```
pip install webdriver_manager
```

```
Collecting webdriver_manager
  Downloading webdriver_manager-4.0.1-py2.py3-none-any.whl (27 kB)
Requirement already satisfied: packaging in c:\users\admin\new folder\
lib\site-packages (from webdriver_manager) (22.0)
Collecting python-dotenv
  Downloading python_dotenv-1.0.1-py3-none-any.whl (19 kB)
Requirement already satisfied: requests in c:\users\admin\new folder\
lib\site-packages (from webdriver_manager) (2.28.1)
Requirement already satisfied: idna<4,>=2.5 in c:\users\admin\new
folder\lib\site-packages (from requests->webdriver_manager) (3.4)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\admin\
new folder\lib\site-packages (from requests->webdriver_manager)
(2022.12.7)
Requirement already satisfied: charset-normalizer<3,>=2 in c:\users\
admin\new folder\lib\site-packages (from requests->webdriver_manager)
(2.0.4)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\
admin\new folder\lib\site-packages (from requests->webdriver_manager)
(1.26.14)
Installing collected packages: python-dotenv, webdriver_manager
Successfully installed python-dotenv-1.0.1 webdriver_manager-4.0.1
Note: you may need to restart the kernel to use updated packages.
```

```
import sqlite3
from selenium import webdriver
from selenium.webdriver.common.by import By
import time
import logging

# Set up logging
logging.basicConfig(level=logging.DEBUG)

# Function to scrape Amazon
def scrape_amazon():
    amazon_data = []
    try:
        service =
Service(executable_path='C:/chromedriver-win64/chromedriver-win64/
chromedriver.exe')
        driver = webdriver.Chrome(service=service)
        driver.get('https://www.amazon.in/s?k=laptops')
        time.sleep(5)
        sections = driver.find_elements(By.CLASS_NAME, 'a-section')
        for section in sections:
            try:
                title = section.find_element(By.CLASS_NAME, 'a-size-
medium').text
                try:
                    price = section.find_element(By.CLASS_NAME, 'a-
price-whole').text
                except:
                    price = 'Not available'
                amazon_data.append((title, price))
            except:
                continue
    except Exception as e:
        logging.error("An error occurred", exc_info=True)
    finally:
        driver.quit()
    return amazon_data

# Function to scrape Flipkart
def scrape_flipkart():
    flipkart_data = []
    service =
Service(executable_path="C:/chromedriver-win64/chromedriver-win64/
chromedriver.exe")
    driver = webdriver.Chrome(service=service)
    try:
        driver.get("https://www.flipkart.com/search?q=laptops")
        time.sleep(5)
        try:
            close_button = driver.find_element(By.XPATH,
'//button[contains(text(),"×")]')
            close_button.click()
        except Exception as e:
            print("No pop-up appeared:", e)
        time.sleep(5)
        sections = driver.find_elements(By.CLASS_NAME, 'yKfJKb.row')
