

# Final Project Report

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## Summary

This project is a meta-crawler specified in Option 4b: MetaShopper. It provides a search engine to acquire the information of merchandise which is ranked by price. Right now it only supports searching from Ebay and Amazon, but it is straightforward to extend to other shopping sites.

## Installation

1. Create a Python3 virtual environment in the folder and activate.

```
$ python3 -m venv venv  
$ source venv/bin/activate
```

2. Install dependencies from requirements.txt.

```
(venv)$ pip install -r requirements.txt
```

3. Run the app.

```
(venv)$ python app.py
```

4. Visit <http://127.0.0.1:5000/> in the browser.
5. Ready for search.

## Achievements

1. An user-friendly UI to help searching for the cheapest goods from Amazon and Ebay.
2. A crawler is implemented to extract desired information including images, names, links and prices, from the corresponding html files.
3. The results are ranked by their prices.
4. Can be adapted to support other shopping sites in a straightforward way.

## Limitation

1. It could only support Amazon and Ebay, which limits it's use in the real life.



2. The alignment and html elements in the html files is changing constantly such that a working extraction protocol right now won't be valid in the future. To be specific, I found the html source code from Amazon is always changing.
3. Not all the shopping sites provide their information in a standard html file. Instead, they generate the information dynamically using javascript, which makes it really difficult to do the information extraction.
4. The searching result could better be ranked by other rules including like rate, relevance, etc.

## Sample outputs


### Your Shopping Helper

Image	Description	Price(\$)
No data available		


### Your Shopping Helper

<input type="text" value="bed"/> <input type="button" value="Search"/>		
Image	Description	Price(\$)
	<a href="#">Memory Foam Bed Pillows Serta Cooling Gel 2-pack Cluster Classic Standard</a> <a href="#">From eBay</a>	18.99
	<a href="#">PETMAKER Orthopedic Sherpa Top Pet Bed with Memory Foam and Removable Cover by</a> <a href="#">From Amazon</a>	20.2

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