")

if choice == "1":

display\_list(todo\_list)

elif choice == "2":

task = input("Enter the task to add: ")

add\_task(todo\_list, task)

elif choice == "3":

try:

task\_index = int(input("Enter the task index to remove: "))

remove\_task(todo\_list, task\_index)

except ValueError:

print("Invalid input. Please enter a valid task index.")

elif choice == "4":

print("Goodbye!")

break

else:

print("Invalid choice. Please select a valid option.")

if \_\_name\_\_ == "\_\_main\_\_":

main()