

## HW1 – HTTP Requests with Python

### Getting Book Information

#### Single book info

Getting the HTML page is as easy as writing `requests.get(<url>)`.

Each book item is listed under a `<div>` tag with the class attribute of “productItem”, in the div “productItem” there is an anchor tag, where it has attributes `title=“<book_title>”`, and `href=“<link>”`. Here the link does not work because the book pages are actually directed from the base URL. So, the actual link should be,

*‘https://www.odtuden.com.tr/chemical-biochemical-and-engineering-thermodynamics’.*

Price is under the span tag with class “discountPriceSpan”. We find all these elements using the library `beautifulsoup4`.

```
Title: Chemical, Biochemical, and Engineering Thermodynamics 5th Ed.  
Link: https://www.odtuden.com.tr/kitaplik/chemical-biochemical-and-engineering-thermodynamics  
Price: ₺1.700,00
```

*Figure 1: Single book info*

#### Multiple book info on a single page

For this step we will iterate over the page doing what we did on parsing single book info.

```
('Chemical, Biochemical, and Engineering Thermodynamics 5th Ed.', 'https://www.odtuden.com.tr/kitaplik/chemical-biochemical-and-engineering-thermodynamics', '₺1.700,00')  
( 'Fundamentals of Analytical Chemistry 10th Ed.', 'https://www.odtuden.com.tr/kitaplik/fundamentals-of-analytical-chemistry-10th-ed', '₺1.700,00')  
( 'Elements of Chemical Reaction Engineering 4th Ed.', 'https://www.odtuden.com.tr/kitaplik/elements-of-chemical-reaction-engineering-4th-ed', '₺1.250,00')  
( 'Autobiographical Memory Development: Theoretical and Methodological Approaches', 'https://www.odtuden.com.tr/kitaplik/autobiographical-memory-development-theoretical-and-methodological-approaches', '₺1.200,00')  
( 'Solomons, Organic Chemistry 13t Ed.', 'https://www.odtuden.com.tr/kitaplik/solomons-organic-chemistry-13t-ed', '₺1.500,00')  
( 'Multinational Financial Management 11 th Ed.', 'https://www.odtuden.com.tr/kitaplik/multinational-financial-management-11-th-ed', '₺1.700,00')  
( 'Children and their Development 7 th Ed.', 'https://www.odtuden.com.tr/kitaplik/children-and-their-development-7-th-ed', '₺1.250,00')  
( 'Doku Mühendisliği Hidrojeller ve Biyomimetikler 3. Boyutlu Organ Yapımı', 'https://www.odtuden.com.tr/kitaplik/doku-muhendisligi-hidrojeller-ve-biyomimetikler-3-boyutlu-organ-yapimi', '₺300,00')  
( 'Beckers World of the Cell, Global Edition 10th Ed.', 'https://www.odtuden.com.tr/kitaplik/beckers-world-of-the-cell-global-edition-10th-ed', '₺1.275,00')  
( 'Operations Management: Sustainability and Supply Chain Management, Global Edition', 'https://www.odtuden.com.tr/kitaplik/operations-management-sustainability-and-supply-chain-management-global-edition', '₺1.275,00')  
( 'The Forefront Achieving Academic Success 1', 'https://www.odtuden.com.tr/kitaplik/the-forefront-achieving-academic-success-1', '₺350,00')  
( 'Introduction to Ceramic Powder Processing', 'https://www.odtuden.com.tr/kitaplik/introduction-to-ceramic-powder-processing', '₺180,00')  
( 'Applied Water Resources Engineering', 'https://www.odtuden.com.tr/kitaplik/applied-water-resources-engineering', '₺550,00')  
( 'Köprü Hidroliği', 'https://www.odtuden.com.tr/kitaplik/kopru-hidroligi', '₺350,00')  
( 'Principles of Electric Machines and Power Electronic', 'https://www.odtuden.com.tr/kitaplik/principles-of-electric-machines-and-power-electronic', '₺1.155,00')  
( 'The Forefront Achieving Academic Success 2', 'https://www.odtuden.com.tr/kitaplik/the-forefront-achieving-academic-success-2', '₺350,00')
```

*Figure 2: Multiple book info on a single page*

#### Multiple pages

Here I defined two functions. One for getting html page for each page, one for parsing each book info into a list, which is the same thing we did just before this one. I capped the page number at 200, and iteration ends whenever respond status code is not 200. I disabled redirects for all this to work.

