# Problem 18 – PIN Validation

You’re part of a very promising team of specialists, which is hired by the parliament to recreate the new electronic government in Bulgaria.

Your task is to write a program that reads data about the voters in an electronic poll: **first and last name, gender and PIN (EGN in Bulgarian) and then verifies the PIN.** The program should generate **a JSON string** for DB insert **if the data is correct,** or print "**Incorrect data**" in **<h2></h2>** heading tags.

The PIN is a 10-digit number, which consists of the following:

* **First 6 digits** are the date of birth of the citizen in format **yymmdd;** if the person is born **before 1900,** the **mm** digits are **+20.** If the person is born **after 2000,** the **mm** digits are **+40**
* **Next 3 digits** show the region, based on the **regional city of birth;**
* **The last of the above 3 digits** shows the gender – **even for male** and **odd for female;**
* **One digit** for **checksum**. In order to get the correct checksum you need to **multiply each of the first 9 digits with [2,4,8,5,10,9,7,3,6]** respectively, **sum all** and then **divide by 11**. The **remainder** is the **checksum**.  
  **NOTE: if the remainder is 10, then the checksum is 0** (source: <http://www.grao.bg/esgraon.html> )

Example: **9912164756** as PIN we check the following:

* **991216** – translates to 16th December 1999 – **correct date**
  + **995216 –** translates to 16th December 2099
  + **993216 –** translates to 16th December 1899
* **475** – shows the regional city is Plovdiv
* **5** – shows the PIN is of a girl – **correct gender**
* 9\*2 + 9\*4 + 1\*8 + 2\*5 + 1\*10 + 6\*9 + 4\*7 + 7\*3 + 5\*6 = 215. 215 / 11 = 19 (remainder **6**) – **correct checksum**

### Input

The input will be read from the console. The **first and last name** will be received on the first line. The **gender** will be received on the second line. The **PIN** will be received on the third line.

### Output

If the PIN is not correct or the data is not in the format described, "**Incorrect data**" should be printed. Otherwise, **print a JSON string** with all the data (follow the format provided below).

### Constraints

* The name string will contain names. You should check if there are 2 words, each starting with an uppercase letter.
* Gender will always be ‘male’ or ‘female’.
* PIN will be a number. You should check if it is a 10-digit number.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Ana Ivanova  female  9912164756 | {"name":"Ana Ivanova","gender":"female","pin":"9912164756"} |
| **Input** | **Output** |
| Ivan Petrov  male  1234567890 | <h2>Incorrect data</h2> |