Weather Man

weatherfile.zip contains weather data files for Murree in multiple formats. Write an application that generates the following **reports**. The user can specify **more than one** report at the same time.

The program should have the following components:

- It should extract the files into a destination folder and execute further tasks as described below.
- A data structure for holding **each weather reading**.
- A **parser** for **parsing** the files and **populating** the readings data structure with correct data types.
- A data structure for holding the **calculations results**.
- A module for computing the **calculations** given the readings.
- A **report generator** for creating the reports given the computation results.
- **PEP-8** conventions should be followed in the code.
- Your code should be **concise** and **self explanatory** and **understandable**.

1. For a given year display the **highest temperature**, **lowest temperature** and **humidity**.

   Command to execute: `weatherman.py /path/to/files-dir -e 2002`

   Example Output:

   Highest: 45C on June 23
   Lowest: 01C on December 22
   Humidity: 95% on August 14

2. For a given month display the **average highest temperature**, **average lowest temperature**, **average mean humidity**.

   Command to execute: `weatherman.py /path/to/files-dir -a 2005/6`

   Example Output:

   Highest Average: 39C
   Lowest Average: 18C
   Average Mean Humidity: 71%

3. For a given month draw **horizontal bar charts** on the console for the highest and lowest temperature on each day. **Highest in red and lowest in blue.**

   Command to execute: `weatherman.py /path/to/files-dir -c 2011/03`

   Example Output:

   March 2011
   01 ++++++++++++++++++++++++++ 25C
   01 ++++++++++ 11C
   02 ++++++++++++++++++++++ 22C
   02 ++++++++ 08C

4. **Multiple Reports** should be generated if multiple available options are passed to application

   Command to execute: `weatherman.py /path/to/files-dir -c 2011/03 -a 2011/3 -e 2011`

5. **BONUS TASK.** For a given month draw one horizontal bar chart on the console for the highest and lowest temperature on each day. **Highest in red and lowest in blue.**

   Command to execute: `weatherman.py /path/to/files-dir -c 2011/3`
   Example output:

   March 2011
   01 ++++++++++++++++++++++++++++++++++ 11C - 25C
   02 ++++++++++++++++++++++++++++++ 08C - 22C