        for section in sections:
            try:
                name = section.find_element(By.CLASS_NAME,
'KzDlHZ').text
                price = section.find_element(By.CLASS_NAME,
'Nx9bqj._4b5DiR').text
                flipkart_data.append((name, price))
            except Exception as e:
                print("An error occurred while extracting data from a
section:", e)
    finally:
        driver.quit()
    return flipkart_data

# Main execution
amazon_data = scrape_amazon()
flipkart_data = scrape_flipkart()
```

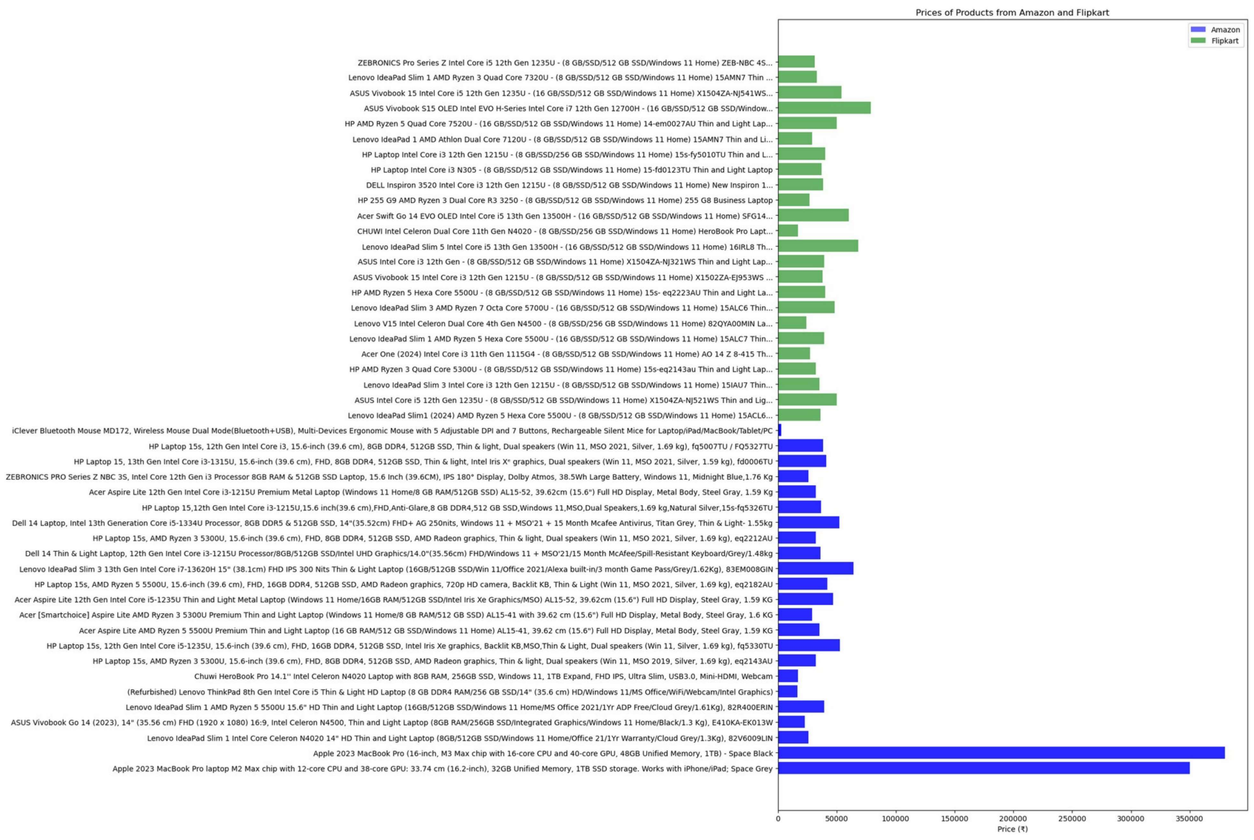
```
DEBUG:selenium.webdriver.common.driver_finder:Skipping Selenium
Manager; path to chrome driver specified in Service class:
C:/chromedriver-win64/chromedriver-win64/chromedriver.exe
DEBUG:selenium.webdriver.common.service:Started executable:
`C:/chromedriver-win64/chromedriver-win64/chromedriver.exe` in a child
process with pid: 5936 using 0 to output -3
DEBUG:selenium.webdriver.remote.remote_connection:POST
http://localhost:51810/session {'capabilities': {'firstMatch': [{}],
'alwaysMatch': {'browserName': 'chrome', 'pageLoadStrategy':
<PageLoadStrategy.normal: 'normal'>, 'goog:chromeOptions':
{'extensions': [], 'args': []}}}}
DEBUG:urllib3.connectionpool:Starting new HTTP connection (1):
localhost:51810
DEBUG:urllib3.connectionpool:http://localhost:51810 "POST /session
HTTP/1.1" 200 882
DEBUG:selenium.webdriver.remote.remote_connection:Remote response:
status=200 | data={"value":{"capabilities":
{"acceptInsecureCerts":false,"browserName":"chrome","browserVersion":"
126.0.6478.127","chrome":{"chromedriverVersion":"126.0.6478.126
(d36ace6122e0a59570e258d82441395206d60e1c-refs/branch-heads/6478@{#159
1})","userDataDir":"C:\\Users\\Admin\\AppData\\Local\\Temp\\
scoped_dir5936_453165181"},"fedcm:accounts":true,"goog:chromeOptions":
{"debuggerAddress":"localhost:51813"},"networkConnectionEnabled":false
,"pageLoadStrategy":"normal","platformName":"windows","proxy":
{},"setWindowRect":true,"strictFileInteractability":false,"timeouts":
{"implicit":0,"pageLoad":300000,"script":30000},"unhandledPromptBehavi
or":"dismiss and
notify","webauthn:extension:credBlob":true,"webauthn:extension:largeBl
ob":true,"webauthn:extension:minPinLength":true,"webauthn:extension:pr
f":true,"webauthn:virtualAuthenticators":true},"sessionId":"fa54be0a01
be0f89038e6d85bddb633c"}} | headers=HTTPHeaderDict({'Content-Length':
'882', 'Content-Type': 'application/json; charset=utf-8', 'cache-
control': 'no-cache'})
DEBUG:selenium.webdriver.remote.remote_connection:Finished Request
DEBUG:selenium.webdriver.remote.remote_connection:POST
http://localhost:51810/session/fa54be0a01be0f89038e6d85bddb633c/url
{'url': 'https://www.amazon.in/s?k=laptops'}
DEBUG:urllib3.connectionpool:http://localhost:51810 "POST
/session/fa54be0a01be0f89038e6d85bddb633c/url HTTP/1.1" 200 14
DEBUG:selenium.webdriver.remote.remote_connection:Remote response:
status=200 | data={"value":null} | headers=HTTPHeaderDict({'Content-
