



Python Developer - Skill Assessment

Task Description

Objective

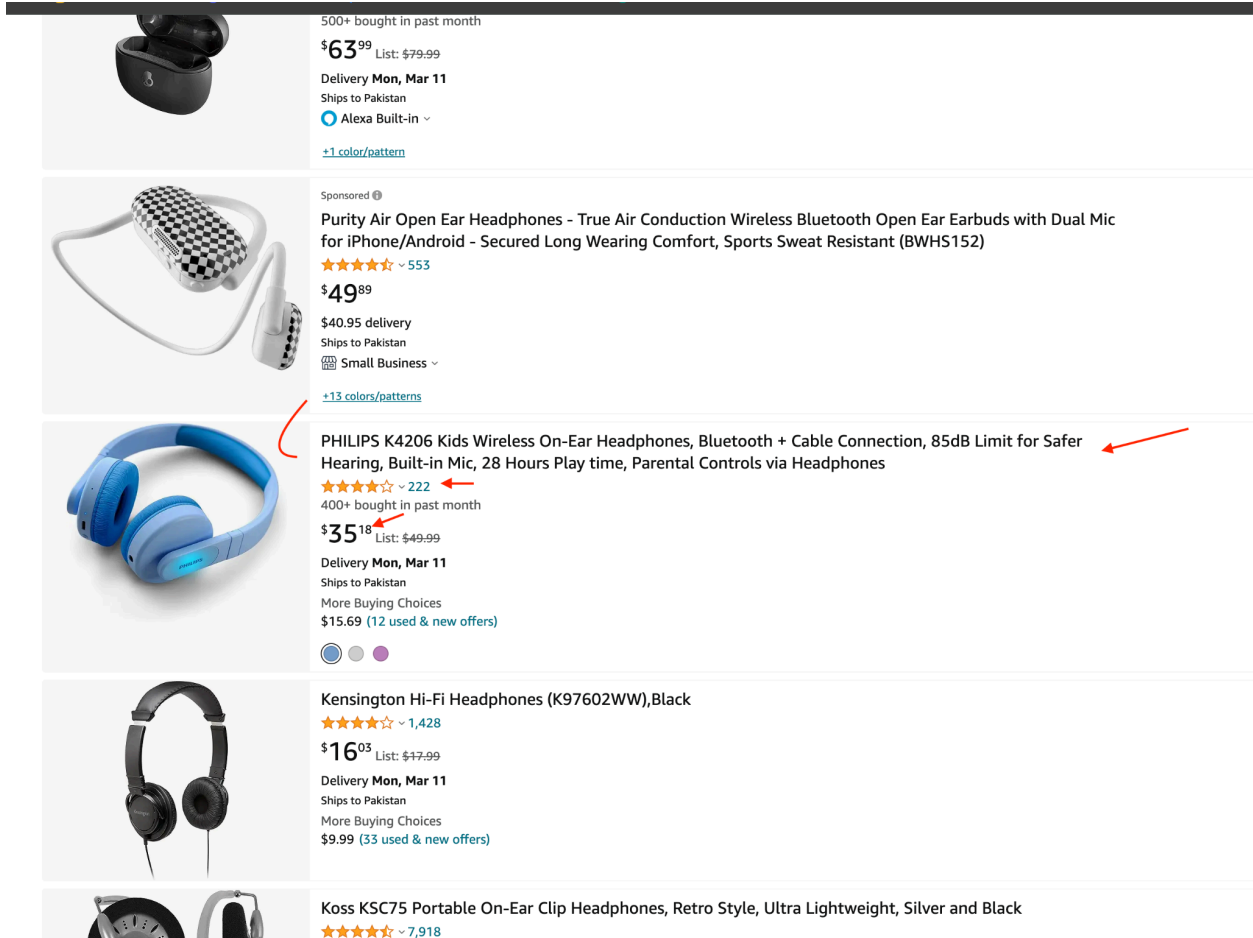
Develop a Python script to scrape product details from Amazon for a set of search queries. The script should be designed with modularity, efficiency, and readability in mind.



