03. Classifying Books

Help librarians classify their newly arrived books by genre.

Write a function named **`classify_books`** that takes a **variable number** of **arguments** (tuples) and **keyword arguments** (key-value pairs).

The function is designed to help **organize books** into **different genres** and produce a **sorted summary**.

The **arguments** will be **passed** as follows:

- The **first group of arguments** will be an **unknown number** of **tuples**.
    - The **first** element in the **tuple** is the **genre** of the book (string). Each book belongs to one of **two genres**: **`"fiction"`** or **`"non_fiction"`**. See the **Examples** section.
    - The **second** element is the **book's title** (string). Each book **title** is **unique**.
- The **following group** will be an **unknown number** of **keyword arguments** (**key-value pairs**).
    - Each **key** represents the **unique ISBN** (standardized book number as string).
    - Each **value** represents the **title** of the **book** (string).

After receiving the information and calling the function:

- **Group** the books into two categories:
    - **Fiction** books
    - **Non-fiction** books
- **Sort** the books:
    - **Fiction books** should be **sorted alphabetically** in **ascending order** by **ISBN**.
    - **Non-fiction books** should be **sorted alphabetically** in **descending order** by **ISBN**.
- **Format the output as follows:**
    - If there are **fiction books**, start with the **heading**: **`"Fiction Books:"`**
        - **Prefix** each **book info** with **`"~~~"`** (three tildes).
    - If there are **non-fiction books**, follow with the **heading**: **`"Non-Fiction Books:"`**
        - **Prefix** each **book info** with **`"***"`** (three asterisks).

- If a **category is empty**, **omit** its **heading entirely** from the output. See the **Examples** section.

In the end, return the output as described below.

***Note**: **Submit only** the **function** to the **Judge system**.*

Input

- There will be **no input from the console**, only arguments passed to your function.

Output

- The **output** should look like this (each string should be on a new line):
  - **Fiction books** are **listed first** (if any), **followed** by **non-fiction books** (if any).

"Fiction Books:

~~~{ISBN$_1$}#{book_title$_1$}

...

~~~{ISBN$_n$}#{book_title$_n$}

Non-Fiction Books:

*****{ISBN$_1$}#{book_title$_1$}**

...

*****{ISBN$_n$}#{book_title$_n$}"**

Constraints

- The **arguments** will always come **before** the **keyword arguments**.
- Each **tuple** will contain a valid **genre** and **book's title**.
- There will always be **at least one tuple** and **keyword argument**.
- All book **titles** will be **unique**, and **genres** will always be **valid** (**"fiction"** or **"non_fiction"**).
- Each book will have a **valid** and **unique ISBN**.

Examples

Input	Output
print(classify_books(("fiction", "Brave New World"), ("non_fiction", "The Art of War"),	Fiction Books: ~~~FF1234UU#Brave New World Non-Fiction Books:

NF3421NN="The Art of War",	***NF3421NN#The Art of War

FF1234UU="Brave New World"))	
print(classify_books(("non_fiction", "The Art of War"), ("fiction", "The Great Gatsby"), ("non_fiction", "A Brief History of Time"), ("fiction", "Brave New World"), FF1234HH="The Great Gatsby", NF3845UU="A Brief History of Time", NF3421NN="The Art of War", FF1234UU="Brave New World"))	Fiction Books: ~~~FF1234HH#The Great Gatsby ~~~FF1234UU#Brave New World Non-Fiction Books: ***NF3845UU#A Brief History of Time ***NF3421NN#The Art of War
print(classify_books(("fiction", "Brave New World"), ("fiction", "The Catcher in the Rye"), ("fiction", "1984"), FICCITRZZ="The Catcher in the Rye", FIC1984XX="1984", FICBNWYYY="Brave New World"))	Fiction Books: ~~~FIC1984XX#1984 ~~~FICBNWYYY#Brave New World ~~~FICCITRZZ#The Catcher in the Rye
print(classify_books(("non_fiction", "Sapiens"), ("non_fiction", "Homo Deus"), ("non_fiction", "The Selfish Gene"), NF123ABC="Sapiens", NF987XYZ="Homo Deus", NF456DEF="The Selfish Gene"))	Non-Fiction Books: ***NF987XYZ#Homo Deus ***NF456DEF#The Selfish Gene ***NF123ABC#Sapiens