Length': '14', 'Content-Type': 'application/json; charset=utf-8',
'cache-control': 'no-cache'})
DEBUG:selenium.webdriver.remote.remote_connection:Finished Request
DEBUG:selenium.webdriver.remote.remote_connection:POST
http://localhost:51810/session/fa54be0a01be0f89038e6d85bddb633c/elemen
ts {'using': 'css selector', 'value': '.a-section'}
DEBUG:urllib3.connectionpool:http://localhost:51810 "POST
/session/fa54be0a01be0f89038e6d85bddb633c/elements HTTP/1.1" 200 58421
DEBUG:selenium.webdriver.remote.remote_connection:Remote response:
```

```
4f735466cecf":"f.558789A19D3A1400682D4B8DC775F70F.d.75FEB79CA890C19DD3
F074FA69C5B028.e.244"}} | headers=HTTPHeaderDict({'Content-Length':
'127', 'Content-Type': 'application/json; charset=utf-8', 'cache-
control': 'no-cache'})
DEBUG:selenium.webdriver.remote.remote_connection:Finished Request
DEBUG:selenium.webdriver.remote.remote_connection:GET
http://localhost:51906/session/6f3dc428bc12bf769791858503af8001/elemen
t/
f.558789A19D3A1400682D4B8DC775F70F.d.75FEB79CA890C19DD3F074FA69C5B028.
e.244/text {}
DEBUG:urllib3.connectionpool:http://localhost:51906 "GET
/session/6f3dc428bc12bf769791858503af8001/element/f.558789A19D3A140068
2D4B8DC775F70F.d.75FEB79CA890C19DD3F074FA69C5B028.e.244/text HTTP/1.1"
200 21
DEBUG:selenium.webdriver.remote.remote_connection:Remote response:
status=200 | data={"value":"₹30,990"} |
headers=HTTPHeaderDict({'Content-Length': '21', 'Content-Type':
'application/json; charset=utf-8', 'cache-control': 'no-cache'})

DEBUG:selenium.webdriver.remote.remote_connection:Finished Request
DEBUG:selenium.webdriver.remote.remote_connection:DELETE
http://localhost:51906/session/6f3dc428bc12bf769791858503af8001 {}
DEBUG:urllib3.connectionpool:http://localhost:51906 "DELETE
/session/6f3dc428bc12bf769791858503af8001 HTTP/1.1" 200 14
DEBUG:selenium.webdriver.remote.remote_connection:Remote response:
status=200 | data={"value":null} | headers=HTTPHeaderDict({'Content-
Length': '14', 'Content-Type': 'application/json; charset=utf-8',
'cache-control': 'no-cache'})
DEBUG:selenium.webdriver.remote.remote_connection:Finished Request

# Function to create tables in SQLite and insert data
def store_in_db(amazon_data, flipkart_data):
    conn = sqlite3.connect('laptops.db')
    cursor = conn.cursor()
    cursor.execute('''CREATE TABLE IF NOT EXISTS amazon
                      (id INTEGER PRIMARY KEY, name TEXT, price
TEXT)''')
    cursor.execute('''CREATE TABLE IF NOT EXISTS flipkart
                      (id INTEGER PRIMARY KEY, name TEXT, price
TEXT)''')

    cursor.executemany('INSERT INTO amazon (name, price) VALUES
(?, ?)', amazon_data)
    cursor.executemany('INSERT INTO flipkart (name, price) VALUES
(?, ?)', flipkart_data)

    conn.commit()
    conn.close()

store_in_db(amazon_data, flipkart_data)
```

```
print("Data successfully scraped and stored in SQLite database.")
```

```
Data successfully scraped and stored in SQLite database.