Requirements





1. **Read Search Queries:** 
 - Input file: `user_queries.json`
 - Structure: `["headphones", "smartphones", ...]` (10 queries in total)
2. **Scraping:** 
 - For each query, scrape product details from the first 20 pages of Amazon search results.
 - URL format:
 - **Example:** <https://www.amazon.com/s?k=headphones>




CODEAZA



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500+ bought in past month
\$63⁹⁹ List: \$79.99
Delivery **Mon, Mar 11**
Ships to Pakistan
 Alexa Built-in 
[+1 color/pattern](#)

Sponsored 
Purity Air Open Ear Headphones - True Air Conduction Wireless Bluetooth Open Ear Earbuds with Dual Mic for iPhone/Android - Secured Long Wearing Comfort, Sports Sweat Resistant (BWHS152)
★★★★☆  ~ 553
\$49⁸⁹
\$40.95 delivery
Ships to Pakistan
 Small Business 
[+13 colors/patterns](#)

 **PHILIPS K4206 Kids Wireless On-Ear Headphones, Bluetooth + Cable Connection, 85dB Limit for Safer Hearing, Built-in Mic, 28 Hours Play time, Parental Controls via Headphones**
★★★★☆  ~ 222
400+ bought in past month
\$35¹⁸ List: \$49.99
Delivery **Mon, Mar 11**
Ships to Pakistan
More Buying Choices
\$15.69 (12 used & new offers)


 Kensington Hi-Fi Headphones (K97602WW),Black
★★★★☆  ~ 1,428
\$16⁰³ List: \$17.99
Delivery **Mon, Mar 11**
Ships to Pakistan
More Buying Choices
\$9.99 (33 used & new offers)

 Koss KSC75 Portable On-Ear Clip Headphones, Retro Style, Ultra Lightweight, Silver and Black
★★★★☆  ~ 7,918

- Extracted details for each product:

- Title
- Total reviews
- Price
- Image URL

Scrape other fields - It will be a plus

- Consider additional fields like creation and update timestamps for each scraped record, and a field indicating the scrape date.

3. Output:

- Save the scraped data into JSON files named after the search query (e.g., `headphones.json`).

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- Each output file should contain an array of product details.
- 4. **Code Organization:**
 - Apply DRY and Separation of Concerns principles.
 - Suggested structure:
 - A module for reading input queries.
 - A scraping module that defines a class or function for fetching and parsing web pages.
 - A data model representing the product.
 - A module for saving the scraped data to JSON files.
- 5. **Error Handling:**
 - Implement error handling for network requests, parsing errors, and file operations.
- 6. Design a UI
 - **Design a Frontend React App that shows the scraped data in the tabular form.**
 - Deploy on Vercel.
 - Share the link in the email
 - Be creative as much as you can.

Additional Considerations

- Keep it simple.
- Don't use AI or Chat GPT 🙅 Use Stackoverflow 👍

Deliverables

Candidates should submit:

1. The complete source code, adhering to the specified requirements and code organization principles.
2. A brief documentation explaining their design decisions, how to run the script, and any dependencies.
3. Sample output files for each of the search queries provided in the `user_queries.json` file.

Other Questions

What do you know about Microsoft Azure and AWS? Have you ever worked with cloud technologies? If so please describe.

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What is FIFO in aws queue? What is the purpose of Queue?


Have you ever setup the CI/CD pipeline? Do you know how to deploy the Lambda functions/Create them?


Email your submission to:


Set Email Subject to

Python Developer Lead | Your Full Name

In the email - Don't forget to answer the following questions 

Why do you want to join Codeaza Technologies? 

Why should we hire you? What makes you unique from other candidates? 

Tell 3 bad habits and 3 good habits about yourself? 

muhammadasim@codeaza.org

Note: You will be evaluated based on your technical skills, with attention to detail, how you understand and approach the problem.

Technical skills are only 20% of what you will be doing, the rest are soft skills.

Good Luck - We are expecting you to be part of an exciting fast growing startup. 