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	<a href="https://www.odtuden.com.tr/kpds-sorulari-276">https://www.odtuden.com.tr/kpds-sorulari-276</a> ₺28,00
203.	MasteringBiology with Pearson eText -- Access Card -- for Campbell Essential Biology (Split), Global Edition, E-Book <a href="https://www.odtuden.com.tr/sifre--campbell-essential-biology-6th-ed-273">https://www.odtuden.com.tr/sifre--campbell-essential-biology-6th-ed-273</a> ₺255,00
204.	ODTÜ Arkeoloji Müzesi (The METU Museum of Archaeology) <a href="https://www.odtuden.com.tr/odtu-arkeoloji-muzesi-the-metu-museum-of-archaeology-255">https://www.odtuden.com.tr/odtu-arkeoloji-muzesi-the-metu-museum-of-archaeology-255</a> ₺75,00
205.	Reading Strategies For The Intermediate Level 3rd Ed <a href="https://www.odtuden.com.tr/reading-strategies-for-the-intermediate-level-3rd-ed-254">https://www.odtuden.com.tr/reading-strategies-for-the-intermediate-level-3rd-ed-254</a> ₺210,00
206.	Strategic Corporate Social Responsibility: Sustainable Value Creation <a href="https://www.odtuden.com.tr/strategic-corporate-social-responsibility-253">https://www.odtuden.com.tr/strategic-corporate-social-responsibility-253</a> ₺300,00
207.	Modified MasteringBiology -- Access Card -- for Elements of Ecology, Global Edition, E-Book <a href="https://www.odtuden.com.tr/elements-of-ecology-global-edition-modified-mastering-biology-243">https://www.odtuden.com.tr/elements-of-ecology-global-edition-modified-mastering-biology-243</a> ₺205,00
208.	MasteringBiology with Pearson eText for Biological Science, Global Edition, E-Book <a href="https://www.odtuden.com.tr/sifre--biological-science-6th-ed.-238">https://www.odtuden.com.tr/sifre--biological-science-6th-ed.-238</a> ₺295,00
209.	Chemical Reaction Engineering Beyond the Fundamentals <a href="https://www.odtuden.com.tr/chemical-reaction-engineering-beyond-the-fundamentals-233">https://www.odtuden.com.tr/chemical-reaction-engineering-beyond-the-fundamentals-233</a> ₺500,00

*Figure 3: Multiple book info on multiple pages*

Workout Upper Intermediate Students Book - Workbook Set <a href="https://www.odtuden.com.tr/workout-upper-intermediate-students-book---workbook-set-1757">https://www.odtuden.com.tr/workout-upper-intermediate-students-book---workbook-set-1757</a> ₺10,00
--

*Figure 4: Cheapest book info*

## Cart Interactions

### Adding book to cart

Link of the cheapest book is requested and parsed. UrunId and UrunKartId is extracted.

```
UrunId: 2669  
UrunKartId: 1757  
response status code for added item: 200
```

*Figure 5: Item info of the cheapest book*

### Format of the AddToCart action

In the Network tab we can see the HTTP traffic. When we click on the button to add the book to the cart, we can see that a POST request is made with a JSON payload and we can inspect the format.

