

Coursework Report

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1 Introduction

This website is a online guitar parts shop. Users can navigate around the shop via the top navigational bar at the top or via the buttons on the home screen. When looking at all the products they have the necessary measurements needed, a small description, a price, product ID and add to basket button. This website also has user accounts in a database and has a log in screen, this is needed as it limits users from going to the basket unless they have an account.

2 Design

For the design of this web app it was decided to get the top navigation bar working as soon as possible as this would allow this would make it easiest to get around it even when it was still being developed. The top navigation bar does change depending on if someone is logged in or not and if its at the log in page. The home page has this functionality as well as depending on if the user is logged in or not it will display different text to start with to prompt the user to log in.

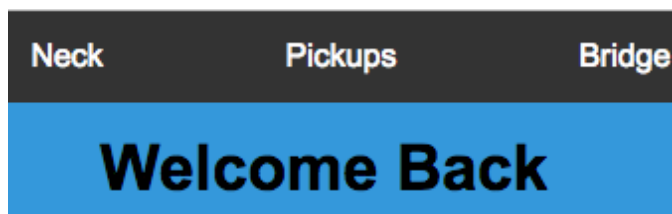


Figure 1: **Logged in** - Home screen when logged in

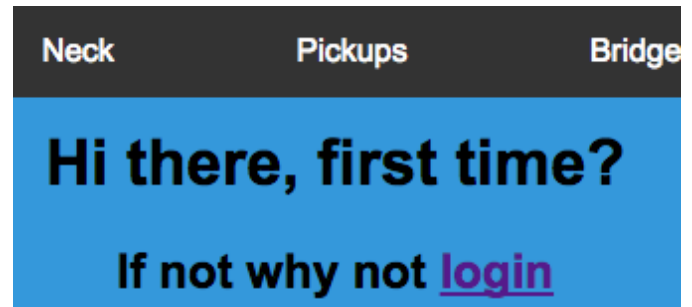


Figure 2: **Not Logged in** - Home screen when not logged in with prompt to log in

The designer then set their eyes on the log in screen. It was decided to keep it simple and consistent with the design of the rest of the web page. All there is on the log in screen is user name, password and the log in button. This helps users understand what they are doing and how to properly log in easily.

The separate pages for the different products also use the same basic layout as each other.

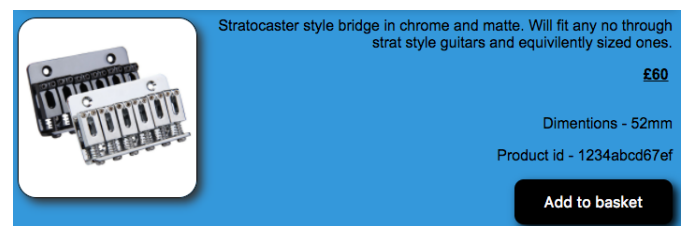


Figure 3: **Products screen** - this is the layout for every product

As you can see here in Figure 3, it has an image on the left so users can see exactly what it is they are looking at. On the right has the bulk of the information, this starts off with a small description, price tag, necessary dimensions that users will need to know, a product ID and a add to basket button. There is also lines across the screen so users know what buttons correlate with what information

given. The lines across the screen and image also have shadow effects on them to give the web page a 3D effect to it this makes it an all round nicer experience to use for the user.

3 Enhancements

If this website had more time to be implemented there would of been a lot more possible additions to it that would of greatly improved usability and how enjoyable it was to use. The separate pages that have all the products in them could have a search bar included or a sort function. This would make the website more user friendly as it would make it easier to find a certain item they are looking for or find related products so they could have a easier selection of items. Items could also have different views to add a bit of custom looks to the website as some users want certain views like shown but others would prefer just the image then they could click the image and it would show all the information allocated to that product.

Another feature that would improve the website would be how user accounts are made, currently users have to be made in the the actual python code to have accounts and then that file has to be run to be added to the database. It would be a lot easier if users could make their accounts without the need to talk to the programmers as this would mean they could just click and go instead of waiting for their request to be put through. This could be improved even more with the log in screen not being a separate page but a little window that pops up when you click log in so you don't click off what your doing and lose your place in that page.

