Write a program to create the following **BD Meteorological System**. In this simple system, we will save the temperatures of different cities of Bangladesh. The following menu will **always**be displayed except if exited by pressing ‘q’.

======= BD Meteorological System =========

• Enter ‘r’, to take temperatures of all cities into the “temperatures” array of size N.

• Enter ‘s’, to search a temperature. If found, display the index. If not found, display “Not found”.

• Enter ‘t’, to display all the temperatures in reverse index order..

• Enter ‘q’, to quit/exit the menu system.

• For any other input, display “Invalid Input.”

After the menu is displayed, the program will prompt the user “Enter your choice: “ to enter a choice from the menu. After a user enters his choice, the program will act according to the menu choice mentioned above.

That means, if a user enters ‘r’, your program will take the temperatures of all the cities into the “temperatures” array from the keyboard. If user enters ‘s’, it will take a temperature as input from the keyboard, and search that in the “tempertures” array. If found, display the index. If not found, display “Not found”. For choices ‘s’ and ‘t’, the program needs to check whether temperatures of all the cities are already populated into the “temperatures” array or not. If not populated, it will display “No temperature information is found. Please populate your temperature information first.” **Use switch case** to handle the choice options entered by the user.