BO - HUB

B-INN-000

WORKSHOP R-SHINY

Initiation

2.0

{EPITECH.}

WORKSHOP R-SHINY

language: R
build tool: no need here

- Your repository must contain the totality of your source files, but no useless files (binary, temp files, obj files,...).
- All the bonus files (including a potential specific Makefile) should be in a directory named *bonus*.
- Error messages have to be written on the error output, and the program should then exit with the 84 error code (0 if there is no error).

R is a programming language and free software environment for statistical computing and graphics supported by the **R** Foundation for Statistical Computing. The **R language** is widely used among statisticians and data miners for developing statistical software and data analysis.

Shiny is a **R package**, which allows creation of web interactive pages on which it's possible to perform all analyzes / action available on **R**.

With R, you handle some data called **dataframe** and these datas are often in .csv files. Let's try to handle these datas with some Dplyr (R package) functions.

You can find an implemented **dataframe** called *starwars* wich contain many informations about starwars characters like: gender, skin colors, species…

STEP 1

In the *starwars* dataframe, you have some useless informations like:

- films
- vehicles
- starships

You **MUST** remove them to have a better view of this dataframe.

In the **Help** page of Rstudio, check the `select` function

.

You can see your dataframe with the `View` function

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STEP 2

Now, You know a way to select some **columns** in a dataframe.

Then, let's try to select some **lines**.

In this step, you must create a dataframe with only **female** character.

You can check the `filter` function

.

STEP 3

After this, you will learn how to **create** a basic **web app** which display a dataframe.
To do so, you will use the Shiny package to create the web app.

Fill the `ui.r` and the `server.r` to display your dataframe.

An empty **ShinyApp** is available on the workshop repo here.

Here is a simple example of implementation:

,ow 10 entries Search:

	name	height	mass	hair_color	skin_color	eye_color	birth_year	gender	homeworld	species
1	Luke Skywalker	172	77	blond	fair	blue	19	male	Tatooine	Human
2	C-3PO	167	75		gold	yellow	112		Tatooine	Droid
3	R2-D2	96	32		white, blue	red	33		Naboo	Droid
4	Darth Vader	202	136	none	white	yellow	41.9	male	Tatooine	Human
5	Leia Organa	150	49	brown	light	brown	19	female	Alderaan	Human
6	Owen Lars	178	120	brown, grey	light	blue	52	male	Tatooine	Human
7	Beru Whitesun lars	165	75	brown	light	blue	47	female	Tatooine	Human
8	R5-D4	97	32		white, red	red			Tatooine	Droid
9	Biggs Darklighter	183	84	black	light	brown	24	male	Tatooine	Human
10	Obi-Wan Kenobi	182	77	auburn, white	fair	blue-gray	57	male	Stewjon	Human

Showing 1 to 10 of 87 entries Previous 1 2 3 4 5 … 9 Next

Step 4

Thereby, you know how to use some basic tools to manage dataframe and to display it on a web app.

So let's develop a web app to **display** properly dataframe and **update** it with some filters.

You can filter the dataframe by:

- Gender
- Species
- Skin colors
- Eye colors

You can check the `selectizeInput` **ui object**.

Check the Shiny Gallery to implement `selectizeInput` or other **Shiny features**.

Here is a simple example of implementation: