



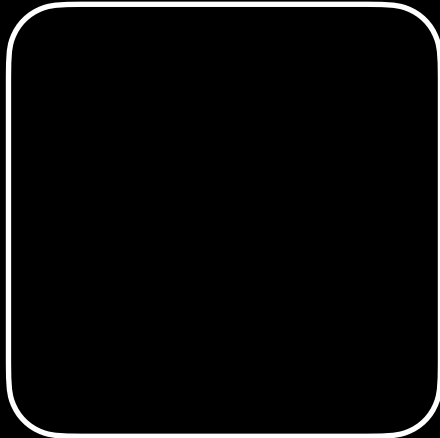
Timetable:

Kw 42	20.10.2021 (Kursvorstellung)
Kw 43	27.10.2021
Kw 44	03.11.2021 (Kick Off)
Kw 45	10.11.2021
Kw 46	17.11.2021
Kw 47	24.11.2021
Kw 48	01.12.2021
Kw 49	08.12.2021
Kw 50	15.12.2021 (Zwischenpräsentation)
Kw 51	22.12.2021
Kw 52	29.12.2021
Kw 01	05.01.2022
Kw 02	12.01.2022
Kw 03	19.01.2022
Kw 04	26.01.2022
Kw 05	02.02.2022 (white card)
Kw 06	09.02.2022 (Abschlusspräsentation)

Der Kurs **Look Mum No Screen** beschäftigt sich mit der Frage, wie Inhalte und Informationen aus dem Digitalen, in den analogen Raum transportiert werden können.

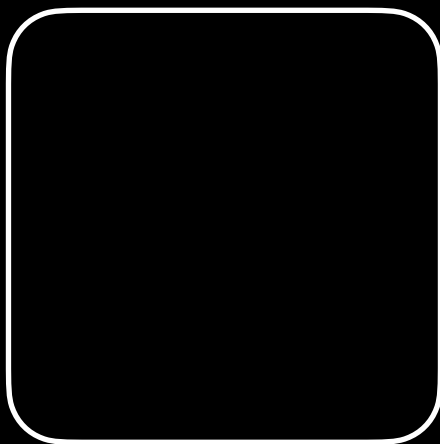
...

Die Kick Off Veranstaltung dient als Einstieg in das Thema. Dabei sollen zu Beginn verschiedene Begrifflichkeiten im Detail besprochen und erklärt werden. Weiterhin möchten wir uns damit beschäftigen, wie wir entsprechende Daten aus dem Internet sammeln und für unsere Zwecke verfügbar machen können.

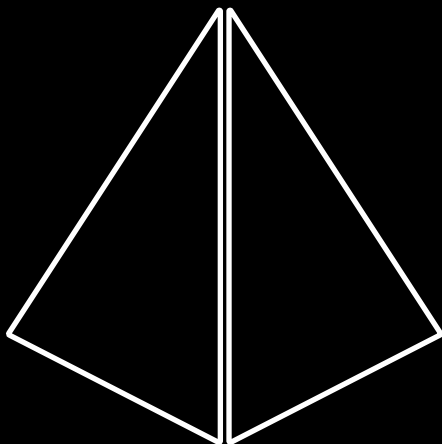


Client

API: Eine API (s. a. REST-API) fungiert als eine Art von Schnittstelle. Sie ermöglicht den Zugriff auf Informationen, Daten und dient somit als Anbindung an ein System.

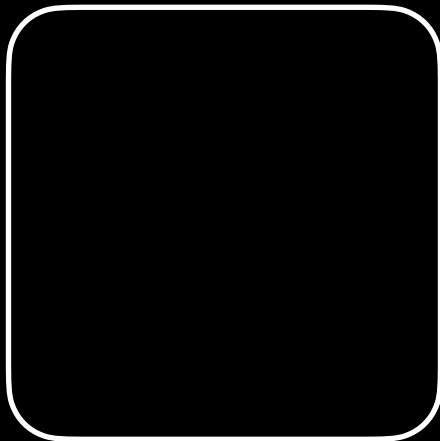


Client

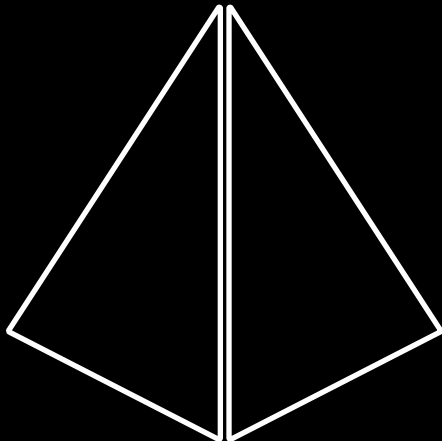


Application Programming Interface (API)

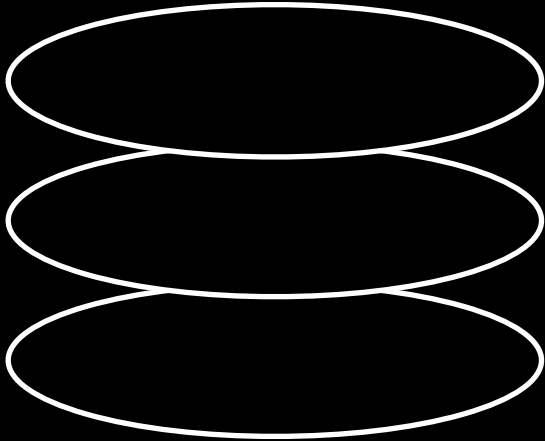
API: Eine API (s. a. REST-API) fungiert als eine Art von Schnittstelle. Sie ermöglicht den Zugriff auf Informationen, Daten und dient somit als Anbindung an ein System.



Client

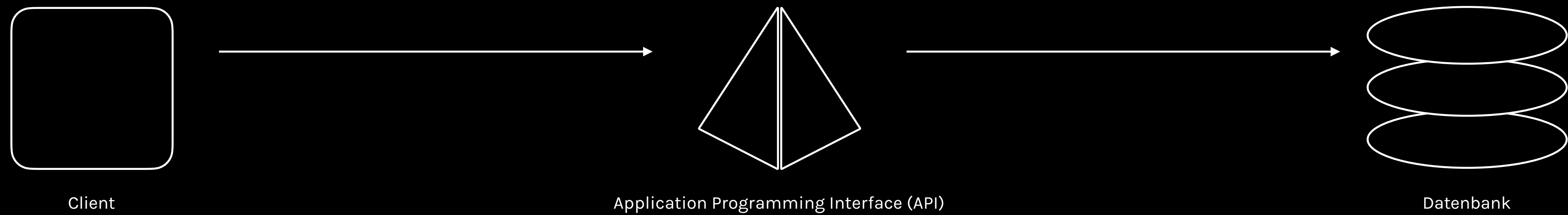


Application Programming Interface (API)

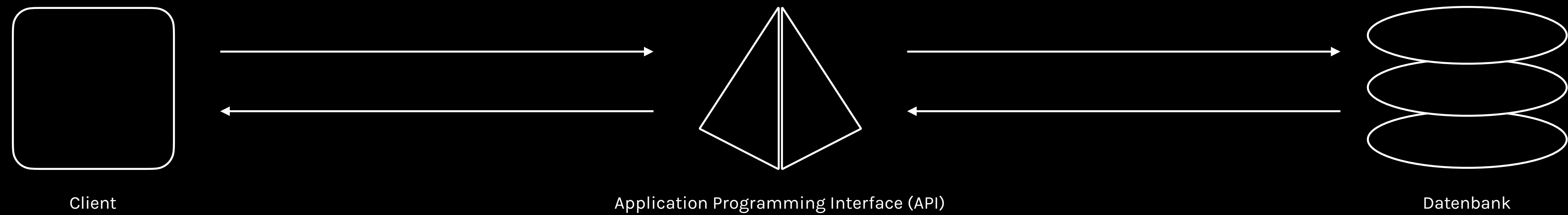


Datenbank

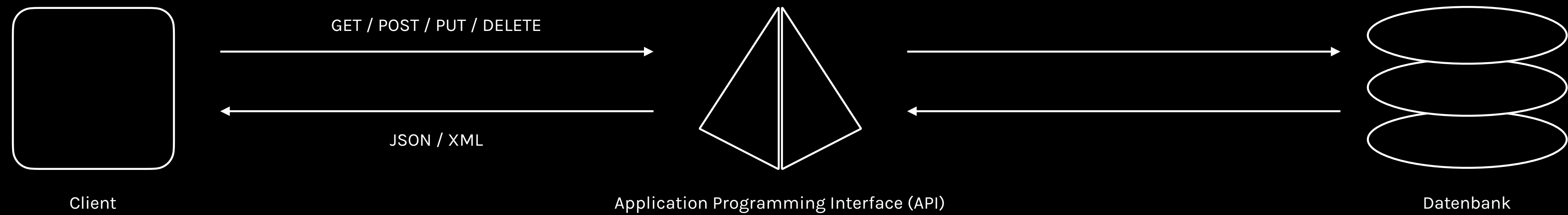
API: Eine API (s. a. REST-API) fungiert als eine Art von Schnittstelle. Sie ermöglicht den Zugriff auf Informationen, Daten und dient somit als Anbindung an ein System.



API: Eine API (s. a. REST-API) fungiert als eine Art von Schnittstelle. Sie ermöglicht den Zugriff auf Informationen, Daten und dient somit als Anbindung an ein System.



API: Eine API (s. a. REST-API) fungiert als eine Art von Schnittstelle. Sie ermöglicht den Zugriff auf Informationen, Daten und dient somit als Anbindung an ein System.



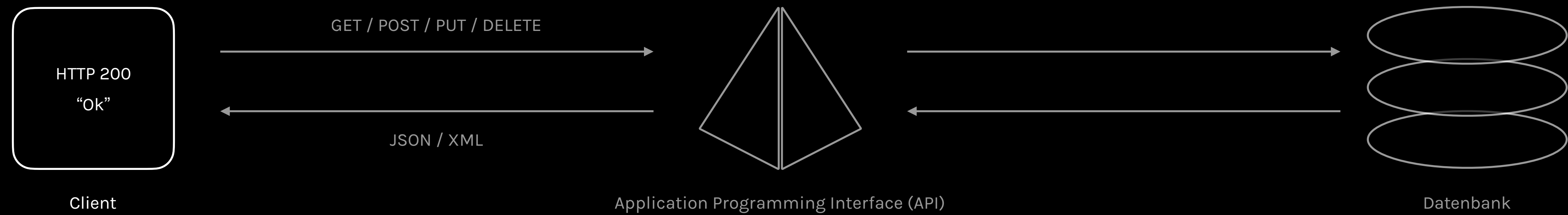
HTTP Methoden: GET, POST, PUT und DELETE beschreiben dabei einige sogenannte HTTP Methoden, die es uns ermöglichen, mit der API zu interagieren.



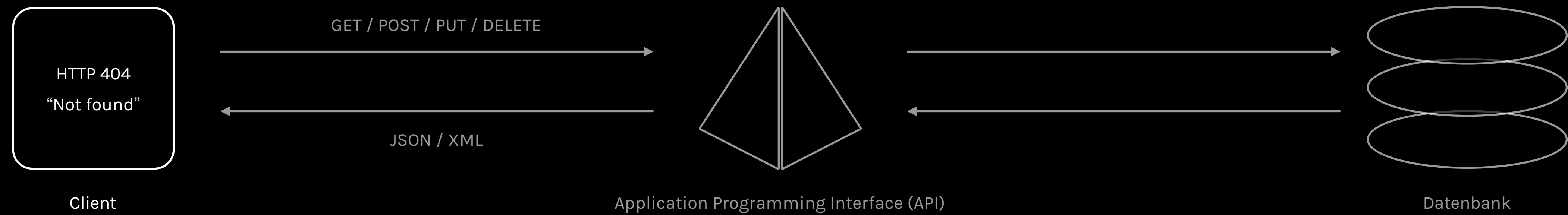
Response: Wenn wir mit der API interagieren (einen request starten), bekommen wir einen sog. “Response” zurück. Dieser Response enthält die abgefragten Daten, meist im JSON oder XML Format.



HTTP Status: Nach einer Anfrage (request) übermittelt der Server ebenfalls einen Status Code an den Client. Je nach Verlauf der Anfrage, sieht dieser dann entsprechend anders aus.



HTTP Status: Nach einer Anfrage (request) übermittelt der Server ebenfalls einen Status Code an den Client. Je nach Verlauf der Anfrage, sieht dieser dann entsprechend anders aus.



Welcome to the RapidAPI Hub


Discover and connect to thousands of APIs


Categories


- Data
- Sports
- Finance
- Travel
- Entertainment
- Location
- Science
- Food
- Transportation
- Music
- Business
- Visual Recognition
- Tools
- Text Analysis
- Weather
- Gaming
- SMS
- Events
- Health and Fitness
- Payments
-  [View All Categories](#)


Discover More APIs

Browse through our collections to learn about new use cases to implement in your app










Recommended APIs

APIs curated by RapidAPI and recommended based on functionality offered, performance, and support.



Telesign SMS Verify

Delivers patented phone-based verification and two-factor authentication using a time-based, one-time


Verified

Official

9.1

1,176 ms

99%



Telize


Telize offers a JSON IP and GeoIP REST API allowing to get a visitor IP address and to query location

Verified

9.8

100 ms

100%



Twilio SMS

Twilio's Programmable SMS API helps you add robust messaging capabilities to your applications. Please


Verified

Official

8.7

12,195 ms

88%



SendGrid

Welcome to SendGrid's Web API v3! This API is RESTful, fully featured, and easy to integrate with.

Verified

Official


9.7

295 ms

100%

Popular APIs

APIs that are popular and frequently used on RapidAPI.



Recipe - Food - Nutrition


The spoonacular Nutrition, Recipe, and Food API allows you to access over

Verified

9.8

743 ms

100%



uNoGS


uNoGS (unofficial Netflix online Global Search) allows anyone to search the global Netflix catalog.

