

Experiment No: 2

CSV File Handling and Basic Operations

Objective:

To write a Python program that reads student grades from a CSV file, calculates the average score for each student, and writes the result into a new CSV file. The program will demonstrate effective CSV file manipulation and the use of functions for modular and reusable code.

Task Description:

Your task is to write a Python program that reads this CSV file, calculates the average score for each student, and then creates a new CSV file named "student_average_grades.csv"

1. Read the data from "student_grades.csv" using CSV file handling in Python.
2. For each student, calculate their average score across all subjects (Maths, Science, and English).
3. Create average functions to calculate the average for each student.
4. Store the student's name and their corresponding average score in a new dictionary.
5. Write the data from the dictionary into a new CSV file named "student_average_grades.csv" with two columns: "Name" and "Average."

Steps to Perform the Program:

1. Import necessary libraries:
 - Use the csv module to handle file operations.
2. Read input CSV file (student_grades.csv) using csv.reader():
 - Skip the header row (if any).
 - Extract student names and their marks in Maths, Science, and English.
3. Create a function named calculate_average() that:
 - Accepts a list of scores
 - Returns the average score (rounded to two decimal places)
4. Loop through each student entry:
 - Pass the subject scores to the calculate_average() function.
 - Store the result in a dictionary in the form:
 { "Student Name": average_score }
5. Create a new CSV file (student_average_grades.csv) using csv.writer():
 - Write the header: Name, Average
 - Write each student's name and their calculated average