The websites biggest improvement could be a working basket. As you can see if you look at the code it was attempted but never managed to work correctly and need a little bit more time to be implemented properly. If this was added properly it could take a product add it to an overall price. This could then show all the products and the overall and separate prices for all the products so the users know exactly how much they are spending. If this was achieved it could then take the users to a separate page where there could be delivery instructions and payment methods selected.

4 Critical Evaluation

This website took some research of python flask and HTML to get some algorithms that help make it what it is now. There was some basic functions of opening all the pages with products in it all with the same code by reading the URL and finding the file that had the same name as it. This means that so long as he files are saved with appropriate file names nothing needs to be changed in the python code. This website also too advantage of the extends function. This means that there was a main page made that every page reads into so you can have constant parts to every page like the top navigation bar. Having this extends means that the developer didn't have to write the code for the navigation bar on every page and if there was edits to it then they would have to of edited every little page to make sure it looks right.

Another part of this website that works well is the log in aspect. Users put in their details and if said details are in the database that goes along with this website they are allowed to continue. Even if users do not have an account they can still use the website to browse products and see everything but they are limited to not being able to use the basket and are redirected to the log in screen. Only users with accounts can do this, this can be seen in lines 23 to 28 in figure 4. Below this can also be seen the part of code that gets the user inputs and checks the database created for valid usernames and password connected to that username. If the users could make their own accounts from the web page then a limitation to the users username would have to be implemented. There would have to be a check on the available usernames in the database and if someone put in a username already in the database then it would have to be denied as this would confuse the program and potentially crash the website.

```

15 @app.route('/log/', methods=['GET', 'POST'])
16 def login():
17     if not session.get('logged_in'):
18         return render_template('login.html')
19     else:
20         return home()
21
22 #has to be logged in to go to basket
23 @app.route('/basket/', methods=['GET', 'POST'])
24 def basket():
25     if not session.get('logged_in'):
26         return render_template('login.html')
27     else:
28         return render_template('basket.html')
29
30 #Reads the user input and checks if its a valid login
31 @app.route('/login/', methods=['POST'])
32 def do_admin_login():
33     #get inputs
34     POST_USERNAME = str(request.form['username'])
35     POST_PASSWORD = str(request.form['password'])
36
37     #check database and if valid says its logged in
38     session = sessionmaker(bind=engine)
39     s = Session()
40     query = s.query(User).filter(User.username.in_([POST_USERNAME]), User.password.in_([POST_PASSWORD]))
41     result = query.first()
42     if result:
43         session['logged_in'] = True
44     else:
45         print('wrong password')
46         flash('wrong password!')
47     return login()
48 #logs the user out
49 @app.route('/logout/')
50 def logout():
51     session['logged_in'] = False
52     return login()

```

Figure 4: **Log in Log out python code** - this code is in the python file to take in user inputs and see if they are valid users

The main part of this website that needs to be fixed before any other change would be the basket. This would complete the website and make it available to work in a real world situation. This has been attempted and is still a work in progress but is not working currently.

5 Personal Evaluation

This project has gone though a lot and has definitely improved my python and HTML coding skills. There was many challenges I faced and I have overcome some. The first challenge I faced was the log in function, it took a lot of effort as this was the first time I had ever attempted a log in before and setting up a database of users. I feel I have done this well for my first attempt but if I was to attempt this again I would of made sure I didn't save users passwords directly in the database. I would of hashed them instead so no to make it easier for hackers to get users information and get into the website easily.

In the website I definitely feel my design skills have improved as this is the first web page I have actually liked the finishing look of and would consider looking at online. This was achieved because I spent a lot of time researching different CSS features that I could implement. I hadn't managed to get all the features I wanted but with a little more time I feel I could achieve the web page I imagined at the start of the programming process.

The one part of the web page I am disappointed

with is the basket page. This wasn't finished and would of perfected the website. Just like the log in, I had never actually attempted a task like a basket before. If I had more time and resources to work out this problem I feel i could of achieved everything I set out to do when I started the web page.

6 Conclusion

In conclusion, I feel I have done a good job to the best of my ability's but know there could of been more done to improve the web page. It has taught me a lot and i feel i have improved my coding skills in the process. I know I have much to learn and feel after acquiring the skills I acquired i will attempt more projects like this in the future.