Verified

9.8

845 ms

100%



Google Play Store


See up to date reviews, ratings and rankings for products on the Google Play Store!

Verified

9.4

154 ms

100%



Trip Purpose Prediction

Understand the reason for a trip with Amadeus AI APIs. The Trip Purpose Prediction API uses AI

Verified

7.8

418 ms

100%

Free Public APIs for Developers

If you're new to RapidAPI, this collection is a great place to start exploring APIs that are free to test, specifically updated for 2021.



Open Weather Map



Google Translate



IMDb

Complete Weather Data Coverage

Get years of historical weather data, request real-time weather information or make use of accurate weather forecasts.

Current Weather

Weather History

Weather Forecast

```
{
  "request": {
    "type": "City",
    "query": "San Francisco, United States of America",
    "language": "en",
    "unit": "m"
  },
  "location": {
    "name": "San Francisco",
    "country": "United States of America",
    "region": "California",
    "lat": "37.775",
    "lon": "-122.418",
    "timezone_id": "America/Los_Angeles",
    "localtime": "2019-09-03 05:35",
    "localtime_epoch": 1567488900,
    "utc_offset": "-7.0"
  },
  "current": {
    "observation_time": "12:35 PM",
    "temperature": 16,
    "weather_code": 122,
    "weather_icons": [
      "https://assets.weatherstack.com/images/symbol.png"
    ],
    "weather_descriptions": [
      "Overcast"
    ],
    "wind_speed": 17,
    "wind_degree": 260,
    "wind_dir": "W",
    "pressure": 1016,
    "precip": 0,
    "humidity": 87,
    "cloudcover": 100,
    "feelslike": 16,
    "uv_index": 0,
    "visibility": 16
  }
}
```



Reliable Data Sources

Powered by a strong backbone of data sources, our weather data API comes with the highest level of reliability, consistency and accuracy.



Lightning-fast Response

Weather data is delivered in lightweight JSON format to ensure a high level of speed and compatibility with any programming language.



Scalable Infrastructure

Our REST API is backed by scalable cloud infrastructure built and maintained by apilayer, capable of handling billions of requests per day.



Flexible Location Lookup



Bank-Level Security



Extensive API Documentation

Was ist wenn?

In einigen Fällen kommt es vor, dass die Informationen oder Daten die uns interessieren, nicht frei zugänglich sind oder es einfach keine offizielle API gibt.

Was ist wenn?

In einigen Fällen kommt es vor, dass die Informationen oder Daten die uns interessieren, nicht frei zugänglich sind oder es einfach keine offizielle API gibt.

Web Scraping:

Web Scraping beschreibt das automatische Auslesen, Extrahieren, Kopieren sowie Speichern von Inhalten einer Website (s. a. Manuelles Scraping: Hier werden Inhalte klassisch mit der “Hand” kopiert.).

Was ist wenn?

In einigen Fällen kommt es vor, dass die Informationen oder Daten die uns interessieren, nicht frei zugänglich sind oder es einfach keine offizielle API gibt.

Web Scraping:

Web Scraping beschreibt das automatische Auslesen, Extrahieren, Kopieren sowie Speichern von Inhalten einer Website (s. a. Manuelles Scraping: Hier werden Inhalte klassisch mit der “Hand” kopiert.).

Achtung:

Das Scraping ist dann legal, wenn die extrahierten Daten frei zugänglich für Dritte im Web stehen.

Wenn Daten urheberrechtlich geschützt sind, dann dürfen sie nicht woanders veröffentlicht werden.

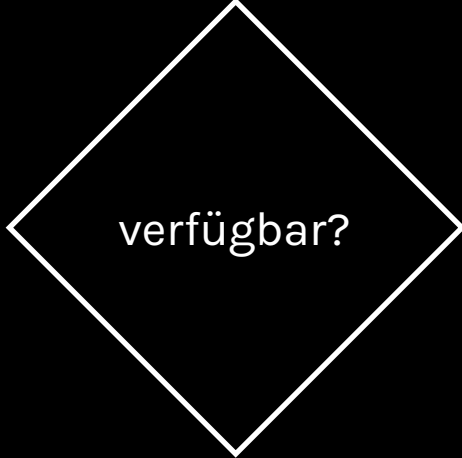
Wenn das Nutzen von Daten mit einer Anmeldung oder einen Nutzungsvertrag zusammenhängt, dann dürfen diese Daten nicht gescraped werden.

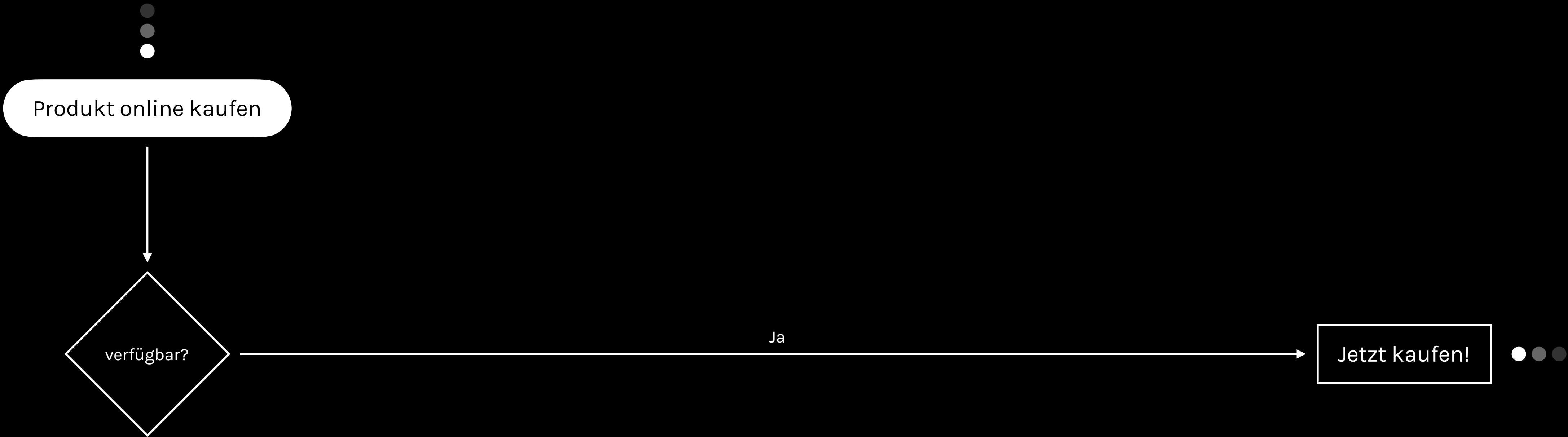


Produkt online kaufen



Produkt online kaufen







Keychron K7 Ultra-slim Wireless Mechanical Keyboard

★★★★★ 12 reviews

\$74.00

VERSION

White Backlight

RGB Backlight

SWITCH TYPE

Low Profile Gateron Mechanical

Low Profile Keychron Optical (Hot-Swappable)

Low Profile Gateron Mechanical (Hot-Swappable)

SWITCH OPTION

Red

Blue

Brown

Banana

Mint

QUANTITY

− 1 +

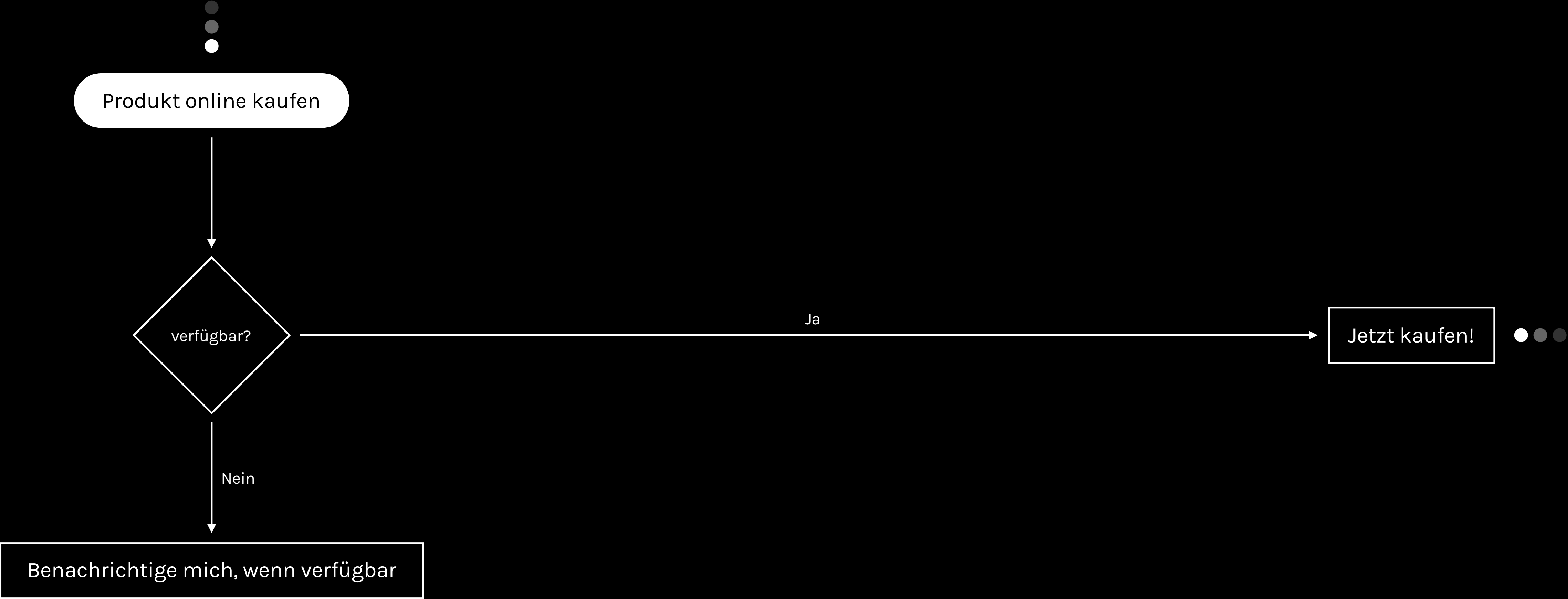
Add to cart

Buy with **PayPal**

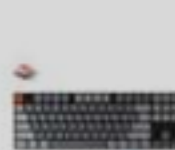
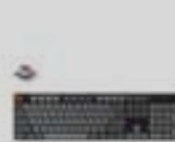
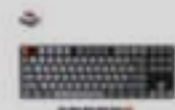
More payment options

We have shipped most of the pre-orders. We will resume shipping on October 7th after the national holidays, and all orders will be shipped out by October 15th.

Keychron K7 Wireless mechanical keyboard has included keycaps for both Windows and macOS, and users can hotswap every switch in seconds with the hot-swappable version.



In den meisten Fällen erscheint hier ein Dialogfenster mit entsprechender Eingabemaske. Dort können sich die Nutzer mit ihrer E-Mail-Adresse eintragen und erhalten eine Benachrichtigung, sobald der Artikel wieder verfügbar ist.



Keychron K1 Wireless Mechanical Keyboard (Version 4)

★★★★☆ 896 reviews

\$89.00

KEYS

87-Key

104-Key

VERSION

RGB Backlight Aluminum Body

White Backlight Aluminum Body

SWITCH OPTION

Gateron Low Profile Red

Gateron Low Profile Blue

Gateron Low Profile Brown

QUANTITY


- 1 +

Sold out


Notify Me When Available

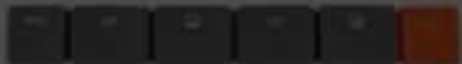
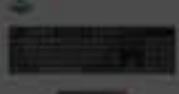
Please drop your email on "Notify Me When Available" if the product model is out of stock.

Keychron K1 Wireless mechanical keyboard has included keycaps for both Windows and Mac operating systems.

 Share

 Tweet

 Pin it



Keychron K1 Wireless Mechanical Keyboard (Version 4)

Register to receive a notification when this item comes back in stock.

