**The Great Computer Challenge, 2023**

***Integrated Applications, Level 4***

**Background**

Subway, a popular sandwich fast food restaurant, provides customers with a variety of sandwich options at reasonable prices. Each month new Subway franchises are opened across the United States.

Your GCC team has been hired by Subway to analyze data and report usage findings for several their new franchises. Your team will work with data from 12 Subway stores that opened in 2011.

You have been provided two files.

The first file is called store.txt, which contains a list of the 12 Subway stores. This file is provided in comma delimited text format and contains the following information: Store ID, store name, first and last name of the store representative, the store’s market segment, target (anticipated) annual sales, and the state in which the store is located.

The second file is also provided in a comma delimited text format and is called items.txt. This file contains a list of 60 menu items, and it details how many units of each item were sold by Subway stores. The information in the items.txt file includes: Item ID, store ID, item name and description, item price, and the number of items sold.

**Guidelines & Requirements**

The purpose of this exercise is to test how well your team can utilize functions of multiple applications to arrive at the requested outcome. Your team must use at least two separate applications (both may be a part of a single suite of applications). The judges must be able to determine how you integrated data across at least two applications for each challenge. You can provide a narrative explanation for the judges if needed. Judging will focus on the team’s ability to obtain the correct outcome, as well as the methods used to integrate data between applications. You do not need to print your solutions, but the judges must be able to easily view your solutions. You must complete all problems in the time allotted.

**Challenge 1**

Subway would like your GCC team to produce a one-page printed executive summary report. The executive summary must contain the following:

* The highest selling item (most items sold), the store that sold the item, and the item name and description.
* The item with the highest total sales (dollar value), the store that sold the item, and the total sales (dollar value) generated.
* The lowest selling item (least number of items sold), the store that sold the item, and the item name and description.
* The item with the lowest total sales (dollar value), the store that sold the item, and the total sales (dollar value) generated.

**Challenge 2**

Produce a one-page letter from Subway to each store representative (12 letters total) informing them of whether or not they met their sales target for the year. Each letter must include:

* Today’s date
* The store name
* The store representative’s name
* The store’s highest selling (most items sold) item name, description, and number of items sold
* The store’s lowest selling (least number of items sold) item name, description, and number of items sold
* The store’s target annual sales (dollar value)
* The store’s actual annual sales (dollar value)
* A statement as to whether or not the target annual sales figure was met

**Challenge 3**

For each state in which the stores are located (STATE), produce a report (format of your choice) with the following information:

* Total sales generated in each state
* Total number of items sold in each state
* List of items sold in each state

Similarly, for each market segment (STORE\_MARKET), produce a second report (format of your choice) showing:

* Total sales generated in each market segment
* Total number of items sold in each market segment
* List of products sold in each market segment

**Challenge 4**

Your GCC team must produce a public relations document for Subway. This document must contain graphics so that potential Subway store/franchise owners can see at a glance what Subway can do (or cannot do) for them.  You must produce two charts. One chart must show the total revenue generated and total items sold for each market segment. The other chart must show the total revenue generated and total items sold for each state in which the companies are located. By viewing the charts, you should be able to easily see which market segment and which state has the highest (and lowest) total revenue generated, and the highest (and lowest) total items sold. You can use the chart format of your choice.

**Judging Criteria**

The purpose of this exercise is to test how well your team can utilize functions of multiple applications to arrive at the requested outcome. Your team must use at least two separate applications (both may be a part of a single suite of applications). The judges must be able to determine how you integrated data across at least two applications for each challenge. You can provide a narrative explanation for the judges if needed. Judging will focus on the team’s ability to obtain the correct outcome, as well as the methods used to integrate data between applications. You do not need to print your solutions, but the judges must be able to easily view your solutions. You must complete all problems in the time allotted.

***Have fun and thanks for participating in the
Great Computer Challenge, 2023!***