The Great Computer Challenge, 2025
Integrated Applications, Level 4

Background

You have been assigned to represent the International Olympic Committee (IOC) in tallying and validating the judged scoring for the Milan Figure Skating. The Milan Figure Skating is a two-day event. Each day consists of two scores/factors per judge representing their evaluation for "Presentation" and "Technical Merit" for the team. The "Presentation" and "Technical Merit" scores or factors are weighted evenly for a judge and the average of these two factors represents a team's final score for the day. Day one consists of the "Short" program, which is a fixed program used primarily to evaluate technical abilities. Day two consists of the "Long" program, which is a freestyle demonstration of the pair's figure skating abilities. Each pair choreographs their own program for this part of the competition.

There are eight judges from various countries around the world. These countries are the Russian Federation (RUS), Austria (AUT), Canada (CAN), United States (USA), Germany (GER), China (CHN), Brazil (BRA), and Spain (ESP). The judges' scores for each factor (Presentation and Technical Merit) will be provided in this order for each team in the competition.

There are ten teams competing in the Pairs Figure Skating event. These teams represent the countries of the United States (USA), Canada (CAN), China (CHN), Russian Federation (RUS), Poland (POL), Czech Republic (CZE), Uzbekistan (UZD), Mexico (MEX), Denmark (DEN), and France (FRN). The teams will compete and be scored in the order listed.

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). 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.

Remember: The purpose of this exercise is to test how well your team can utilize and **integrate** functions of multiple applications to arrive at the requested outcome. The judges must be able to determine how you integrated data between at least two applications for each problem. You can provide a narrative explanation for the judges if needed.

You must complete all problems in the time allotted. If you finish early, double check your answers.

Challenge 1

You have been provided a file called divIV_day1.txt (comma delimited text file) which contains the scoring results for the "Short" program at the end of the first day of competition. You need to read in the scores assigned, calculate the average score for each judge, and then use this to calculate the average score for each team based on all the judges' scores. Provide a letter to the Chairman of the IOC Skating Commission on the team standings at the end of the first day of competition.

Challenge 2

You have been provided with a file called divIV_day2.txt (comma delimited text file) which contains the scoring results for the "Long" program at the end of the second day of competition. You need to read in the scores assigned and calculate the average score for each judge, then use this to calculate the average score for each team based on all the judges' scores. Provide a letter to the Chairman of the IOC Skating Commission on the team standings at the end of the second day (only the second day – the "Long" program) of competition.

Challenge 3

You will need to utilize the results from the first and second day of competition and average them for each team to determine the final Milan Figure Skating standings. Provide a letter to the Chairman of the IOC Skating Commission on the final standings for each team and be sure to specify which teams won the gold, silver, and bronze medals for this competition.

Judging Criteria

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.

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, 2025!