104-key / White Backlight Aluminum Body / Gateror ▾

Email

Notify me when available

K1 Wireless Mechanical Keyboard (Version

104-Key

104-Key

VERSION

RGB Backlight Aluminum Body

White Backlight Aluminum Body

SWITCH OPTION

Gateron Low Profile Red

Gateron Low Profile Blue

Gateron Low Profile Brown

QUANTITY

- 1 +

Sold out

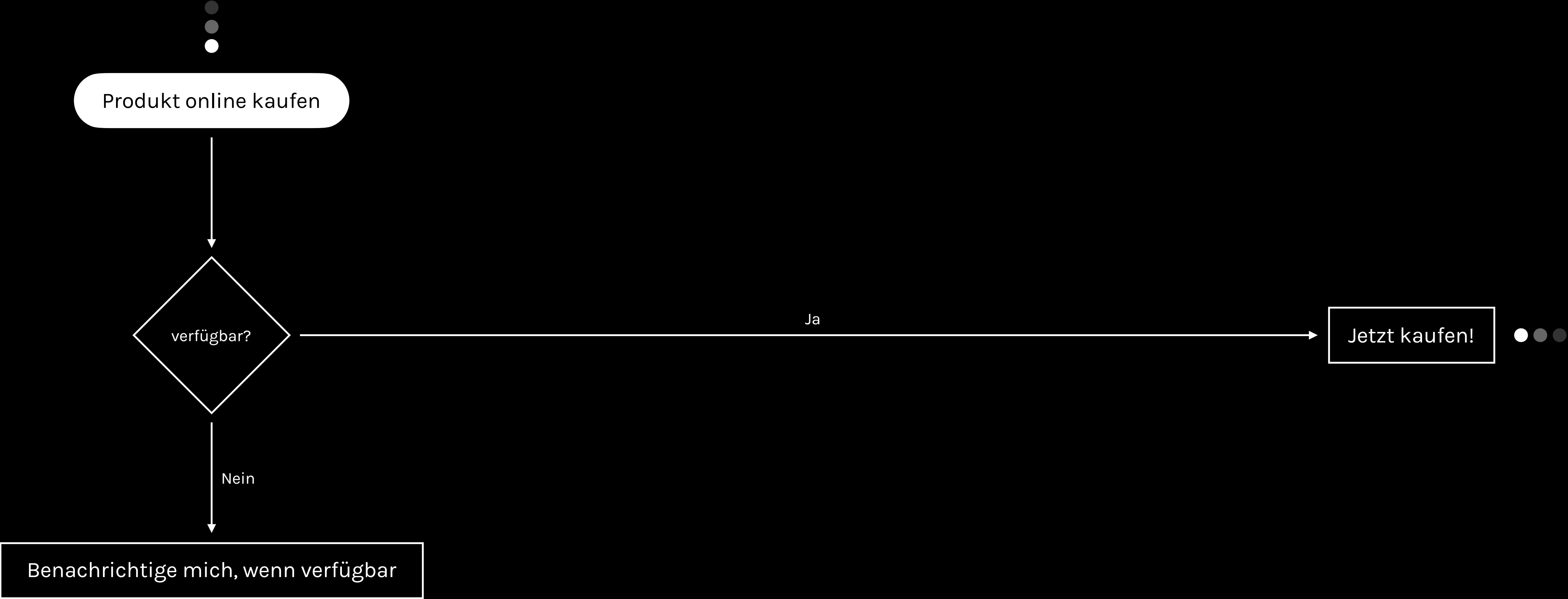
Notify Me When Available

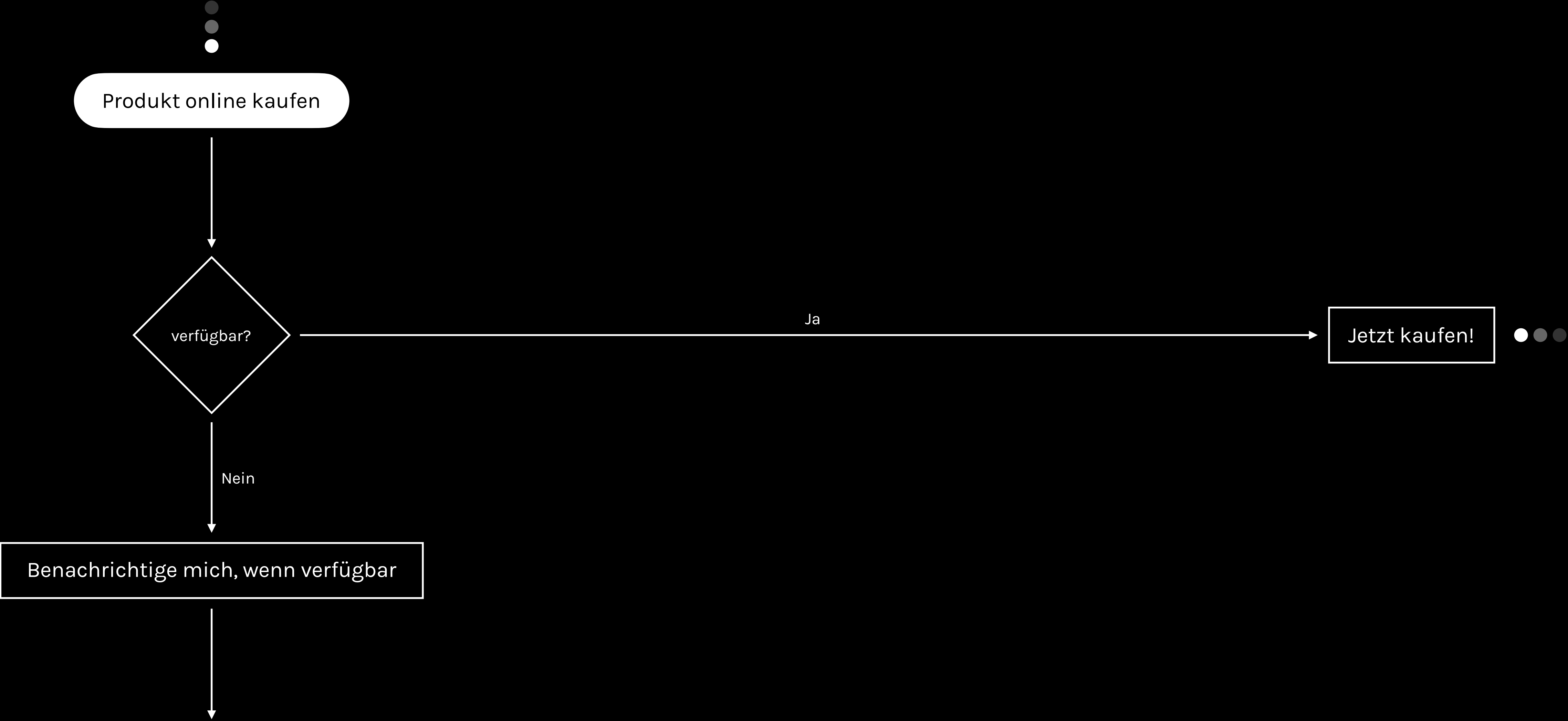
Please drop your email on "Notify Me When Available" if the product model is out of stock.

Keychron K1 Wireless mechanical keyboard has included keycaps for both Windows and Mac operating systems.

In den meisten Fällen erscheint hier ein Dialogfenster mit entsprechender Eingabemaske. Dort können sich die Nutzer mit ihrer E-Mail-Adresse eintragen und erhalten eine Benachrichtigung, sobald der Artikel wieder verfügbar ist.

Nachteil: Die Benachrichtigungen (E-Mails) werden dann auf dem Smartphone oder auf dem Rechner abgerufen / gelesen. Weiterhin landen wir mit unserer E-Mail-Adresse in einem Newsletter-Verteiler.

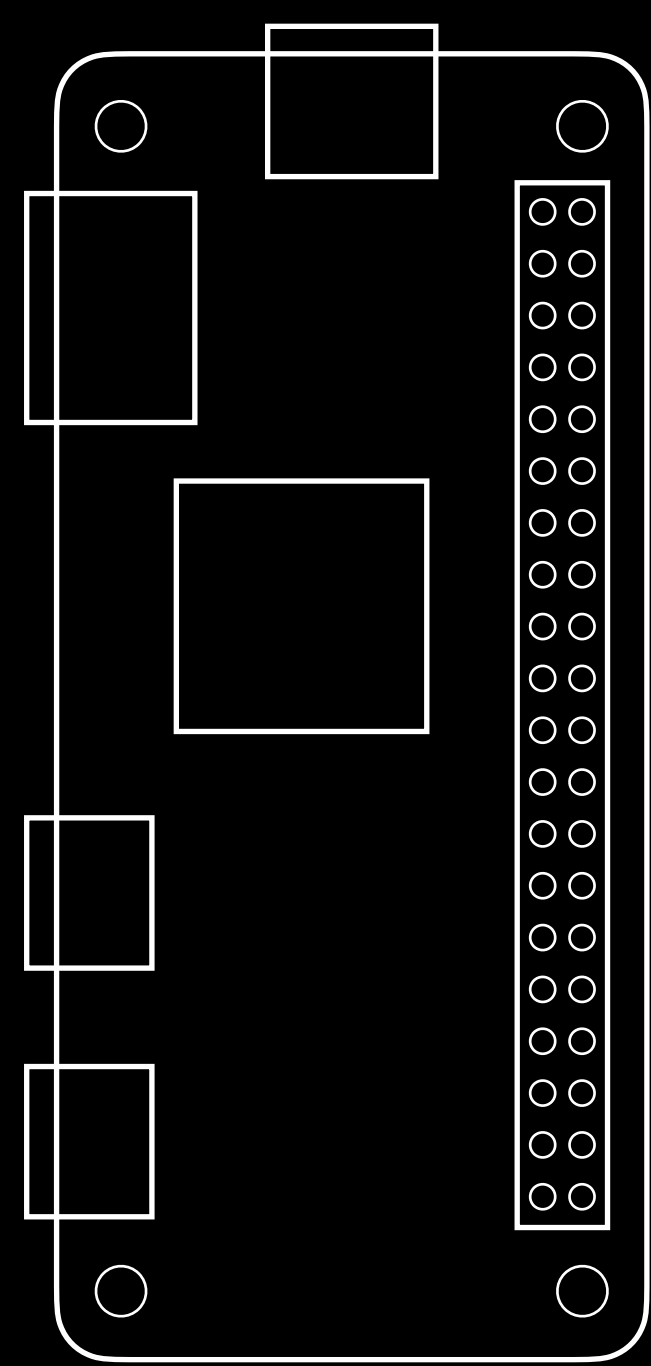


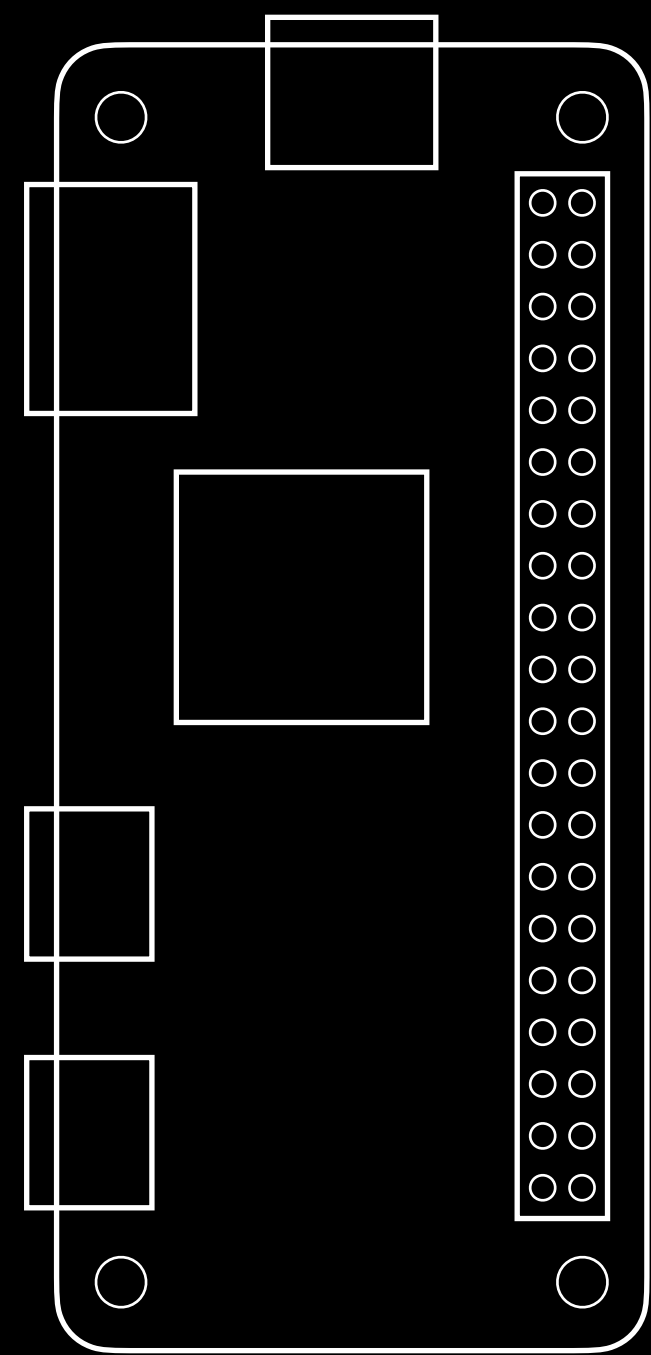


In den meisten Fällen erscheint hier ein Dialogfenster mit entsprechender Eingabemaske. Dort können sich die Nutzer mit ihrer E-Mail-Adresse eintragen und erhalten eine Benachrichtigung, sobald der Artikel wieder verfügbar ist.

Nachteil: Die Benachrichtigungen (E-Mails) werden dann auf dem Smartphone oder auf dem Rechner abgerufen / gelesen. Weiterhin landen wir mit unserer E-Mail-Adresse in einem Newsletter-Verteiler.

Wir entwickeln ein System, das unabhängig agiert und uns auf andere Art und Weise benachrichtigt, sobald der gewünschte Artikel wieder verfügbar ist.

