Music Gear

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1 Introduction

Music Gear is a catalogue for musicians and guitar enthusiasts. The website features catalogues of guitars, amplifiers and guitar pedals(effects), which can be filtered to find specific items the user might be interested in. Items can be added to the catalogues, and each item can be opened to see it in more detail. This website provides an easy way for someone to find instruments and music gear and compare them.

The idea originated from my interest in guitars and guitar related gear. A few years ago I was looking for a website that would list all the guitars, so I could look through and see the designs I like. I don't think this website is unique, however it addresses what I needed when I was looking for such a site.

In this coursework I tried to use only my code, without using bootstrap or designs shared on the internet. The code is based on knowledge I acquired in this module, as well as some tutorials on basic html/css and python syntax.

2 Design

I decided to go for a simple and intuitive design, with a navigation bar on top. The users can easily see which page they're on by the color change on the navigation bar.

Figure 1: **Active pages** - Active pages are set a different color

Additionally, catalogue pages also feature a filtering bar placed on the left side. All items in the catalogues are displayed in the center of each page. All items in the catalogues were set the same size parameters to be visually pleasing. When clicking on an item, the user is shown details, like the description of the item.

Most things in each page are encased in divs, so the pages are organized. This helped me to manipulate how things are displayed and where they are placed. Since I used CSS to set parameters for most divs, I could reuse them in different pages.

Figure 2: **Items in catalogue** - Uniform item sizes

Adding items to each section is possible, where photo, brand, model and description are required. Each section (guitars, amplifiers, effects) has a separate page for adding, so the items can't get mixed up. Each item is given an ID, which is used for saving the photos and retrieving data on specific items. All items are saved in a .json file, where they are stored as objects. All objects are assigned to their arrays (guitars, amps, effects) and each object has strings assigned to their values.

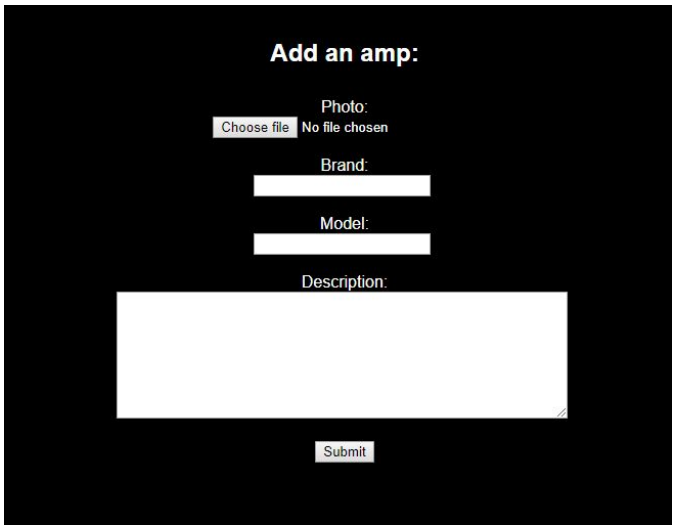

Figure 3: **Adding an amp** - photo, brand, model and description are required

Listing 1: Adding a new item: Python

```
1  newguitar = { 'id' : id, 'brand' : brand, 'model' : model, 'desc' : ↩
       desc, 'photo' : photo }
2  data['guitars'].append(newguitar)
3  with open('static/data.json', 'w') as outfile:
4      json.dump(data, outfile)
5  ...
```

Filtering lets the user choose the specific brand they're interested in. The filtered list of items is then sent to a dynamically created page, which includes the filter in the address.

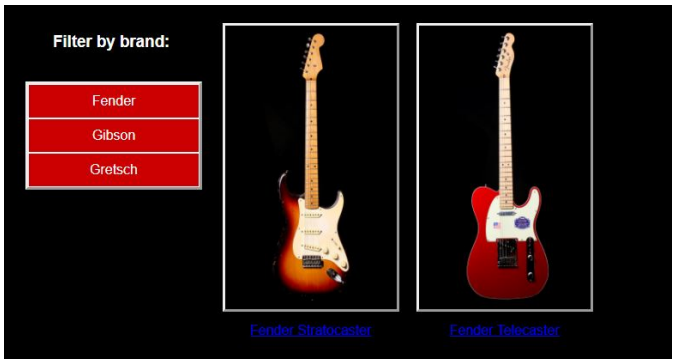

Figure 4: **Filtered items**

Styling was done by myself, using .css file I created. The .css is referenced in all of my pages, and I only used style function in html for single instances. CSS proved to be very useful and saved me a lot of time in writing and a lot of space in code.

3 Enhancements

The catalogue could also feature a search function, to quickly find the item the user is looking for. The search would find items by keywords, and if multiple items are found from multiple categories, the items would be displayed in separate sections according to the category.

I would also like to implement more filters for the catalogues, however more data on each item would need to be added (year of production, body type, price range). However, these additions are easy to implement, and I decided to omit them to save time.

Finally, I would like to add references to websites selling these items and provide a price comparison. When clicked on, the user would be redirected to the website selling the item. Websites listed would also be rated by users to ensure that no unreliable online retailer is listed. Eventually, the website could provide advertising opportunities to online retailers, so their websites are displayed first and that their price is not visible before visiting their page.

4 Critical Evaluation

I believe the displaying and filtering work well. The items could be filtered by more categories, however not enough data is provided on each item at the moment. This is easy to implement, so I decided that one filter is enough, just as a presentation.

I'm happy with the way the pages are created dynamically when opening single items. The address is determined by the id of the item clicked. This let me reduce the number of templates I had to use and the amount of code.

Listing 2: Using Jinja to create single item pages: Python

```
1  @app.route('/guitars/single/<zoom>)
2  def guitarzoom(zoom=None):
3  ...
```

Listing 3: Using Jinja to create single item pages: html

```
1 {% for items in data %}
2    <a href="/guitars/single/{{ items.id }}" class="div" id="items">
3    ...
```

Website should feature logging in, so only the administrators/moderators can add new items to catalogues. The registration/logging in could also be used for users for storing their favorite guitar setups, reviewing items or even selling their used gear. Logged in users could enlist in email notifications about new products and new items available for sale from other users.

5 Personal Evaluation

This coursework taught me a lot about python syntax. I was pleased to see that I could apply a lot of my knowledge from other programming languages to overcome problems I had in this coursework. Python seems easy so far. The syntax is easy to follow and is intuitive.

Even though I was already familiar with html and css, I learned many new techniques to display items and change the styling to suit my page. I was particularly happy with Jinja, as I found it very useful.

Overall, I think I did well on this coursework. I had a few problems, but I was able to overcome most of them with just a bit of thinking, and occasionally by Google search. This coursework laid a good foundation for my next coursework, and I will use many techniques I learned in the future.