Text Processing in Linux - The Sort Command #5

Problem Statement

The 'Sort' Command Line Program

This is frequently used for sorting input in text or TSV formats, in various different ways supported by it; which may be either lexicographical, case insensitive, based on the numeric field only, based on a particular column, etc. Using a variety of flags and options, **sort** can also be extended in various powerful ways. The command can also be used for sorting tables of data, delimited by commas (csv) or tabs (tsv) or even spaces; on a particular column or field. The **-k** option helps sort the input file on a particular field, i.e. the column number.

A few useful resources to study these variations of *sort* are:
A Wikipedia entry for the 'sort' command
How to Sort Files in Linux using Sort Command

Task
You are given a file of text,which contains temperature information about American cities, in TSV (tab-separated) format. The first column is the name of the city and the next four columns are the average temperature in the months of Jan, Feb, March and April (see the sample input). Rearrange the rows of the table in **descending order** of the values for the average temperature in January.

Input Format
A text file where each line contains a row of data as described above.

Output Format
Rearrange the rows of the table in **descending order** of the values for the average temperature in January (i.e, the mean temperature value provided in the second column).

Sample Input

```
Albany, N.Y.   22.2   46.6   71.1   49.3   38.60   136 64.4   57
Albuquerque, N.M.  35.7   55.6   78.5   57.3   9.47   60  11.0   64
Anchorage, Alaska  15.8   36.3   58.4   34.1   16.08   115 70.8   39 / 60
Asheville, N.C. 35.8   54.1   73.0   55.2   47.07   126 15.3   39
Atlanta, Ga.   42.7   61.6   80.0   62.8   50.20   115 2.1 69 / 65
Atlantic City, N.J. 32.1   50.6   75.3   55.1   40.59   113 16.2   60 / 54
Austin, Texas   50.2   68.3   84.2   70.6   33.65   85  0.9 62 / 58
Baltimore, Md.  32.3   53.2   76.5   55.4   41.94   115 21.5   53
Baton Rouge, La.   50.1   66.6   81.7   68.1   63.08   110 0.2 52 / 46
Billings, Mont. 24.0   46.1   72.0   48.1   14.77   96  56.9   69
Birmingham, Ala.   42.6   61.3   80.2   62.9   53.99   117 1.5 60
Bismarck, N.D.  10.2   43.3   70.4   45.2   16.84   96  44.3   64
Boise, Idaho   30.2   50.6   74.7   52.8   12.19   89  20.6   64
Boston, Mass.  29.3   48.3   73.9   54.1   42.53   127 42.8   52 / 66
Bridgeport, Conn.  29.9   48.9   74.0   54.7   44.15   119 26.2   55 / 49
```

Sample Output

```
Austin, Texas   50.2   68.3   84.2   70.6   33.65   85  0.9 62 / 58
Baton Rouge, La.   50.1   66.6   81.7   68.1   63.08   110 0.2 52 / 46
Atlanta, Ga.   42.7   61.6   80.0   62.8   50.20   115 2.1 69 / 65
Birmingham, Ala.   42.6   61.3   80.2   62.9   53.99   117 1.5 60
```

```
Asheville, N.C. 35.8    54.1    73.0    55.2    47.07   126 15.3    39
Albuquerque, N.M.   35.7    55.6    78.5    57.3    9.47    60  11.0    64
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Atlantic City, N.J. 32.1    50.6    75.3    55.1    40.59   113 16.2    60 / 54
Boise, Idaho    30.2    50.6    74.7    52.8    12.19   89  20.6    64
Bridgeport, Conn.   29.9    48.9    74.0    54.7    44.15   119 26.2    55 / 49
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Anchorage, Alaska   15.8    36.3    58.4    34.1    16.08   115 70.8    39 / 60
Bismarck, N.D.  10.2    43.3    70.4    45.2    16.84   96  44.3    64
```

Explanation

The data has been sorted in descending order of the average monthly temperature in January (i.e, the second column).