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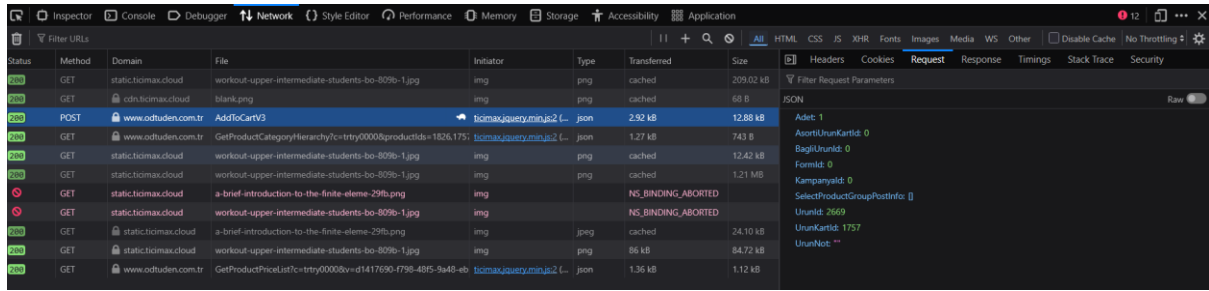


Figure 6: Post request with the JSON payload

### Checking the cart

I realized I had to start a session for this one, and adding to cart and checking the cart should be done in the same session to ensure cookies are preserved. In the JSON object there is a totalNumberproducts where the number of items in the cart can be accessed.

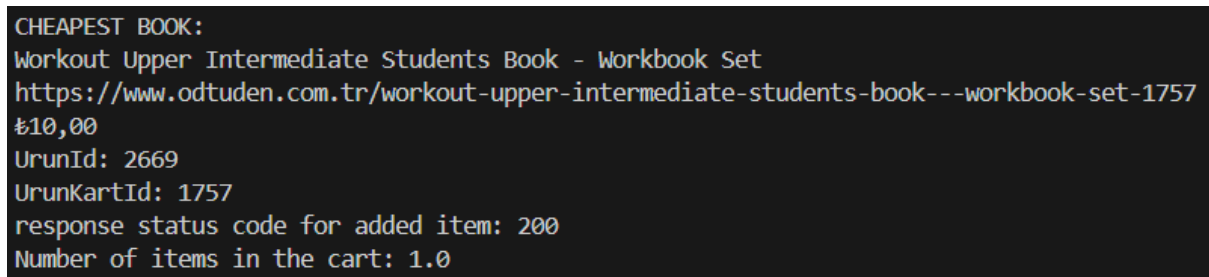


Figure 7: Cart state after adding item to the cart

### Removing from cart

From the browser I added and removed a book from the cart while inspecting the network requests using the browser debug tools. A POST request is made to <https://www.odtuden.com.tr/api/cart/RemoveProduct> with a following JSON object as a payload.

```
{  
  "BasketProductId": "3d9304b6-557d-423f-b2c2-f76b2b88cd38",  
  "CampaignId": 0,  
  "Quantity": 1,  
  "VariantId": 2669,  
  "VirtualProduct": false,  
  "VirtualProduct2": false  
}
```

First thing I observed was that the VariantID is the same number as the UrunId from before, and then the other variable we need is the BasketProductId. It can be found by inspecting the

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JSON object returned from <https://www.odtuden.com.tr/api/cart/GetMemberCart>. Then I wrote a function to get the BasketProductId and a function to remove an item from the cart.

```
CHEAPEST BOOK:  
Workout Upper Intermediate Students Book - Workbook Set  
https://www.odtuden.com.tr/workout-upper-intermediate-students-book---workbook-set-1757  
₺10,00  
UrunId: 2669  
UrunKartId: 1757  
response status code for added item: 200  
Number of items in the cart: 1  
basketProductId: cea54bb4-e7df-4508-b31e-69b8cb638bc4  
response status code for removed item: 200  
Number of items in the cart: 0
```

*Figure 8: Cart state after adding and removing the item*