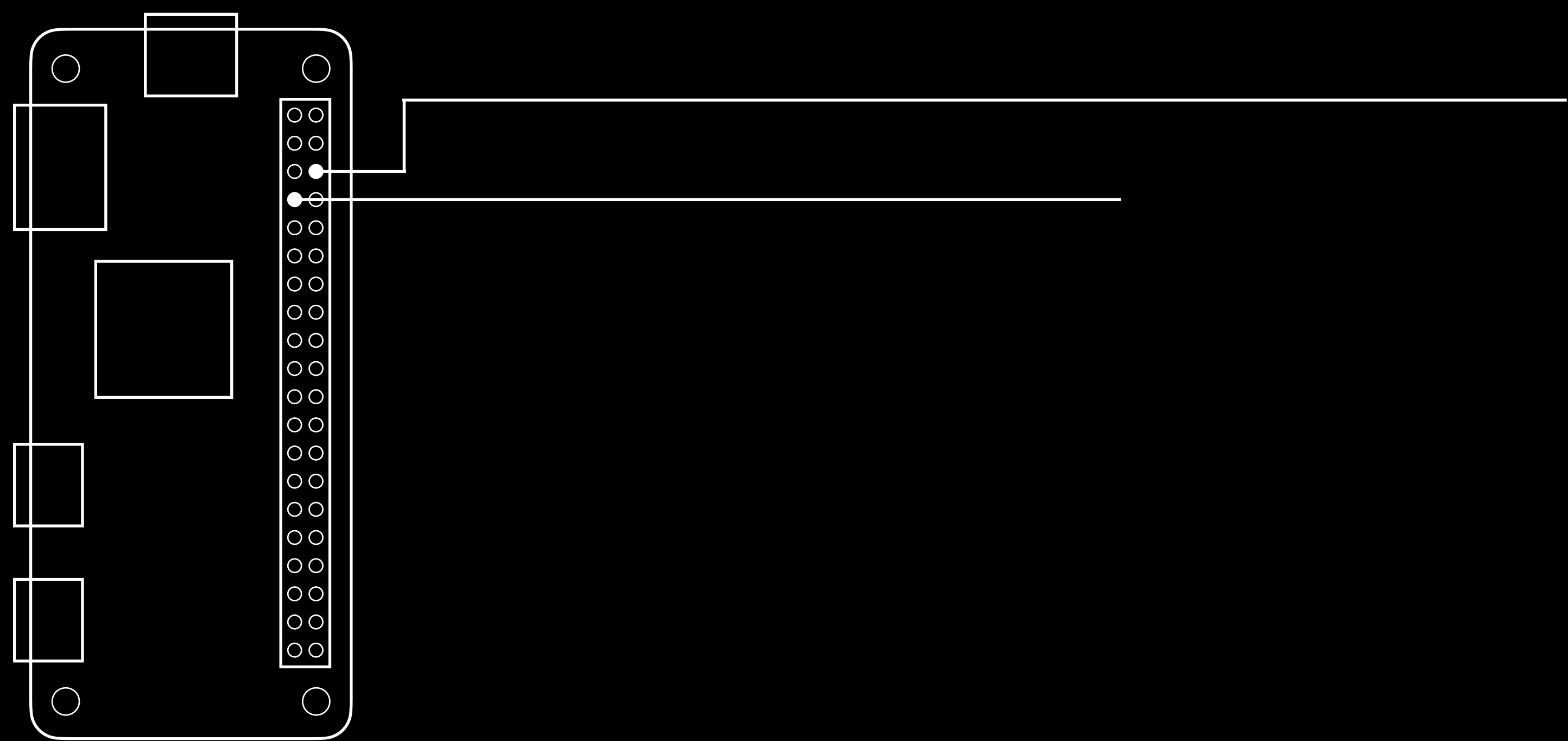




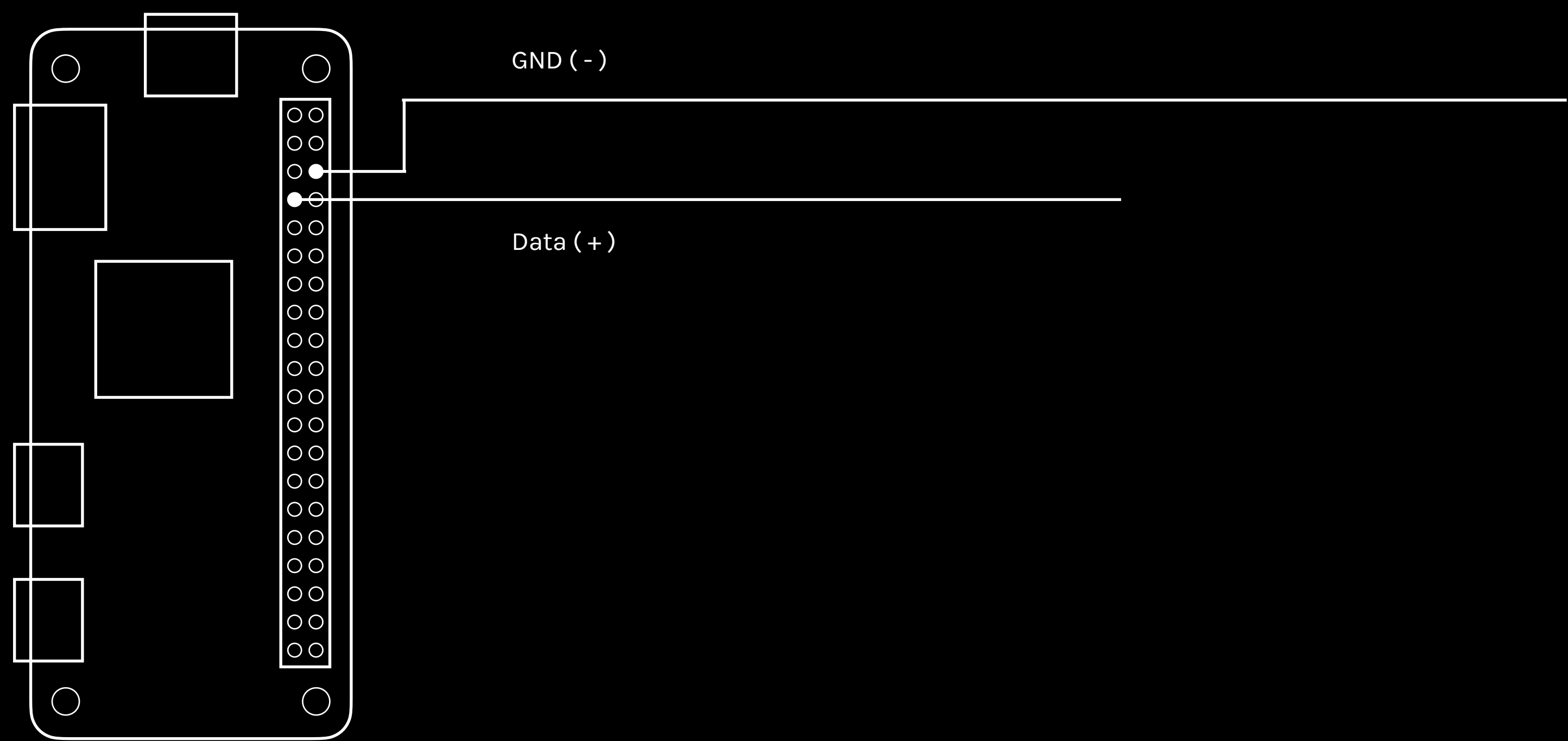
Einplatinencomputer,
mit dem Internet verbunden.



Einplatinencomputer,
mit dem Internet verbunden.



Einplatinencomputer,
mit dem Internet verbunden.



Einplatinencomputer,
mit dem Internet verbunden.





In den meisten Fällen erscheint hier ein Dialogfenster mit entsprechender Eingabemaske. Dort können sich die Nutzer mit ihrer E-Mail-Adresse eintragen und erhalten eine Benachrichtigung, sobald der Artikel wieder verfügbar ist.

Nachteil: Die Benachrichtigungen (E-Mails) werden dann auf dem Smartphone oder auf dem Rechner abgerufen / gelesen. Weiterhin landen wir mit unserer E-Mail-Adresse in einem Newsletter-Verteiler.

Wir entwickeln ein System, das unabhängig agiert und uns auf andere Art und Weise benachrichtigt, sobald der gewünschte Artikel wieder verfügbar ist.

Wenn mein Artikel wieder verfügbar ist, **dann** soll die Diode (LED) aufleuchten.



Keychron K7 Ultra-slim Wireless Mechanical Keyboard

★★★★★ 12 reviews

\$74.00

VERSION

White Backlight

RGB Backlight

SWITCH TYPE

Low Profile Gateron Mechanical

Low Profile Keychron Optical (Hot-Swappable)

Low Profile Gateron Mechanical (Hot-Swappable)

SWITCH OPTION

Red

Blue

Brown

Banana

Mint

QUANTITY

− 1 +

Add to cart

Buy with **PayPal**

More payment options

We have shipped most of the pre-orders. We will resume shipping on October 7th after the national holidays, and all orders will be shipped out by October 15th.

Keychron K7 Wireless mechanical keyboard has included keycaps for both Windows and macOS, and users can hotswap every switch in seconds with the hot-swappable version.

Look Mum No Screen

Keychron K7 Ultra-slim Wireless Mechanical Keyboard

★★★★★ 12 reviews

\$74.00

VERSION

White Backlight

RGB Backlight

SWITCH TYPE

Low Profile Gateron Mechanical

Low Profile Keychron Optical (Hot-Swappable)

Low Profile Gateron Mechanical (Hot-Swappable)

SWITCH OPTION

Red

Blue

Brown

Banana

Mint

QUANTITY

- 1 +

Add to cart

Buy with **PayPal**

More payment options

We have shipped most of the pre-orders. We will resume shipping on October 7th after the national holidays, and all orders will be shipped out by October 15th.

Keychron K7 Wireless mechanical keyboard has included keycaps for both Windows and macOS, and users can hotswap every switch in seconds with the hot-swappable version.

🔍 📄 Elements Console Sources Network Performance Memory Application Security Lighthouse AdBlock

🔗 Kick Off

 \$74.00

><div class="product__unit-price product__unit-price-wrapper--6598973456473 hide">...</div>

><script>...</script>

<div id="ProductInventory-6598973456473" class="product__inventory hide">289 in stock </div>

<hr class="hr--medium">

><form method="post" action="/cart/add" id="AddToCartForm-6598973456473" accept-charset="UTF-8" class="product-single__form" enctype="multipart/form-data">

>><variantswatchking>...</variantswatchking>

>><input type="hidden" name="form_type" value="product">

>><input type="hidden" name="utf8" value="✓">

>><div class="variant-wrapper variant-wrapper--button js">...</div>

>><div class="variant-wrapper variant-wrapper--button js">...</div>

>><div class="variant-wrapper variant-wrapper--button js">...</div>

>><select name="id" id="ProductSelect-6598973456473" class="product-single_variants no-js">...</select>

>><div class="product__quantity product__quantity--button">...</div>

>><div class="payment-buttons">

>>><button type="submit" name="add" id="AddToCart-6598973456473" class="btn btn--full add-to-cart add-to-cart--secondary">...</button>

>>><div data-shopify="payment-button" class="shopify-payment-button">...</div>

>></div>

>><textarea id="VariantsJson-6598973456473" class="hide" aria-hidden="true" aria-label="Product JSON">...</textarea>

>><textarea id="CurrentVariantJson-6598973456473" class="hide" aria-hidden="true" aria-label="Variant JSON"> == \$0

>>>" {"id":39396243996761,"title":"White Backlight \\/ Low Profile Keychron Optical (Hot-swappable) \\/ Brown","option1":"White Backlight","option2":"Low Profile Keychron Optical (Hot-swappable)","option3":"Brown","sku":"K7-D3","requires_shipping":true,"taxable":false,"featured_image":{"id":28286033559641,"product_id":6598973456473,"position":6,"created_at":"2021-07-29T19:17:23+08:00","updated_at":"2021-07-29T19:33:13+08:00","alt":"Keychron K7 65-percent ultra-slim compact wireless mechanical keyboard for Mac Windows Hot-swappable low-profile Keychron Optical Mechanical brown switches with white backlit","width":2000,"height":2000,"src":"https:\\\\/cdn.shopify.com\\/s\\/files\\/1\\/0059\\/0630\\/1017\\/products\\/Keychron-K7-65-percent-ultra-slim-compact-wireless-mechanical-keyboard-for-Mac-Windows-Hot-swappable-low-profile-Optical-brown-switches-for-Mac-Windows-with-White-backlit.jpg?v=1627558393"},"available":true,"name":"Keychron K7 Ultra-slim Wireless Mechanical Keyboard - White Backlight \\/ Low Profile Keychron Optical (Hot-swappable) \\/ Brown","public_title":"White Backlight \\/ Low Profile Keychron Optical (Hot-swappable) \\/ Brown","options":["White Backlight","Low Profile Keychron Optical (Hot-swappable)","Brown"],"price":7400,"weight":0,"compare_at_price":7400,"inventory_management":"shopify","barcode":"","featured_media":{"alt":"Keychron K7 65-percent ultra-slim compact wireless mechanical keyboard for Mac Windows Hot-swappable low-profile Keychron Optical Mechanical brown switches with white backlit","id":20586842947673,"position":6,"preview_image":{"aspect_ratio":1.0,"height":2000,"width":2000,"src":"https:\\\\/cdn.shopify.com\\/s\\/files\\/1\\/0059\\/0630\\/1017\\/products\\/Keychron-K7-65-percent-ultra-slim-compact-wireless-mechanical-keyboard-for-Mac-Windows-Hot-swappable-low-profile-Optical-brown-switches-for-Mac-Windows-with-White-backlit.jpg?v=1627557443"}}, "requires_selling_plan":false,"selling_plan_allocations":[]}

>>></textarea>

>>>Notify Me When Available

>></form>

>>><div class="product-single_description rte">...</div>

>>><div class="social-sharing">...</div>

>></div>

></div>

>>>::after

></div>

>><div style="clear:both"></div>

></div>

></div>

... :ction div.page-content div.page-width div.grid div.grid item.medium-up--one-half div.product-single meta form#AddToCartForm-6598973456473.product-single form textarea#CurrentVariantJson-6598973456473

\$74.00

Keychron

Look Mum No Screen

Keychron K7 Ultra-slim Wireless Mechanical Keyboard

★★★★★12 reviews

\$74.00

VERSION

White Backlight

RGB Backlight

SWITCH TYPE

Low Profile Gateron Mechanical

Low Profile Keychron Optical (Hot-Swappable)

Low Profile Gateron Mechanical (Hot-Swappable)

SWITCH OPTION

Red

Blue

Brown

Banana

Mint

QUANTITY

-

1

+

Add to cart

Buy with PayPal

More payment options

We have shipped most of the pre-orders. We will resume shipping on October 7th after the national holidays, and all orders will be shipped out by October 15th.

Keychron K7 Wireless mechanical keyboard has included keycaps for both Windows and macOS, and users can hotswap every switch in seconds with the hot-swappable version.

