
Life expectancy

P12454_en

Good health and well-being is the third target of the United Nations Sustainable Development Goals (SDGs). One way to assess health in a population is by looking at mortality data. Life expectancy measures how many years, on average, a person is expected to live based on current age death rates.

Given the life expectancy of several countries in two different years y_1 and y_2 , compute the country with best life expectancy on y_1 , the country with best life expectancy on y_2 , and the country with the best life expectancy improvement during the period.

Input

Input begins with two integer numbers y_1 and y_2 , with $0 \leq y_1 < y_2 \leq 10^4$. Follow data for several countries (at least one): a string with the country name (all different), and the country life expectancies of the two years. These are real numbers between 0.00 and 10000.00 with two digits after the decimal point.

Output

Print three lines with the required information. For the given test cases, there will always be a clear winner for the three queries.

In the first sample input, Sweden is the best of 1980 with 75.85, Spain is the best of 2019 with 83.56, and India has the best improvement: $69.66 - 53.81$.

Sample input 1

```
1980 2019
France 74.20 82.65
India 53.81 69.66
Spain 75.33 83.56
Italy 74.20 83.51
Sweden 75.85 82.80
```

Sample output 1

```
Sweden has the best life expectancy of 1980.
Spain has the best life expectancy of 2019.
India has the best improvement.
```

Sample input 2

```
3000 3001
Borduria 60.00 59.00
```

Sample output 2

```
Borduria has the best life expectancy of 3000.
Borduria has the best life expectancy of 3001.
Borduria has the best improvement.
```

Problem information

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