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Blood test

4 points

Introduction

A blood test consists of an examination of a blood sample used in health care to determine physiological and biochemical states to assess an individual's general health. Once the sample is analyzed, the laboratory compiles the results in a blood test report. This report details different components in the blood and their levels. To easily read the results, each of the values is written next to a healthy range. Some of the ranges depends on the sex of the individual.

Here's a typical range of results related to complete blood count:

Component	Definition	Normal range
Red blood cells	Cells responsible for carrying oxygen throughout the body	male: 4.3–5.9 million/mm ³ female: 3.5–5.5 million/mm ³
White blood cells	Immune system cells in the blood	4500–11000/mm ³
Platelets	The substances that control the clotting of the blood	150000–400000/mm ³
Hemoglobin	Protein within the red blood cells that carries oxygen to organs and tissues, and carbon dioxide back to the lungs	male: 13.5–17.5 g/dL female: 12.0–16.0 g/dL
Hematocrit	Percentage of blood made of red blood cells	male: 41–53% female: 36–46%

Given the patient's sex and their five component levels can you code a program to check whether any of the parameters are out of range?

Note: The limits of normal range are not included as normal values. For example, 4.3 million/mm³ red blood cells for male IS NOT a normal value.

Input

The input consists of six lines:

The first line defines the sex of the patient: Male or Female.

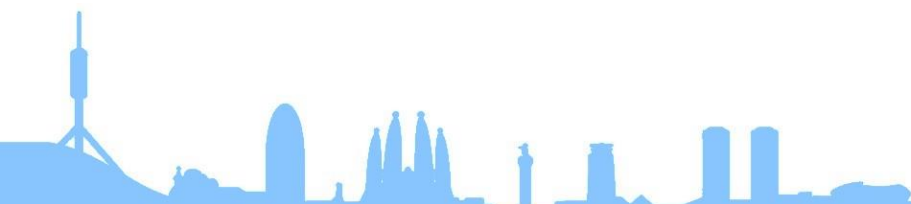
The second line refers to the red blood cells expressed in a decimal value in million/mm³

The third line indicates the total of white blood cells per mm³

The fourth line reports the number of platelets per mm³

The fifth line is a decimal value defining the hemoglobin in grams/deciliter

The last line is for hematocrit, expressing percentage of blood made of red blood cells.





Output

A readable report stating whether the blood test is normal or if the patient needs to visit the doctor:

Red blood cells: NORMAL or VISIT THE DOCTOR

White blood cells: NORMAL or VISIT THE DOCTOR

Platelets: NORMAL or VISIT THE DOCTOR

Hemoglobin: NORMAL or VISIT THE DOCTOR

Hematocrit: NORMAL or VISIT THE DOCTOR

Example 1

Input

Male

4.2

5900

150001

14.2

50

Output

Red blood cells: VISIT THE DOCTOR

White blood cells: NORMAL

Platelets: NORMAL

Hemoglobin: NORMAL

Hematocrit: NORMAL

Example 2

Input

Female

4.6

4400

300000

14.5

51

Output

Red blood cells: NORMAL

White blood cells: VISIT THE DOCTOR

Platelets: NORMAL

Hemoglobin: NORMAL

Hematocrit: VISIT THE DOCTOR