```

```
def format_price(price_str):
    # Check if the price_str is 'Not available' or any other non-
numeric value
    if price_str in ['Not available', '', None]:
        return None
    try:
        # Remove currency symbols and commas, then convert to float
        return float(price_str.replace('₹', '').replace('$',
'').replace(',', '').strip())
    except ValueError:
        return None

def compare_prices(amazon_data, flipkart_data):
    amazon_products = [{'name': row[1], 'price': format_price(row[2])}
for row in amazon_data]  # Assuming columns: id, name, price
    flipkart_products = [{'name': row[1], 'price':
format_price(row[2])} for row in flipkart_data]  # Assuming columns:
id, name, price

    similar_products = {}

    for amazon_product in amazon_products:
        for flipkart_product in flipkart_products:
            if amazon_product['name'] == flipkart_product['name']:
                if amazon_product['price'] is not None and
flipkart_product['price'] is not None:
                    similar_products[amazon_product['name']] = {
                        'Amazon Price': amazon_product['price'],
                        'Flipkart Price': flipkart_product['price']
                    }
                break

    return similar_products

import matplotlib.pyplot as plt

def plot_prices(amazon_data, flipkart_data):
    # Extract product names and prices
    amazon_products = [{'name': row[1], 'price': format_price(row[2])}
for row in amazon_data]  # Assuming columns: id, name, price
    flipkart_products = [{'name': row[1], 'price':
format_price(row[2])} for row in flipkart_data]  # Assuming columns:
id, name, price

    # Create lists for plotting
    amazon_products_list = [product['name'] for product in 
amazon_products if product['price'] is not None]
    amazon_prices_list = [product['price'] for product in 
amazon_products if product['price'] is not None]

    flipkart_products_list = [product['name'] for product in 
flipkart_products if product['price'] is not None]
    flipkart_prices_list = [product['price'] for product in 
flipkart_products if product['price'] is not None]

    # Plotting
    plt.figure(figsize=(24, 16))

    # Plot Amazon prices
    plt.barh(amazon_products_list, amazon_prices_list, color='b', 
alpha=0.6, label='Amazon')

    # Plot Flipkart prices
    plt.barh(flipkart_products_list, flipkart_prices_list, color='g', 
alpha=0.6, label='Flipkart')

    plt.xlabel('Price (₹)')
    plt.title('Prices of Products from Amazon and Flipkart')
    plt.legend()
    plt.tight_layout()
    plt.show()

# Main execution
amazon_data, flipkart_data = fetch_data_from_db()
plot_prices(amazon_data, flipkart_data)
```


Prices of Products from Amazon and Flipkart
Amazon
Flipkart
ZEBRONICS Pro Series Z Intel Core i5 12th Gen 1235U - (8 GB/SSD/512 GB SSD/Windows 11 Home) ZEB-NBC 4S...
Lenovo IdeaPad Slim 1 AMD Ryzen 3 Quad Core 7320U - (8 GB/SSD/512 GB SSD/Windows 11 Home) 15AMN7 Thin ...
ASUS Vivobook 15 Intel Core i5 12th Gen 1235U - (16 GB/SSD/512 GB SSD/Windows 11 Home) X1504ZA-NJ541WS...
ASUS Vivobook S15 OLED Intel EVO H-Series Intel Core i7 12th Gen 12700H - (16 GB/SSD/512 GB SSD/Window...
HP AMD Ryzen 5 Quad Core 7520U - (16 GB/SSD/512 GB SSD/Windows 11 Home) 14-em0027AU Thin and Light Lap...
Lenovo IdeaPad 1 AMD Athlon Dual Core 7120U - (8 GB/SSD/512 GB SSD/Windows 11 Home) 15AMN7 Thin and Li...
HP Laptop Intel Core i3 12th Gen 1215U - (8 GB/SSD/256 GB SSD/Windows 11 Home) 15s-fy5010TU Thin and L...
HP Laptop Intel Core i3 N305 - (8 GB/SSD/512 GB SSD/Windows 11 Home) 15-fd0123TU Thin and Light Laptop
DELL Inspiron 3520 Intel Core i3 12th Gen 1215U - (8 GB/SSD/512 GB SSD/Windows 11 Home) New Inspiron 1...
HP 255 G9 AMD Ryzen 3 Dual Core R3 3250 - (8 GB/SSD/512 GB SSD/Windows 11 Home) 255 G8 Business Laptop
Acer Swift Go 14 EVO OLED Intel Core i5 13th Gen 13500H - (16 GB/SSD/512 GB SSD/Windows 11 Home) SFG14...
