

Rocket – Gateway To Space

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1 Introduction

1.1 The Task

The objective is to demonstrate your understanding of the Python Flask micro-framework by creating a prototype web application for an online catalogue. Your online catalogue can be a catalogue of music, movies, books, stars, butterflies, rabbits, or some other collection that interests you. If you have a novel idea for a collection then speak to the module coordinator to make sure that it is suitable. You should carefully consider the nature of the problem domain, and design a URL hierarchy that is appropriate for finding and retrieving information about the collection. For example, when we think about a collection of music we often consider genre and artist, but also other kinds of metadata like release dates, formats, number of tracks, track length, album length, and many more parameters (it is worth looking at online music streaming sites MP3 management tools to get an idea of the ways that music can be organised and discovered). [1].

1.2 The App

The web app is designed to allow users to gain knowledge about our solar system, space and the cosmos. Its a multi-page application the user can interact with, with hover features and jumping to and from different pages exploring the universe like never before. Gain knowledge about planets small bodies and the sun.

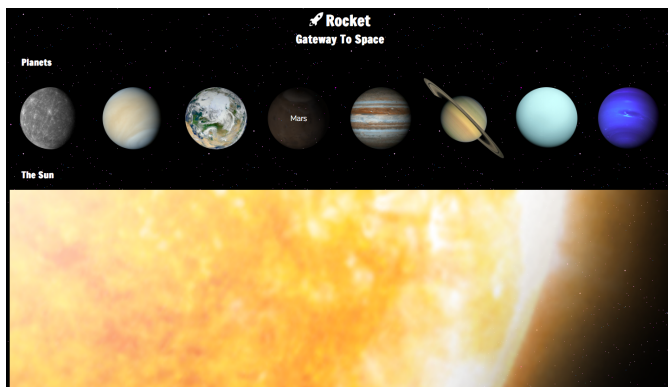


Figure 1: Home Page

2 Design

The home page gives users a visual representation of planets the sun and small bodies, the planets are even in order as they are in the solar system from left to right with the left hand side being closest to the sun. The bright colors of the planets attract users in to wanting to know more. The images are big enough so if this web app was loaded on a mobile device, it would be easily accessible to everyone. With the background being a dark colour and text being a white colour and font sizes being on the larger side it's easy for users to read from.

3 Enhancements

The website could have done with more interaction, such as more moving objects, a good idea would have been to have a hover feature on each of the separate planet page possibly a gif so when you hover over the still image of the planet a gif comes into place where the planet is spinning or even clickable so the image zooms in and gives a fact about the certain area the user has clicked. The possibility of a kids section where they can interact with the planets and learn about the different features of the universe in one sentence facts to keep them engaged. The possibility of a back button on the non route pages (users are able to click the header of the web application to return home) might come in handy for the non technical users. The possibility of making it responsive so the web page moves when loaded in a mobile device the web page changed to accommodate the new screen resolution. The developer could have made the code behind the website more efficient as most of the code is reused, possibly a loop going through each item (planet) and replacing attributes such as name and description for each. This may have made the web application more responsive? As you can see in 4.1 Code Listing, the developer had to reuse this code for every URL taking time and effort, it may have been an idea to have loop as previously said. This can be seen in 4.1 Code listing.

4 Critical Evaluation

The web application could have done with a better design that could have been more clean and concise. As the home page just doesnt seem sleek and smooth. The hover feature on the home page allows the user to see the names associated with the images using this feature is a great and clean feature allowing the user to have a little more interaction on the

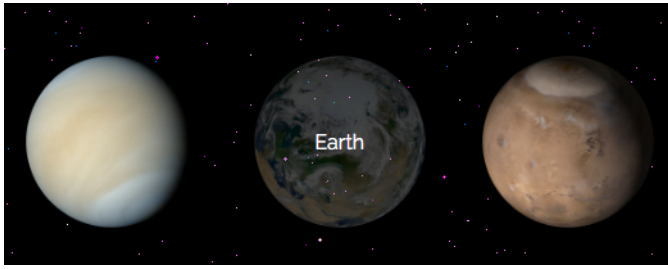


Figure 2: **Hover Feature**– Earth Active Hover

website and is very pleasing to the eye. The fact that it's the same design, as in the background image, the fonts the colours through out make the web application seem fluid as you jump from page to page.

4.1 Code Listing

Listing 1: Reused Code

```

1 @app.route("/jupiter")
2 def jupiter():
3     name = "Jupiter"
4     category = "Planet"
5     description = "TEXT DESCRIPTION"
6     return render_template('jupiter.html', name=name, category=category, description=description)

```

5 Personal Evaluation

Using python for the first time was exciting for the developer and seeing how it ties in with HTML and CSS was great. The developer has come to like python as a result of this. During this coursework the developer has learned how to use CSS to allow text over images as seen in the 404 page and on the home page when users hover over feature on an image. The developer in the beginning tried to use JSON for all the data. He got to read from a JSON but when it came down to it it would be just as effective as hard coding in all the values as he couldnt work out the loop to allow web URLs to be displayed by filename and then to grab the correct information from the JSON to display on each page. If this could have been done, there could have been more pages with even more details about space, with more information, it could have been full of facts.

6 Conclusion

This web application is a great base to be something fantastic and with a little bit more work could work out really well in teaching and showing the world the great depth of space. With a little more interaction and to become to responsive to mobile it could become a good web application.

References

- [1] S. Wells, "Coursework specification 1,"