**Lesson 3 Assignment**

**Source Code:**

import random

def collect\_grades():

grades = [] # List to store grades

while True:

user\_input = input("Enter your grade (or -1 to stop): ")

if user\_input == "-1": # Exit condition

break

try:

grade = float(user\_input) # Convert input to float

if 0 <= grade <= 100:

grades.append(grade) # Append the grade to the list

else:

print("Grade must be between 0 and 100.")

except ValueError: # Handle invalid input

print("Please enter a valid number.")

return grades

def remove\_lowest\_grade(grades):

if grades: # Check if the list is not empty

lowest\_grade = min(grades)

grades.remove(lowest\_grade) # Remove the lowest grade

print("List of grades after removing the lowest grade:", grades)

def remove\_random\_grade(grades):

if grades: # Check if the list is not empty

random\_grade = random.choice(grades)

grades.remove(random\_grade) # Remove the randomly chosen grade

print("List of grades after removing a random grade:", grades)

def edit\_grade(grades):

print("Editing a grade...")

for index, grade in enumerate(grades, start=1): # Display grades with index starting from 1

print(f"{index}: {grade}")

while True:

try:

index\_to\_edit = int(input("Enter the index of the grade you want to edit: ")) - 1

if 0 <= index\_to\_edit < len(grades): # Check for valid index

new\_grade = float(input("Enter the new grade: "))

if 0 <= new\_grade <= 100: # Optional range check

grades[index\_to\_edit] = new\_grade # Update the grade

print("List of grades after editing:", grades)

break

else:

print("New grade must be between 0 and 100.")

else:

print("Index out of range. Please try again.")

except ValueError: # Handle invalid input

print("Please enter a valid number.")

def calculate\_total\_average(grades):

total = sum(grades) # Calculate total

average = total / len(grades) if grades else 0 # Calculate average

print(f"Total of grades: {total:.2f}") # Format total to 2 decimal places

print(f"Average of grades: {average:.2f}") # Format average to 2 decimal places

def main():

grades = collect\_grades()

print("List of grades:", grades)

remove\_lowest\_grade(grades)

remove\_random\_grade(grades)

edit\_grade(grades)

# Sort the list in descending order

grades.sort(reverse=True) # Sort the grades in descending order

print("List of grades after sorting:", grades)

calculate\_total\_average(grades)

print("Completed by, Yashoda Dhital") # Your name

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

main()

**Output:**

