**Advanced Programming (CCS 3532)**

**Lab 5 – Exercises on File Manipulation in Python**

**Name: ID:**

1. Given the following dictionary temperatures, which contains Celsius temperatures samples for three days.

temperatures = { **'Monday'**: **'45, 45, 42, 39'**,  
 **'Tuesday'**: **'42, 42, 40, 41'**,  
 **'Wednesday'**:**'31, 32, 41, 45'**}

Write a Python code that stores temperature information into temperature.txt plain text file. Each record represents a day and its related temperature samples. The output should be formatted as follows.

Monday 45 45 42 39  
Tuesday 42 42 40 41  
Wednesday 31 32 41 45

1. Write a Python code that appends a new record to the temperature.txt file you created in the previous question. The records contains the following temperature samples for Friday: 31, 32, 41 and 45.

Monday 45 45 42 39  
Tuesday 42 42 40 41  
Wednesday 31 32 41 45  
Friday 31 32 41 45

1. Write a Python code that updates an existing record in the temperature.txt file. You need to replace Wednesday with Sunday.

Monday 45 45 42 39  
Tuesday 42 42 40 41  
Sunday 31 32 41 45  
Friday 31 32 41 45

1. Use the json module to write the following course information to a file, in JSON format. Name the file course\_info.json

course = {**'course\_name'**:**'Advanced Programming'**,  
 **'grades'**: [86, 90, 96, 64, 73],  
 **'year'**: **'2021'**}

1. Use the json module to read the course\_info.json file from the previous question. Display the course name and the average grade for the course.

The output should be as follows.

Course Name Average Grade

Advanced Programming 81.8

1. Reimplement **Q1** using the csv module to write the temperature information to a file, named temperature.csv, in CSV format.

1. Use the csv module to read the attached accounts.csv file. Each line in the file represents a bank customer information: name and balances for three accounts. Display the name and the total balance for the customer accounts. Also, display the total balance for all customers. The output should be formatted as follows.

Name Total

Fahad 140

Saleh 147

Sami 135

Total(all customers): 422