CHUWI Intel Celeron Dual Core 11th Gen N4020 - (8 GB/SSD/256 GB SSD/Windows 11 Home) HeroBook Pro Lapt...
Lenovo IdeaPad Slim 5 Intel Core i5 13th Gen 13500H - (16 GB/SSD/512 GB SSD/Windows 11 Home) 16IRL8 Th...
ASUS Intel Core i3 12th Gen - (8 GB/SSD/512 GB SSD/Windows 11 Home) X1504ZA-NJ321WS Thin and Light Lap...
ASUS Vivobook 15 Intel Core i3 12th Gen 1215U - (8 GB/SSD/512 GB SSD/Windows 11 Home) X1502ZA-EJ953WS ...
HP AMD Ryzen 5 Hexa Core 5500U - (8 GB/SSD/512 GB SSD/Windows 11 Home) 15s- eq2223AU Thin and Light La...
Lenovo IdeaPad Slim 3 AMD Ryzen 7 Octa Core 5700U - (16 GB/SSD/512 GB SSD/Windows 11 Home) 15ALC6 Thin...
Lenovo V15 Intel Celeron Dual Core 4th Gen N4500 - (8 GB/SSD/256 GB SSD/Windows 11 Home) 82QYA00MIN La...
Lenovo IdeaPad Slim 1 AMD Ryzen 5 Hexa Core 5500U - (16 GB/SSD/512 GB SSD/Windows 11 Home) 15ALC7 Thin...
Acer One (2024) Intel Core i3 11th Gen 1115G4 - (8 GB/SSD/512 GB SSD/Windows 11 Home) AO 14 Z 8-415 Th...
HP AMD Ryzen 3 Quad Core 5300U - (8 GB/SSD/512 GB SSD/Windows 11 Home) 15s-eq2143au Thin and Light Lap...
Lenovo IdeaPad Slim 3 Intel Core i3 12th Gen 1215U - (8 GB/SSD/512 GB SSD/Windows 11 Home) 15IAU7 Thin...
ASUS Intel Core i5 12th Gen 1235U - (8 GB/SSD/512 GB SSD/Windows 11 Home) X1504ZA-NJ521WS Thin and Lig...
Lenovo IdeaPad Slim1 (2024) AMD Ryzen 5 Hexa Core 5500U - (8 GB/SSD/512 GB SSD/Windows 11 Home) 15ACL6...
iClever Bluetooth Mouse MD172, Wireless Mouse Dual Mode(Bluetooth+USB), Multi-Devices Ergonomic Mouse with 5 Adjustable DPI and 7 Buttons, Rechargeable Silent Mice for Laptop/iPad/MacBook/Tablet/PC
HP Laptop 15s, 12th Gen Intel Core i3, 15.6-inch (39.6 cm), 8GB DDR4, 512GB SSD, Thin & light, Dual speakers (Win 11, MSO 2021, Silver, 1.69 kg), fq5007TU / FQ5327TU
HP Laptop 15, 13th Gen Intel Core i3-1315U, 15.6-inch (39.6 cm), FHD, 8GB DDR4, 512GB SSD, Thin & light, Intel Iris Xᵉ graphics, Dual speakers (Win 11, MSO 2021, Silver, 1.59 kg), fd0006TU
ZEBRONICS PRO Series Z NBC 3S, Intel Core 12th Gen i3 Processor 8GB RAM & 512GB SSD Laptop, 15.6 Inch (39.6CM), IPS 180° Display, Dolby Atmos, 38.5Wh Large Battery, Windows 11, Midnight Blue,1.76 Kg
Acer Aspire Lite 12th Gen Intel Core i3-1215U Premium Metal Laptop (Windows 11 Home/8 GB RAM/512GB SSD) AL15-52, 39.62cm (15.6") Full HD Display, Metal Body, Steel Gray, 1.59 Kg
HP Laptop 15,12th Gen Intel Core i3-1215U,15.6 inch(39.6 cm),FHD,Anti-Glare,8 GB DDR4,512 GB SSD,Windows 11,MSO,Dual Speakers,1.69 kg,Natural Silver,15s-fq5326TU
Dell 14 Laptop, Intel 13th Generation Core i5-1334U Processor, 8GB DDR5 & 512GB SSD, 14"(35.52cm) FHD+ AG 250nits, Windows 11 + MSO'21 + 15 Month Mcafee Antivirus, Titan Grey, Thin & Light- 1.55kg
HP Laptop 15s, AMD Ryzen 3 5300U, 15.6-inch (39.6 cm), FHD, 8GB DDR4, 512GB SSD, AMD Radeon graphics, Thin & light, Dual speakers (Win 11, MSO 2021, Silver, 1.69 kg), eq2212AU
