**The Great Computer Challenge, 2020**

***Integrated Applications, Level 3***

**Background**

Your GCC team has been hired by J.D. Power and Associates to analyze data and report findings for their automobile ratings. J.D. Power and Associates has asked your team to work with data from 5 car companies.

J.D. Power and Associates is a global marketing information services company operating in business sectors across a variety of industries, including market research, automotive forecasting, performance improvement, Web intelligence, and customer satisfaction. Established in 1968, the company has been listening to consumers and business customers; analyzing their opinions and perceptions; and refining research techniques and study methodologies to offer some of the most advanced product quality, customer satisfaction, and tracking research available today. The company’s quality and satisfaction measurements are based on responses from millions of consumers annually.

**Guidelines & Requirements**

You have been provided two files. The first file is called company.txt, which contains a list of the 5 automobile companies rated by J.D. Power and Associates. The file also contains the contact information for the Chief Executive Officers (CEO) of each of the automobile companies. This file is provided in comma delimited text format and contains the following information: Company ID, company name, and the name and address of the CEO. The second file is called cars.txt, which contains a list of 10 automobiles that have been rated by product categories. There are seven product categories. These product categories are: overall quality, mechanical, features, body, interior, engine, and safety. Ratings are on a 100 point scale.

**Challenge 1**

J.D. Power and Associates would like your GCC team to produce a one-page printed executive summary report. The executive summary should contain the following:

* For each **company** rated by J.D. Power and Associates, report the (1) average, (2) maximum, and (3) minimum rating received for each product category (overall quality, mechanical, features, body, interior, engine, and safety).
* Report an Overall Rating for each company and car. The Overall Rating of a car is equal to the average of all seven rating categories for that car. The Overall Rating for a company is equal to the average of all rating categories for all cars made by that company. Include in the executive summary the overall rating for each company and car and indicate which company and car have the highest Overall Rating.

**Challenge 2**

Produce a one-page report for J.D. Power and Associates that contains the best and the worst rated car in each of the seven categories (overall quality, mechanical, features, body, interior, engine, and safety). The report should include, for each of the seven categories:

* The name of the category
* The company, car name, and rating of the highest rated car
* The company, car name, and rating of the lowest rated car

**Challenge** 3

J.D. Power and Associates would like your GCC team to inform the CEOs of their ratings. Your GCC team must print a one-page letter to each CEO (5 letters). You can format the letters any way you like, but each letter must contain the following six elements (note the definition of Overall Rating in Challenge 1):

|  |  |
| --- | --- |
| * Today’s date | * The name of the company’s cars |
| * The CEO’s name and address | * The company’s Overall Rating |
| * The company name | * The 7 category ratings for each car |

Be sure to include your GCC team’s congratulations in the letter to the CEO with the highest company Overall Rating.

**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). Judging will focus on the team’s ability to obtain the correct outcome, as well as the methods used to integrate data between applications.

**SOL Correlation**

Apply knowledge and skills to generate innovative ideas, products, processes, and solutions.

* Use various creative software, programming environments, or digital tools to convey existing ideas in new and effective ways.
* Use technology to develop innovative and effective solutions for assignments.

***Have fun and thanks for participating in the   
Great Computer Challenge, 2020!***