Share

Tweet

Pin

Hilfe

DevTools is now available in German! Always match Chrome's language Switch DevTools to German Don't show again

Elements

Console

Sources

Network

Performance

Memory

Application

Security

Lighthouse

AdBlock

↳ Kick Off

 \$74.00

><div class="product__unit-price product__unit-price-wrapper--6598973456473 hide">...</div>

><script>...</script>

<div id="ProductInventory-6598973456473" class="product__inventory hide">289 in stock </div>

<hr class="hr--medium">

><form method="post" action="/cart/add" id="AddToCartForm-6598973456473" accept-charset="UTF-8" class="product-single__form" enctype="multipart/form-data">

>><variantswatchking>...</variantswatchking>

>><input type="hidden" name="form_type" value="product">

>><input type="hidden" name="utf8" value="✓">

>><div class="variant-wrapper variant-wrapper--button js">...</div>

>><div class="variant-wrapper variant-wrapper--button js">...</div>

>><div class="variant-wrapper variant-wrapper--button js">...</div>

>><select name="id" id="ProductSelect-6598973456473" class="product-single_variants no-js">...</select>

>><div class="product__quantity product__quantity--button">...</div>

>><div class="payment-buttons">

>>><button type="submit" name="add" id="AddToCart-6598973456473" class="btn btn--full add-to-cart add-to-cart--secondary">...</button>

>>><div data-shopify="payment-button" class="shopify-payment-button">...</div>

>></div>

>><textarea id="VariantsJson-6598973456473" class="hide" aria-hidden="true" aria-label="Product JSON">...</textarea>

>>><textarea id="CurrentVariantJson-6598973456473" class="hide" aria-hidden="true" aria-label="Variant JSON"> == \$0

>>>>" {"id":39396243996761,"title":"White Backlight \\/ Low Profile Keychron Optical (Hot-swappable) \\/ Brown","option1":"White Backlight","option2":"Low Profile Keychron Optical (Hot-swappable)","option3":"Brown","sku":"K7-D3","requires_shipping":true,"taxable":false,"featured_image":{"id":28286033559641,"product_id":6598973456473,"position":6,"created_at":"2021-07-29T19:17:23+08:00","updated_at":"2021-07-29T19:33:13+08:00","alt":"Keychron K7 65-percent ultra-slim compact wireless mechanical keyboard for Mac Windows Hot-swappable low-profile Keychron Optical Mechanical brown switches with white backlit","width":2000,"height":2000,"src":"https:\\\\cdn.shopify.com\\s\\files\\1\\0059\\0630\\1017\\products\\Keychron-K7-65-percent-ultra-slim-compact-wireless-mechanical-keyboard-for-Mac-Windows-Hot-swappable-low-profile-Optical-brown-switches-for-Mac-Windows-with-White-backlit.jpg?v=1627558393"},"available":true,"name":"Keychron K7 Ultra-slim Wireless Mechanical Keyboard - White Backlight \\/ Low Profile Keychron Optical (Hot-swappable) \\/ Brown","public_title":"White Backlight \\/ Low Profile Keychron Optical (Hot-swappable) \\/ Brown","options":["White Backlight","Low Profile Keychron Optical (Hot-swappable)","Brown"],"price":7400,"weight":0,"compare_at_price":7400,"inventory_management":"shopify","barcode":"","featured_media":{"alt":"Keychron K7 65-percent ultra-slim compact wireless mechanical keyboard for Mac Windows Hot-swappable low-profile Keychron Optical Mechanical brown switches with white backlit","id":20586842947673,"position":6,"preview_image":{"aspect_ratio":1.0,"height":2000,"width":2000,"src":"https:\\\\cdn.shopify.com\\s\\files\\1\\0059\\0630\\1017\\products\\Keychron-K7-65-percent-ultra-slim-compact-wireless-mechanical-keyboard-for-Mac-Windows-Hot-swappable-low-profile-Optical-brown-switches-for-Mac-Windows-with-White-backlit.jpg?v=1627557443"}}, "requires_selling_plan":false,"selling_plan_allocations":[]}

>>>></textarea>

>>>>Notify Me When Available

>>></form>

>>>><div class="product-single_description rte">...</div>

>>>><div class="social-sharing">...</div>

>>></div>

>></div>

>>>>::after

>></div>

>>>><div style="clear:both"></div>

>></div>

>>>></div>

...>action

div.page-content

div.page-width

div.grid

div.grid

item.medium-up--one-half

div.product-single

meta

form#AddToCartForm-6598973456473

product-single

form

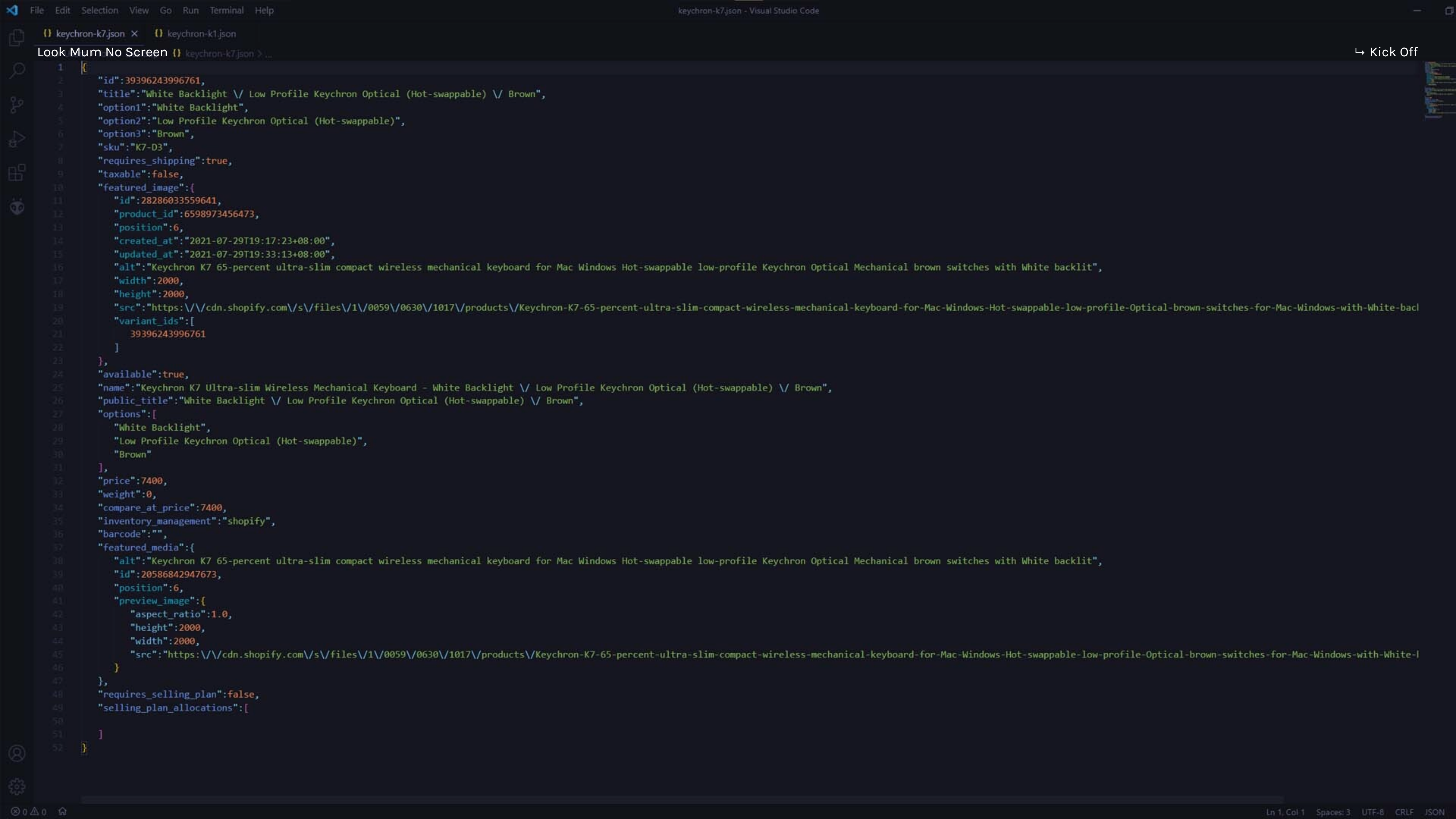
textarea#CurrentVariantJson-6598973456473

\$74.00

② Hilfe

↳ Kick Off

</div>

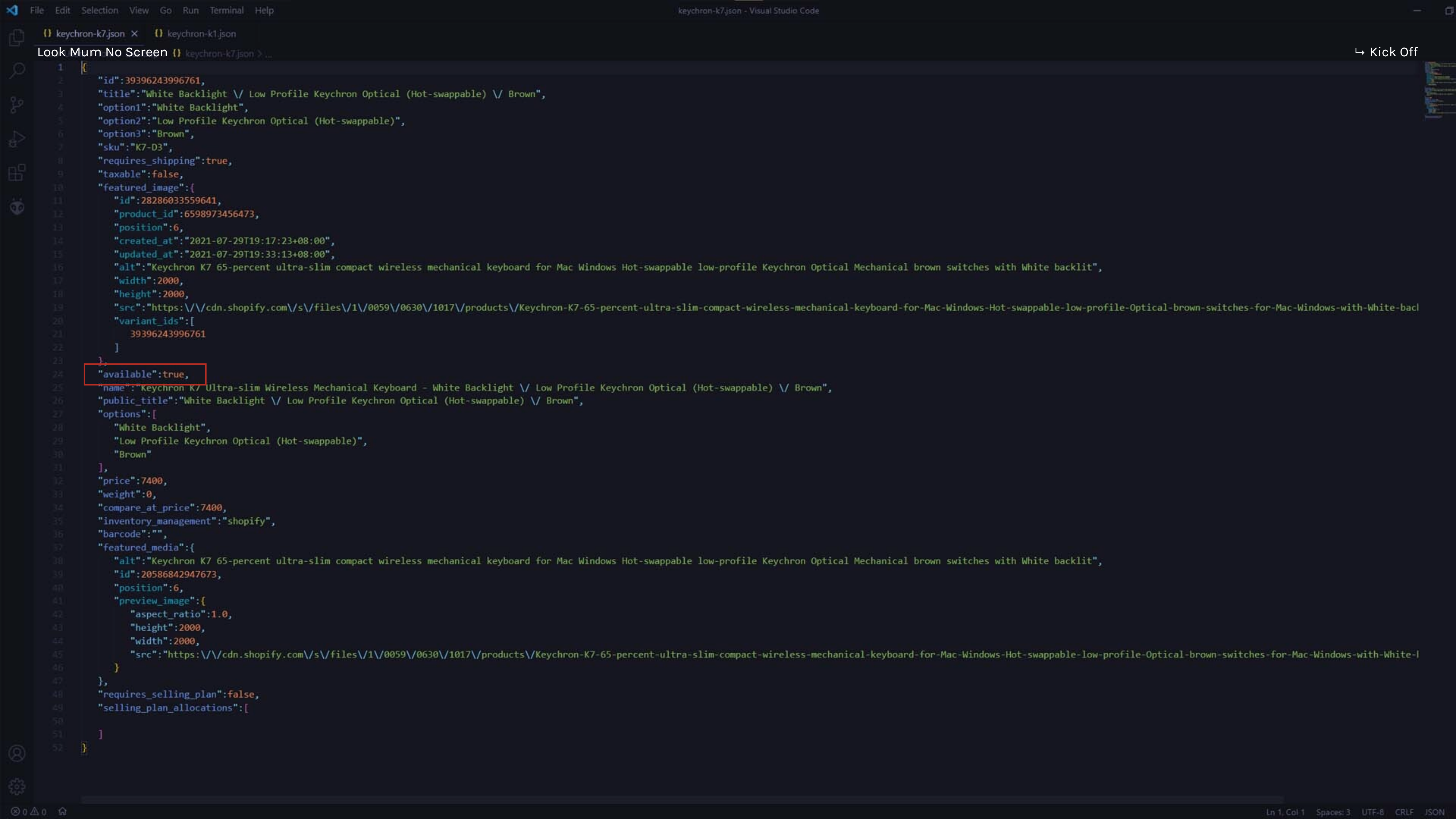


keychron-k7.json × keychron-k1.json

Look Mum No Screen keychron-k7json > ...

