# Lab: Regular Expressions

Tasks for exercise in class and for homework to the course ["Programming Advanced for QA" @ SoftUni](https://softuni.bg/trainings/4257/programming-advanced-for-qa-november-2023)

Test your tasks in the Judge system: [https://judge.softuni.org/Contests/4463](https://judge.softuni.org/Contests/4463/Regular-Expressions-Lab)

## Match Full Name

Write a program that:

* Reads a **text** from the console
* **Match full names** from the **given text**
* A **valid full name** has the following characteristics:
  + It consists of **two words**
  + Each word **starts** with a **capital letter**
  + After the first letter, it **only contains lowercase letters afterward**
  + **Each** of the **two words** should be **at least two letters long**
  + The **two words** are **separated** by a **single space**
* **Print full names** on the console, separated by single space

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Bethany Taylor, Oliver miller, sophia Johnson, SARah Wilson, John Smith, Sam Smith | Bethany Taylor John Smith |
| Elvis Presley a a C C-Muhammad Ali EE PeterpeterJR-a a xi ban D D bb b b-B B-c c EE-Michael Jackson DD peter smith B B PETER BROWN IVAN DAVIES- | Elvis Presley Muhammad Ali Michael Jackson |

## Match Phone Number

Write a program that:

* Reads a **text** from the console
* Create a **regular expression** to match a **valid phone number** from **Sofia**
* A **valid number** has the following characteristics:
* It starts with "**+359**"
* Then, it is followed by the area code (always **2**)
* After that, it's followed by the **number** itself:
  + The number consists of **7 digits** (separated into **two** **groups** of **3** and **4** **digits** respectively)
* The different **parts** are **separated** by **either a space or a hyphen** ('**-**')
* **Print all valid numbers** on the console, separated by a **comma and a space** ", "

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| +359 2 222 2222,359-2-222-2222, +359/2/222/2222, +359-2 222 2222 +359 2-222-2222, +359-2-222-222, +359-2-222-22222 +359-2-222-2222 | +359 2 222 2222, +359-2-222-2222 |
| +359 2 234 2324, 359-2-111-9876, +359/8/655/5432, +359-2 222 2222, +359 2-222-2222, +359-2-234-345, +359-2-123-45678, +359-2-222-2222, +359 2 654 1234 | +359 2 234 2324, +359-2-222-2222, +359 2 654 1234 |

## Match Dates

Write a program that:

* Reads a **text** from the console
* Create a **regular expression** to match a **valid dates**
* Every **valid date** has the following characteristics:
  + Format: "dd{separator}MMM{separator}yyyy"
  + Always starts with **two digits**, followed by a **separator**
  + After that, it has **one uppercase** and **two lowercase** letters (e.g. Jan, Mar)
  + After that, it has a **separator** and **exactly 4 digits** (for the year)
  + The separator could be either of three things: a period (**'**.**'**), a hyphen (**'**-**'**) or a forward-slash (**'**/**'**)
  + The separator needs to be **the same** for the whole date (e.g. 13.03.2016 is valid, 13.03/2016 is **NOT**). Use a **group backreference** to check for this
* Use **named** **capturing groups** in your regular expression.
* **Print all valid dates** on the console, separated by a **new line**

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 13/Jul/1928, 10-Nov-1934, , 01/Jan-1951,f 25.Dec.1937 23/09/1973, 1/Feb/2016 | Day: 13, Month: Jul, Year: 1928  Day: 10, Month: Nov, Year: 1934  Day: 25, Month: Dec, Year: 1937 |
| 03-Mar-1878, 25/Apr/1915, 31-May-1916, 22/Jun-1941, 25.Dec.1937, 23/09/1973 | Day: 03, Month: Mar, Year: 1878  Day: 25, Month: Apr, Year: 1915  Day: 31, Month: May, Year: 1916  Day: 25, Month: Dec, Year: 1937 |