Dell 14 Thin & Light Laptop, 12th Gen Intel Core i3-1215U Processor/8GB/512GB SSD/Intel UHD Graphics/14.0"(35.56cm) FHD/Windows 11 + MSO'21/15 Month McAfee/Spill-Resistant Keyboard/Grey/1.48kg
Lenovo IdeaPad Slim 3 13th Gen Intel Core i7-13620H 15" (38.1cm) FHD IPS 300 Nits Thin & Light Laptop (16GB/512GB SSD/Win 11/Office 2021/Alexa built-in/3 month Game Pass/Grey/1.62Kg), 83EM008GIN
HP Laptop 15s, AMD Ryzen 5 5500U, 15.6-inch (39.6 cm), FHD, 16GB DDR4, 512GB SSD, AMD Radeon graphics, 720p HD camera, Backlit KB, Thin & Light (Win 11, MSO 2021, Silver, 1.69 kg), eq2182AU
Acer Aspire Lite 12th Gen Intel Core i5-1235U Thin and Light Metal Laptop (Windows 11 Home/16GB RAM/512GB SSD/Intel Iris Xe Graphics/MSO) AL15-52, 39.62cm (15.6") Full HD Display, Steel Gray, 1.59 KG
Acer [Smartchoice] Aspire Lite AMD Ryzen 3 5300U Premium Thin and Light Laptop (Windows 11 Home/8 GB RAM/512 GB SSD) AL15-41 with 39.62 cm (15.6") Full HD Display, Metal Body, Steel Gray, 1.6 KG
Acer Aspire Lite AMD Ryzen 5 5500U Premium Thin and Light Laptop (16 GB RAM/512 GB SSD/Windows 11 Home) AL15-41, 39.62 cm (15.6") Full HD Display, Metal Body, Steel Gray, 1.59 KG
HP Laptop 15s, 12th Gen Intel Core i5-1235U, 15.6-inch (39.6 cm), FHD, 16GB DDR4, 512GB SSD, Intel Iris Xe graphics, Backlit KB,MSO,Thin & Light, Dual speakers (Win 11, Silver, 1.69 kg), fq5330TU
HP Laptop 15s, AMD Ryzen 3 5300U, 15.6-inch (39.6 cm), FHD, 8GB DDR4, 512GB SSD, AMD Radeon graphics, Thin & light, Dual speakers (Win 11, MSO 2019, Silver, 1.69 kg), eq2143AU
Chuwi HeroBook Pro 14.1'' Intel Celeron N4020 Laptop with 8GB RAM, 256GB SSD, Windows 11, 1TB Expand, FHD IPS, Ultra Slim, USB3.0, Mini-HDMI, Webcam
(Refurbished) Lenovo ThinkPad 8th Gen Intel Core i5 Thin & Light HD Laptop (8 GB DDR4 RAM/256 GB SSD/14" (35.6 cm) HD/Windows 11/MS Office/WiFi/Webcam/Intel Graphics)
Lenovo IdeaPad Slim 1 AMD Ryzen 5 5500U 15.6" HD Thin and Light Laptop (16GB/512GB SSD/Windows 11 Home/MS Office 2021/1Yr ADP Free/Cloud Grey/1.61Kg), 82R400ERIN
ASUS Vivobook Go 14 (2023), 14" (35.56 cm) FHD (1920 x 1080) 16:9, Intel Celeron N4500, Thin and Light Laptop (8GB RAM/256GB SSD/Integrated Graphics/Windows 11 Home/Black/1.3 Kg), E410KA-EK013W
Lenovo IdeaPad Slim 1 Intel Core Celeron N4020 14" HD Thin and Light Laptop (8GB/512GB SSD/Windows 11 Home/Office 21/1Yr Warranty/Cloud Grey/1.3Kg), 82V6009LIN
Apple 2023 MacBook Pro (16-inch, M3 Max chip with 16-core CPU and 40-core GPU, 48GB Unified Memory, 1TB) - Space Black
Apple 2023 MacBook Pro laptop M2 Max chip with 12-core CPU and 38-core GPU: 33.74 cm (16.2-inch), 32GB Unified Memory, 1TB SSD storage. Works with iPhone/iPad; Space Grey
0
50000
100000
150000
200000
250000
300000
350000
Price (₹)