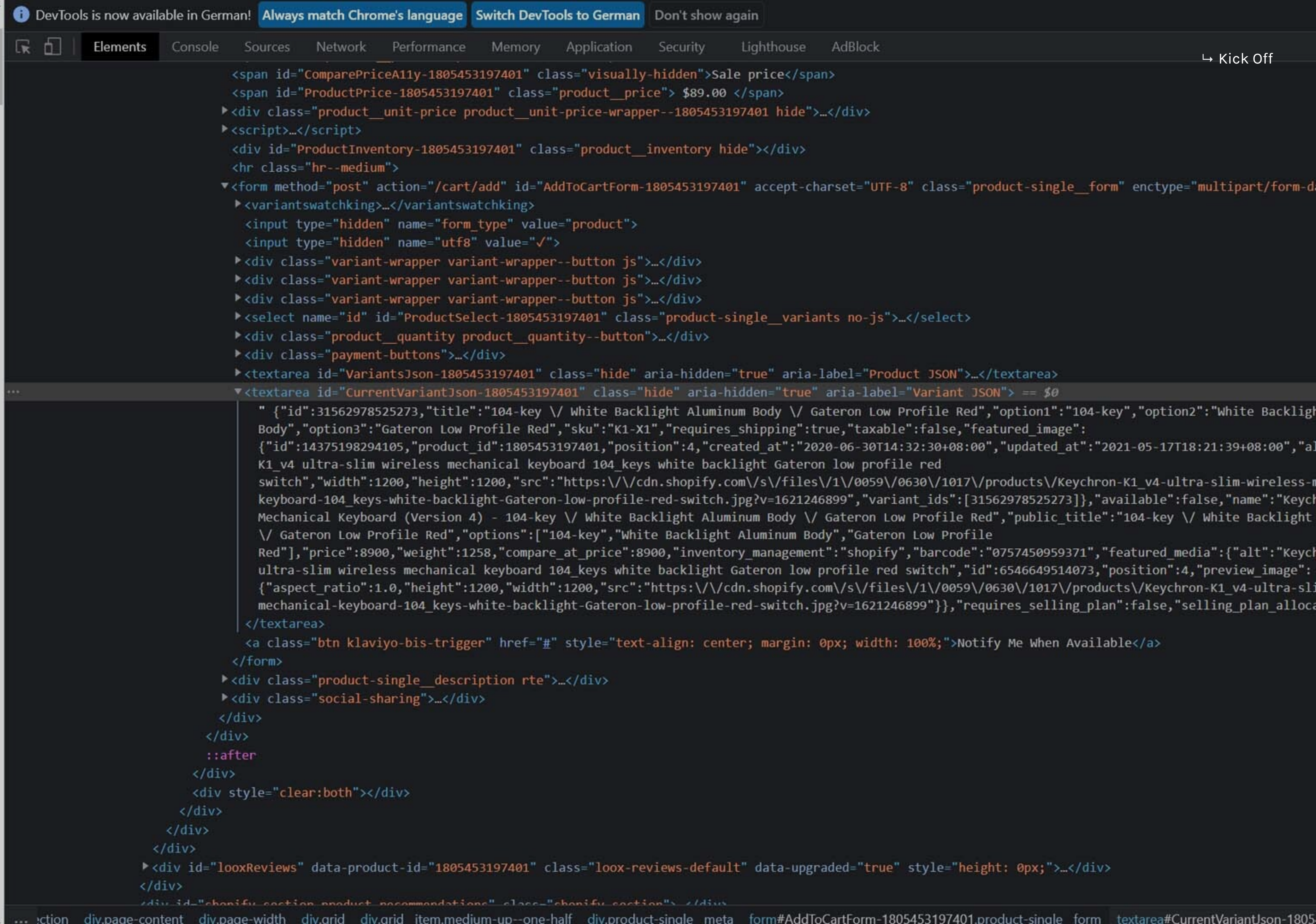
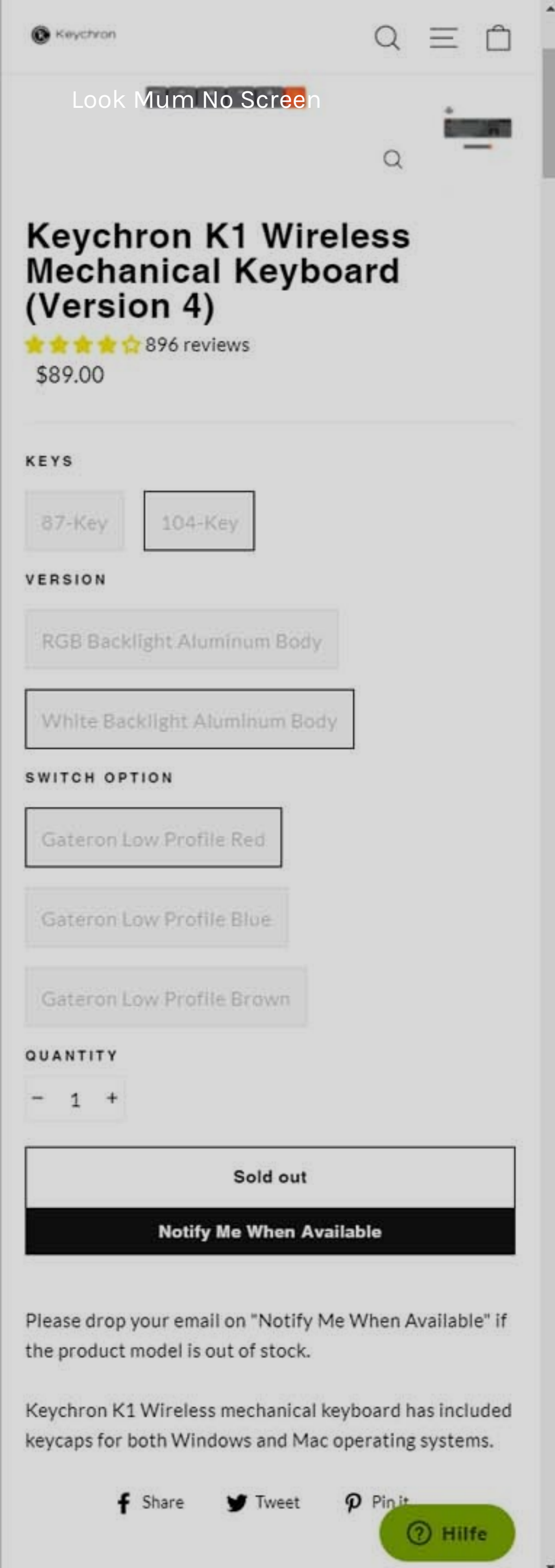
↳ Kick Off

```
1  {
2    "id":39396243996761,
3    "title":"White Backlight \\/ Low Profile Keychron Optical (Hot-swappable) \\/ Brown",
4    "option1":"White Backlight",
5    "option2":"Low Profile Keychron Optical (Hot-swappable)",
6    "option3":"Brown",
7    "sku":"K7-D3",
8    "requires_shipping":true,
9    "taxable":false,
10   "featured_image":{
11     "id":28286033559641,
12     "product_id":6598973456473,
13     "position":6,
14     "created_at":"2021-07-29T19:17:23+08:00",
15     "updated_at":"2021-07-29T19:33:13+08:00",
16     "alt":"Keychron K7 65-percent ultra-slim compact wireless mechanical keyboard for Mac Windows Hot-swappable low-profile Keychron Optical Mechanical brown switches with White backlit",
17     "width":2000,
18     "height":2000,
19     "src":"https:\\\\cdn.shopify.com\\s\\files\\1\\0059\\0630\\1017\\products\\Keychron-K7-65-percent-ultra-slim-compact-wireless-mechanical-keyboard-for-Mac-Windows-Hot-swappable-low-profile-Optical-brown-switches-for-Mac-Windows-with-White-bacl
20     "variant_ids":[
21       39396243996761
22     ]
23   },
24   "available":true,
25   "name":"Keychron K7 Ultra-slim Wireless Mechanical Keyboard - White Backlight \\/ Low Profile Keychron Optical (Hot-swappable) \\/ Brown",
26   "public_title":"White Backlight \\/ Low Profile Keychron Optical (Hot-swappable) \\/ Brown",
27   "options":[
28     "White Backlight",
29     "Low Profile Keychron Optical (Hot-swappable)",
30     "Brown"
31   ],
32   "price":7400,
33   "weight":0,
34   "compare_at_price":7400,
35   "inventory_management":"shopify",
36   "barcode":"",
37   "featured_media":{
38     "alt":"Keychron K7 65-percent ultra-slim compact wireless mechanical keyboard for Mac Windows Hot-swappable low-profile Keychron Optical Mechanical brown switches with White backlit",
39     "id":20586842947673,
40     "position":6,
41     "preview_image":{
42       "aspect_ratio":1.0,
43       "height":2000,
44       "width":2000,
45       "src":"https:\\\\cdn.shopify.com\\s\\files\\1\\0059\\0630\\1017\\products\\Keychron-K7-65-percent-ultra-slim-compact-wireless-mechanical-keyboard-for-Mac-Windows-Hot-swappable-low-profile-Optical-brown-switches-for-Mac-Windows-with-White-l
46     }
47   },
48   "requires_selling_plan":false,
49   "selling_plan_allocations":[
50
51   ]
52 }
```

JSON:

Das JSON Format beschreibt eine kompakte und einfach lesbare Textform. Sie funktioniert unabhängig von der Programmiersprache und ist deshalb das ideale Format für den Datenaustausch.



Q —

★★★★☆ 896 reviews

KEYS

- 1 +

☐ Notify Me When Available

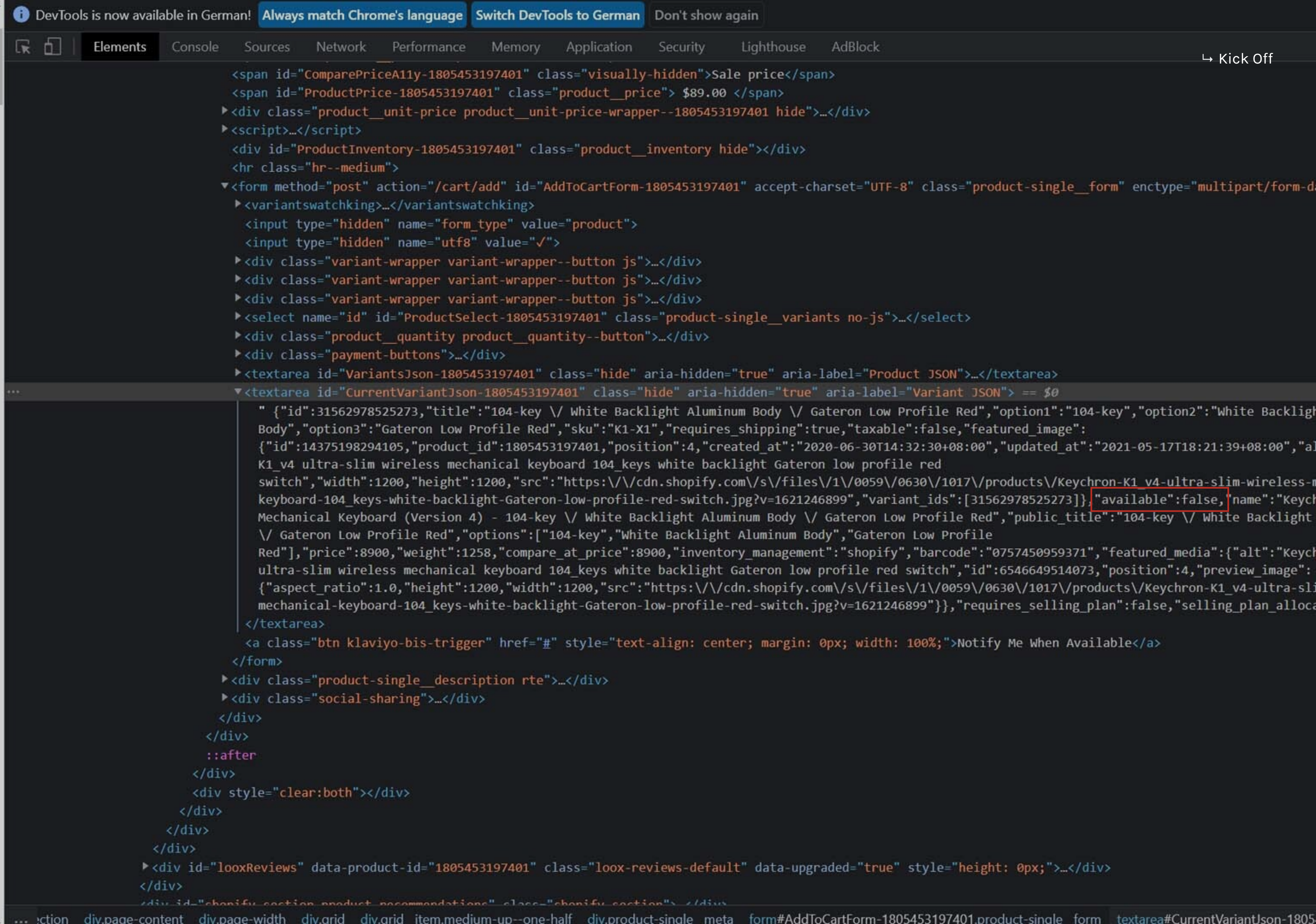
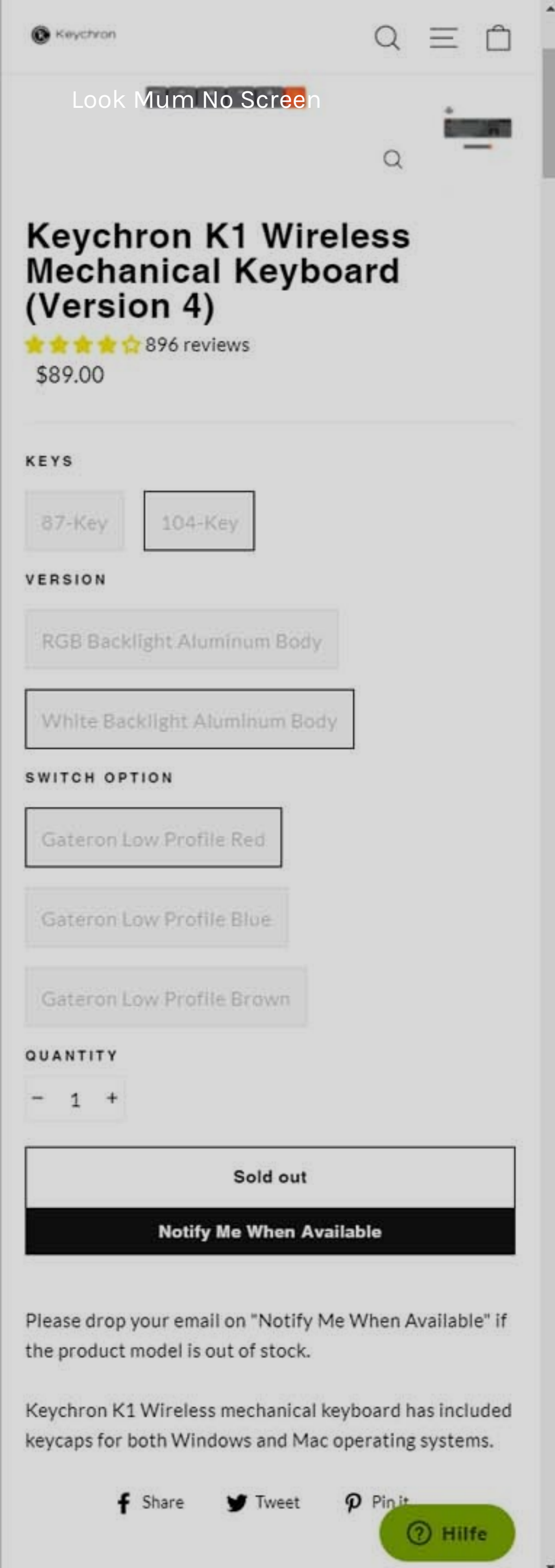
Keychron K1 Wireless mechanical keyboard has included keycaps for both Windows and Mac operating systems.

