Exoplanet data interface

An interface for the visualization and interaction of data from exoplanet detections, provided by the NASA api

Bernat Ferrer

Description

In this project, the user will have a menu on his or her disposal, from which he will be able to choose among different options.
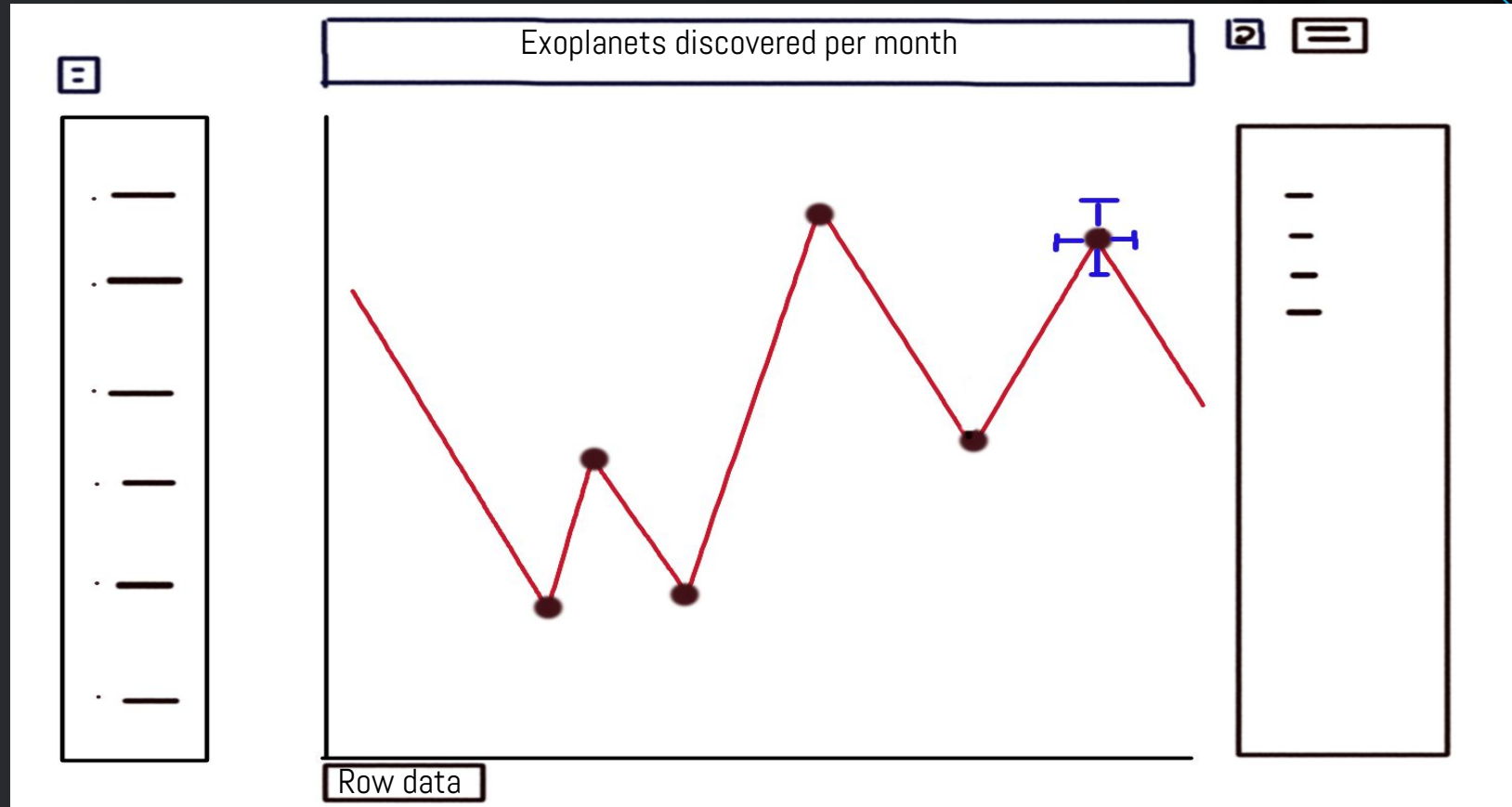
Eg: *"plot of number of exoplanets discovered per month (last six months)*

Eg: *"plot of mass vs distance from star for the discovered planets"*

Once an option is chosen , a plot will appear in the middle by having queried nasa api and displaying the data obtained. The plot will be stored in the html so that, unless the user deletes the cache, it will be available if accessed later on

Wireframe

Exoplanets discovered per month

Row data

Wireframe

REGISTER/ LOGIN

username

password

api key

Row data

API DOCUMENTATION

NASA API

https://api.nasa.gov/

EXOPLANET ARCHIVE

https://exoplanetarchive.ipac.caltech.edu/

HOW TO USE IT

https://exoplanetarchive.ipac.caltech.edu/docs/program_interfaces.html

Dependencies

Backend : League CSV , Package for easier csv manipulation

https://packagist.org/packages/league/csv

Frontend: Chart.js : Package for making nice charts with the canvas

https://www.npmjs.com/package/chart.js

Info about npm

https://docs.npmjs.com/using-npm-packages-in-your-projects

Requirements

- PHP querying a csv table with exoplanet data from the nasa api, which is saved and only queried once. If the user logs back, the data is saved and it is asked if he/she wants to use the available data (displaying the creation time) or update it.
- Displaying at least two plots from the data.
- Option for the user to either visualize raw csv data or the plot.
- Menu bar with different options related with types of plots being displayed (at least 2).
- Main section with the plot.
- Navbar with the plot title being displayed.
- Tests on the fetching from javascript to PHP.

Extras

- Right section with some info regarding the plot
- More queries and different ways of plotting the data.
- Settings option for each chart (color, display or not the axis labels, display or not the uncertainty).
- Tooltips when hovering over data points.

GIT STRATEGY

Master branch, develop branch (remotes) and experimental branch for specific functionalities and code snippets (local) .