

In Question 2, the program analyses temperature data collected from multiple weather stations across Australia. The data is stored in several CSV files inside a folder named “**temperatures**”, where each file represents one year. The program automatically reads **all CSV files** in this folder and combines the data for analysis. Any missing temperature values (NaN) are ignored to make sure the calculations remain accurate.

First, the program calculates the **seasonal average temperature** using Australian seasons: Summer (December–February), Autumn (March–May), Winter (June–August), and Spring (September–November). Each temperature record is assigned to a season based on its month. All temperatures from the same season, across all stations and years, are grouped together and averaged. The results are saved in a file called **average\_temp.txt**.

Next, the program finds the **largest temperature range** for each weather station. This is done by subtracting the minimum recorded temperature from the maximum recorded temperature at that station. The station or stations with the largest range are identified and written to **largest\_temp\_range\_station.txt**.

Finally, the program measures **temperature stability** by calculating the standard deviation for each station. Stations with the smallest standard deviation are considered the most stable, while those with the largest standard deviation are the most variable. These results are saved in **temperature\_stability\_stations.txt**.

Overall, the program efficiently processes multiple files, handles missing data correctly, and saves clear results for further review.

All results are saved into separate text files.

References: Python Turtle docs ([docs.python.org/3/library/turtle.html](https://docs.python.org/3/library/turtle.html));

Recursive fractals ([en.wikipedia.org/wiki/Koch\\_snowflake](https://en.wikipedia.org/wiki/Koch_snowflake)).