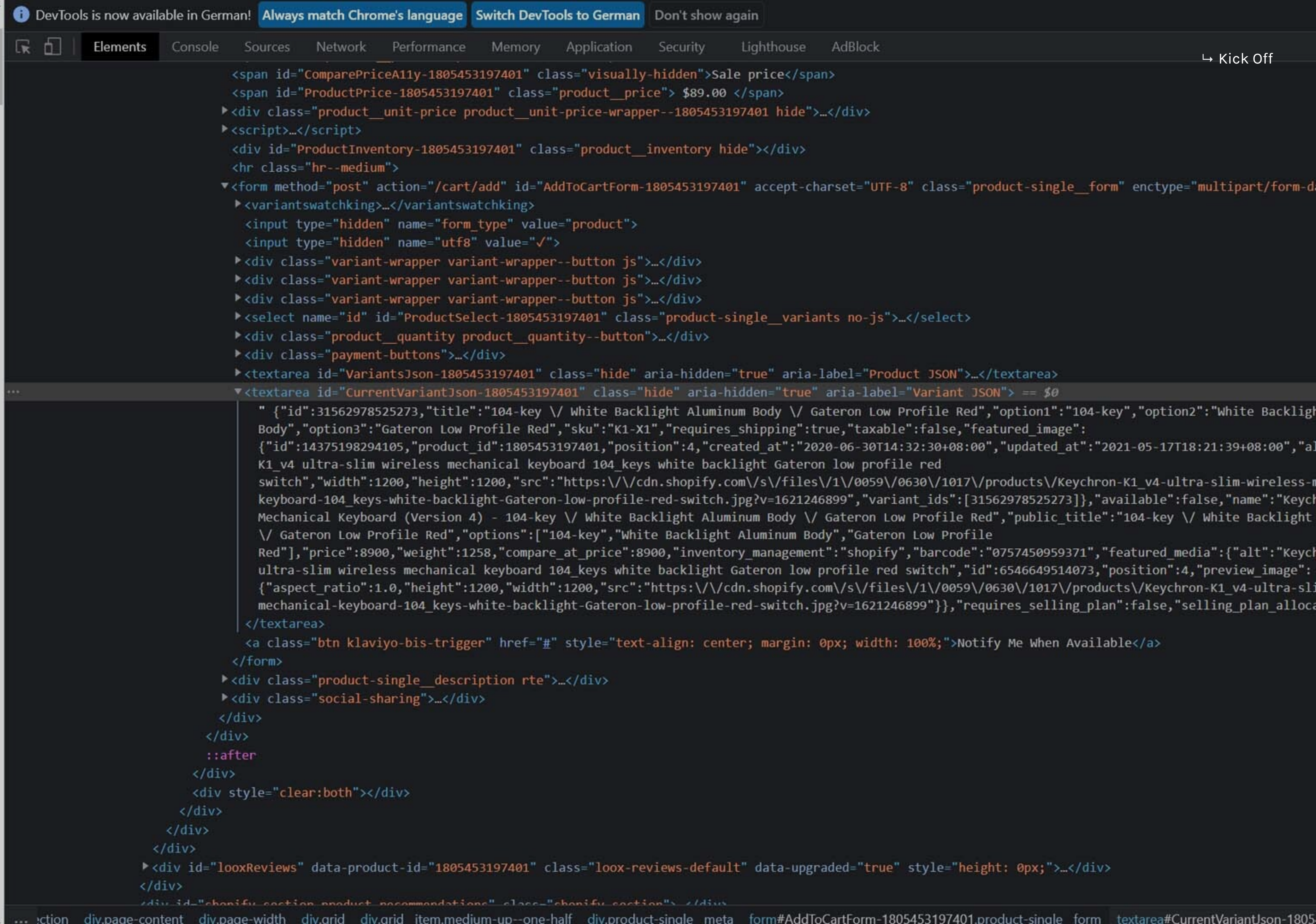
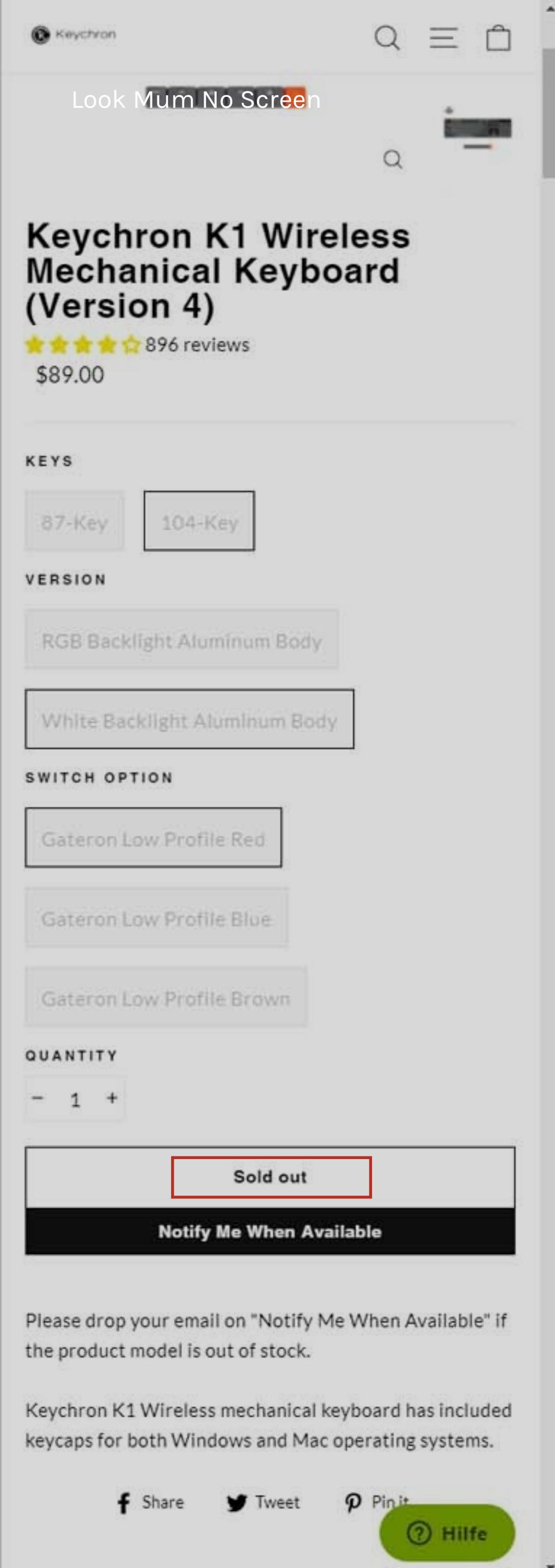
 Pin it

② Hilfe

AdBlock

↳ Kick Off





Wir wissen jetzt: Wo wir die gewünschte Information finden können.

Wir wissen jetzt:

Wo wir die gewünschte Information finden können.

Die Frage lautet:

Wie kann ich auf diese Information zugreifen?

JSON:	Das JSON Format beschreibt eine kompakte und einfach lesbare Textform. Sie funktioniert unabhängig von der Programmiersprache und ist deshalb das ideale Format für den Datenaustausch.
Python:	Python ist eine einfach zu lernende, aber mächtige Programmiersprache. Durch die elegante Syntax ist Python als interpretierte Sprache sowohl für Skripte als auch für schnelle Anwendungsentwicklung (Rapid Application Development) hervorragend geeignet.

JSON:	Das JSON Format beschreibt eine kompakte und einfach lesbare Textform. Sie funktioniert unabhängig von der Programmiersprache und ist deshalb das ideale Format für den Datenaustausch.
Python:	Python ist eine einfach zu lernende, aber mächtige Programmiersprache. Durch die elegante Syntax ist Python als interpretierte Sprache sowohl für Skripte als auch für schnelle Anwendungsentwicklung (Rapid Application Development) hervorragend geeignet.
XPath:	XPath ist eine Pfadbeschreibungssprache für XML-Dokumente. Sie stellt den Anwendern somit eine nicht XML-basierte Syntax zur Verfügung, die es ermöglicht, die Elemente eines Dokuments im Web gezielt zu adressieren.

- Wir wissen jetzt: Wo wir die gewünschte Information finden können.
- Die Frage lautet: Wie kann ich auf diese Information zugreifen?
- Ein Weg ist also: Die Verwendung von Python und XPath.

script-1.py X
Look Mum No Screen

↪ Kick Off

C: > Users > Tom > Desktop > script-1.py > ...

```
1  from lxml import html
2  import requests
3
4  def get_info(URL):
5      ''' Data scraping function '''
6
7      page = requests.get(URL)
8      tree = html.fromstring(page.content)
9      print(page.content)
10
11  get_info("https://www.keychron.com/products/keychron-k1-wireless-mechanical-keyboard?variant=31562978525273")
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\Tom\Desktop> █

script-1.py X
Look Mum No Screen

↪ Kick Off

C: > Users > Tom > Desktop > script-1.py > ...

```
1  from lxml import html
2  import requests
3
4  def get_info(URL):
5      ''' Data scraping function '''
6
7      page = requests.get(URL)
8      tree = html.fromstring(page.content)
9      content = tree.xpath('')
10     print(content)
11
12     get_info("https://www.keychron.com/products/keychron-k1-wireless-mechanical-keyboard?variant=31562978525273")
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\Tom\Desktop> █



Keychron K7 Ultra-slim Wireless Mechanical Keyboard

★★★★★ 29 reviews

\$74.00

VERSION

- White Backlight
- RGB Backlight

SWITCH TYPE

- Low Profile Gateron Mechanical
- Low Profile Keychron Optical (Hot-Swappable)
- Low Profile Gateron Mechanical (Hot-Swappable)

SWITCH OPTION

- Red
- Blue
- Brown
- Banana
- Mint

QUANTITY

− 1 +

Sold out

Notify Me When Available

Keychron K7 Wireless mechanical keyboard has included keycaps for both Windows and macOS, and users can hotswap every switch in seconds with the hot-swappable version.

📌 Share 🐦 Tweet 📌 Pin it

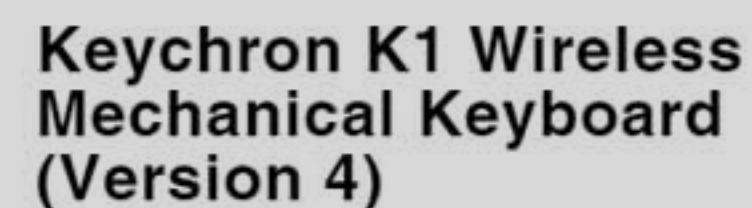


The K7 has included keycaps for both Windows and Mac operating systems.

Inspect: Windows [F12] / MacOS: [command]+[option]+[i]

World's first 65% ultra-slim wireless mechanical keyboard

KEYCHRON K7



★★★★☆ 896 reviews

\$89.00

KEYS

VERSION

White Backlight Aluminum Body

SWITCH OPTION

Gateron Low Profile Red

QUANTITY

- 1 +

Sold out

② Hilfe

script-1.py X
Look Mum No Screen

↪ Kick Off

C: > Users > Tom > Desktop > script-1.py > ...

```
1  from lxml import html
2  import requests
3
4  def get_info(URL):
5      ''' Data scraping function '''
6
7      page = requests.get(URL)
8      tree = html.fromstring(page.content)
9      content = tree.xpath('//*[@id="CurrentVariantJson-1805453197401"]/text()')
10     print(content)
11
12     get_info("https://www.keychron.com/products/keychron-k1-wireless-mechanical-keyboard?variant=31562978525273")
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\Tom\Desktop> █

script-1.py X
Look Mum No Screen

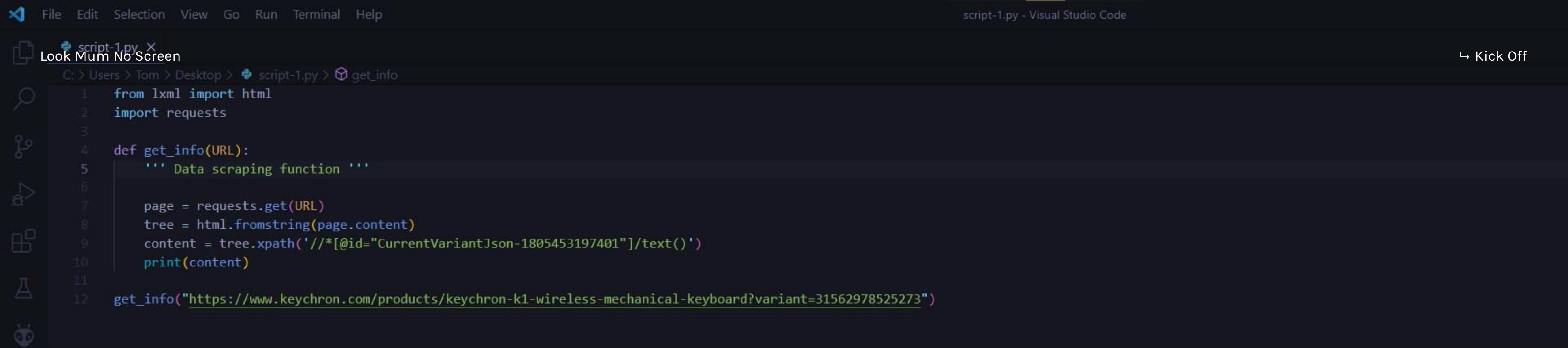
↪ Kick Off

C:\> Users > Tom > Desktop > script-1.py > ...

```
1 from lxml import html
2 import requests
3
4 def get_info(URL):
5     ''' Data scraping function '''
6
7     page = requests.get(URL)
8     tree = html.fromstring(page.content)
9     content = tree.xpath('//*[@id="CurrentVariantJson-1805453197401"]/text()')
10    print(content)
11
12 get_info("https://www.keychron.com/products/keychron-k1-wireless-mechanical-keyboard?variant=31562978525273")
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\Tom\Desktop> █



TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

```
PS C:\Users\Tom\Desktop> python .\script-1.py
['\n      {"id":31562978525273,"title":"104-key \\/ White Backlight Aluminum Body \\/ Gateron Low Profile Red","option1":"104-key","option2":"White Backlight Aluminum Body","option3":"Gateron Low Profile Red","product_id":1805453197401,"position":4,"created_at":"2020-06-30T14:32:30+08:00","updated_at":"2021-05-17T18:21:39+08:00","alt":"Keychron K1_v4 ultra-slim wireless mechanical keyboard","width":1200,"height":1200,"src":"https:\\\\cdn.shopify.com\\/s\\/files\\/1\\/0059\\/0630\\/1017\\/products\\/Keychron-K1_v4-ultra-slim-wireless-mechanical-keyboard-104_keys-white-backlight-Gateron-low-profile-red-switch.jpg?v=1621246899"},"requires_selling_plan":false,"selling_plan_allocations":[]}\n']
PS C:\Users\Tom\Desktop>
```


Q —

★★★★☆ 896 reviews

KEYS

- 1 +

Notify Me When Available

Keychron K1 Wireless mechanical keyboard has included keycaps for both Windows and Mac operating systems.

 Pin it

② Hilfe

Console

Sources

Network

Performance

Memory

Application

Security

Lighthouse

AdBlock

↳ Kick Off

script-1.py X
Look Mum No Screen




↪ Kick Off

C: > Users > Tom > Desktop > script-1.py > ...

```
1  from lxml import html
2  import requests
3  import json
4
5  def get_info(URL):
6      ''' Data scraping function '''
7
8      page = requests.get(URL)
9      tree = html.fromstring(page.content)
10     content = tree.xpath('//*[@id="CurrentVariantJson-1805453197401"]/text()')
11
12     convertet = ''.join(content)
13     d = json.loads(convertet)
14
15     for key, value in d.items():
16         print(key, value)
17
18 get_info("https://www.keychron.com/products/keychron-k1-wireless-mechanical-keyboard?variant=31562978525273")
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\Tom\Desktop> █



C: > Users > Tom > Desktop > script-1.py > ...

```
1  from lxml import html
2  import requests
3  import json
4
5  def get_info(URL):
6      ''' Data scraping function '''
```

TERMINALPROBLEMSOUTPUTDEBUG CONSOLE

PS C:\Users\Tom\Desktop> python .\script-1.py
id 31562978525273
title 104-key / White Backlight Aluminum Body / Gateron Low Profile Red
option1 104-key
option2 White Backlight Aluminum Body
option3 Gateron Low Profile Red
sku K1-X1
requires_shipping True
taxable False
featured_image {'id': 14375198294105, 'product_id': 1805453197401, 'position': 4, 'created_at': '2020-06-30T14:32:30+08:00', 'updated_at': '2021-05-17T18:21:39+08:00', 'alt': 'Keychron K1_v4 ultra-slim wireless mechanical keyboard 104_keys white backlight Gateron low profile red switch', 'width': 1200, 'height': 1200, 'src': 'https://cdn.shopify.com/s/files/1/0059/0630/1017/products/Keychron-K1_v4-ultra-slim-wireless-mechanical-keyboard-104_keys-white-backlight-Gateron-low-profile-red-switch.jpg?v=1621246899'}}
available False
name Keychron K1 Wireless Mechanical Keyboard (Version 4) - 104-key / White Backlight Aluminum Body / Gateron Low Profile Red
public_title 104-key / White Backlight Aluminum Body / Gateron Low Profile Red
options ['104-key', 'White Backlight Aluminum Body', 'Gateron Low Profile Red']
price 8900
weight 1258
compare_at_price 8900
inventory_management shopify
barcode 0757450959371
featured_media {'alt': 'Keychron K1_v4 ultra-slim wireless mechanical keyboard 104_keys white backlight Gateron low profile red switch', 'id': 6546649514073, 'position': 4, 'preview_image': {'aspect_ratio': 1.0, 'width': 1200, 'height': 1200, 'src': 'https://cdn.shopify.com/s/files/1/0059/0630/1017/products/Keychron-K1_v4-ultra-slim-wireless-mechanical-keyboard-104_keys-white-backlight-Gateron-low-profile-red-switch.jpg?v=1621246899'}}
requires_selling_plan False
selling_plan_allocations []
PS C:\Users\Tom\Desktop> █

script-1.py X
Look Mum No Screen

↪ Kick Off

C: > Users > Tom > Desktop > script-1.py > ...

```
1 from lxml import html
2 import requests
3 import json
4
5 def get_info(URL):
6     ''' Data scraping function '''
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\Tom\Desktop> python .\script-1.py

id 31562978525273

title 104-key / White Backlight Aluminum Body / Gateron Low Profile Red

option1 104-key

option2 White Backlight Aluminum Body

option3 Gateron Low Profile Red

sku K1-X1

requires_shipping True

taxable False

featured_image {'id': 14375198294105, 'product_id': 1805453197401, 'position': 4, 'created_at': '2020-06-30T14:32:30+08:00', 'updated_at': '2021-05-17T18:21:39+08:00', 'alt': 'Keychron K1_v4 ultra-slim wireless mechanical keyboard 104_keys white backlight Gateron low profile red switch', 'width': 1200, 'height': 1200, 'src': 'https://cdn.shopify.com/s/files/1/0059/0630/1017/products/Keychron-K1_v4-ultra-slim-wireless-mechanical-keyboard-104_keys-white-backlight-Gateron-low-profile-red-switch.jpg?v=1621246899'}
73}}

available False

name Keychron K1 Wireless Mechanical Keyboard (Version 4) - 104-key / White Backlight Aluminum Body / Gateron Low Profile Red

public_title 104-key / White Backlight Aluminum Body / Gateron Low Profile Red

options ['104-key', 'White Backlight Aluminum Body', 'Gateron Low Profile Red']

price 8900

weight 1258

compare_at_price 8900

inventory_management shopify

barcode 0757450959371

featured_media {'alt': 'Keychron K1_v4 ultra-slim wireless mechanical keyboard 104_keys white backlight Gateron low profile red switch', 'id': 6546649514073, 'position': 4, 'preview_image': {'aspect_ratio': 1.0, 'width': 1200, 'height': 1200, 'src': 'https://cdn.shopify.com/s/files/1/0059/0630/1017/products/Keychron-K1_v4-ultra-slim-wireless-mechanical-keyboard-104_keys-white-backlight-Gateron-low-profile-red-switch.jpg?v=1621246899'}}}

requires_selling_plan False

selling_plan_allocations []

PS C:\Users\Tom\Desktop> █

script-1.py X
Look Mum No Screen

↪ Kick Off

C: > Users > Tom > Desktop > script-1.py > ...

```
1 from lxml import html
2 import requests
3 import json
4
5 def get_info(URL):
6     ''' Data scraping function '''
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\Tom\Desktop> python .\script-1.py

id 31562978525273

title 104-key / White Backlight Aluminum Body / Gateron Low Profile Red

option1 104-key

option2 White Backlight Aluminum Body

option3 Gateron Low Profile Red

sku K1-X1

requires_shipping True

taxable False

featured_image {'id': 14375198294105, 'product_id': 1805453197401, 'position': 4, 'created_at': '2020-06-30T14:32:30+08:00', 'updated_at': '2021-05-17T18:21:39+08:00', 'alt': 'Keychron K1_v4 ultra-slim wireless mechanical keyboard 104_keys white backlight Gateron low profile red switch', 'width': 1200, 'height': 1200, 'src': 'https://cdn.shopify.com/s/files/1/0059/0630/1017/products/Keychron-K1_v4-ultra-slim-wireless-mechanical-keyboard-104_keys-white-backlight-Gateron-low-profile-red-switch.jpg?v=1621246899'}
73}}

available False

name Keychron K1 Wireless Mechanical Keyboard (Version 4) - 104-key / White Backlight Aluminum Body / Gateron Low Profile Red

public_title 104-key / White Backlight Aluminum Body / Gateron Low Profile Red

options ['104-key', 'White Backlight Aluminum Body', 'Gateron Low Profile Red']

price 8900

weight 1258

compare_at_price 8900

inventory_management shopify


barcode 0757450959371

featured_media {'alt': 'Keychron K1_v4 ultra-slim wireless mechanical keyboard 104_keys white backlight Gateron low profile red switch', 'id': 6546649514073, 'position': 4, 'preview_image': {'aspect_ratio': 1.0, 'width': 1200, 'height': 1200, 'src': 'https://cdn.shopify.com/s/files/1/0059/0630/1017/products/Keychron-K1_v4-ultra-slim-wireless-mechanical-keyboard-104_keys-white-backlight-Gateron-low-profile-red-switch.jpg?v=1621246899'}}}

requires_selling_plan False




selling_plan_allocations []

PS C:\Users\Tom\Desktop> █

script-1.py X

Look Mum No Screen

↪ Kick Off



C: > Users > Tom > Desktop > script-1.py > ...

```
1 from lxml import html
2 import requests
3 import json
4
5 def get_info(URL):
6     ''' Data scraping function '''
```

TERMINALPROBLEMSOUTPUTDEBUG CONSOLE

PS C:\Users\Tom\Desktop> python .\script-1.py

id 31562978525273

title 104-key / White Backlight Aluminum Body / Gateron Low Profile Red

option1 104-key

option2 White Backlight Aluminum Body

option3 Gateron Low Profile Red

sku K1-X1

requires_shipping True

taxable False

featured_image {'id': 14375198294105, 'product_id': 1805453197401, 'position': 4, 'created_at': '2020-06-30T14:32:30+08:00', 'updated_at': '2021-05-17T18:21:39+08:00', 'alt': 'Keychron K1_v4 ultra-slim wi

ile red switch', 'width': 1200, 'height': 1200, 'src': 'https://cdn.shopify.com/s/files/1/0059/0630/1017/products/Keychron-K1_v4-ultra-slim-wireless-mechanical-keyboard-104_keys-white-backlight-Gateron-lo

73}}

availableFalse

name Keychron K1 Wireless Mechanical Keyboard (Version 4) - 104-key / White Backlight Aluminum Body / Gateron Low Profile Red

public_title 104-key / White Backlight Aluminum Body / Gateron Low Profile Red

options ['104-key', 'White Backlight Aluminum Body', 'Gateron Low Profile Red']

price 8900

weight 1258

compare_at_price 8900

inventory_management shopify

barcode 0757450959371

featured_media {'alt': 'Keychron K1_v4 ultra-slim wireless mechanical keyboard 104_keys white backlight Gateron low profile red switch', 'id': 6546649514073, 'position': 4, 'preview_image': {'aspect_ratio

om/s/files/1/0059/0630/1017/products/Keychron-K1_v4-ultra-slim-wireless-mechanical-keyboard-104_keys-white-backlight-Gateron-low-profile-red-switch.jpg?v=1621246899'}}}

requires_selling_plan False

selling_plan_allocations []

PS C:\Users\Tom\Desktop>

Key : Value

script-1.py X
Look Mum No Screen

↪ Kick Off

C: > Users > Tom > Desktop > script-1.py > ...

```
1  from lxml import html
2  import requests
3  import json
4
5  def get_info(URL):
6      ''' Data scraping function '''
7
8      page = requests.get(URL)
9      tree = html.fromstring(page.content)
10     content = tree.xpath('//*[@id="CurrentVariantJson-1805453197401"]/text()')
11
12     convertet = ''.join(content)
13     d = json.loads(convertet)
14
15     for key, value in d.items():
16         if key == "available":
17             print(value)
18
19     get_info("https://www.keychron.com/products/keychron-k1-wireless-mechanical-keyboard?variant=31562978525273")
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\Tom\Desktop> █

script-1.py X
Look Mum No Screen

↪ Kick Off

C: > Users > Tom > Desktop > script-1.py > ...

```
1  from lxml import html
2  import requests
3  import json
4
5  def get_info(URL):
6      ''' Data scraping function '''
7
8      page = requests.get(URL)
9      tree = html.fromstring(page.content)
10     content = tree.xpath('//*[@id="CurrentVariantJson-1805453197401"]/text()')
11
12     convertet = ''.join(content)
13     d = json.loads(convertet)
14
15     for key, value in d.items():
16         if key == "available":
17             print(value)
18
19     get_info("https://www.keychron.com/products/keychron-k1-wireless-mechanical-keyboard?variant=31562978525273")
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

PS C:\Users\Tom\Desktop> python .\script-1.py

False

PS C:\Users\Tom\Desktop> □

Aufgabe:

Sucht euch eine Website und sammelt mittels **Web Scraping** interessante, witzige oder informative Inhalte zusammen. Im besten Fall sind diese Inhalte dynamisch und verändern sich mit der Zeit (z.B. Preis für Kopfhörer).

Wenn ihr auf Inhalte stoßt, die sehr interessant sind, aber sich nicht auslesen lassen, bringt diese gerne zur nächsten Veranstaltung mit.

Links: <https://json.org/json-de.html>
<https://py-tutorial-de.readthedocs.io/de/python-3.3/>
https://www.w3schools.com/xml/xpath_intro.asp
<https://www.myrasecurity.com/de/was-ist-web-scraping/>
<https://weatherstack.com/>
<https://www.postman.com/>
<https://rapidapi.com/>
<https://jupyter.org/>

Tutorial: <https://timber.io/blog/an-intro-to-web-scraping-with-lxml-and-python/>

Material: <https://github.com/tmjns/Look-Mum-No-Screen>