Scraping Laptops from Ayoub Computers Web Site.

Laptop Class:

```java
package com.dgpad.session1;

public class Laptop {

    String title;
    String imagrUrl;
    String link;
    String summary;
    String OldPrice;
    String CurrentPrice;

    public Laptop(String title, String imagrUrl, String link, String summary, String OldPrice, String CurrenPrice)
    {
        setLink(link);
        setSummary(summary);
        setImagrUrl(imagrUrl);
        setTitle(title);
        setOldPrice(OldPrice);
        setCurrentPrice(CurrenPrice);
    }
```

```java
    // Getters
    public String getTitle() { return title; }

    public String getImagrUrl() { return imagrUrl; }

    public String getLink() { return link; }

    public String getSummary() { return summary; }

    public String getOldPrice() { return OldPrice; }

    public String getCurrentPrice() { return CurrentPrice; }

    // Setters
    public void setTitle(String title) { this.title = title; }

    public void setImagrUrl(String imagrUrl) { this.imagrUrl = imagrUrl; }

    public void setLink(String link) { this.link = link; }

    public void setSummary(String summary) { this.summary = summary; }

    public void setOldPrice(String OldPrice) { this.OldPrice = OldPrice; }

    public void setCurrentPrice(String CurrentPrice) { this.CurrentPrice = CurrentPrice; }
```

```java
72          // toString method
73          @Override
74          public String toString() {
75              return "Product{" +
76                      "title='" + title + '\'' +
77                      ", imagrUrl='" + imagrUrl + '\'' +
78                      ", link='" + link + '\'' +
79                      ", summary='" + summary + '\'' +
80                      ", OldPrice='" + OldPrice + '\'' +
81                      ", CurrentPrice='" + CurrentPrice + '\'' +
82                      '}';
83          }
84      }
85
```

Scraping Service Class:

```java
package com.dgpad.session1;
import java.io.IOException;
import java.util.List;
import java.util.ArrayList;
import org.jsoup.Jsoup;
import org.jsoup.nodes.Document;
import org.jsoup.nodes.Element;
import org.jsoup.select.Elements;

public class ScrapingService {

    public static List<Laptop> scrapeLaptops(String url) throws IOException
    {
        List<Laptop> LaptopList = new ArrayList<>();

            // Load the HTML document from the website
            Document doc = Jsoup.connect( url: "https://ayoubcomputers.com/laptops").get();

            // Select the product elements
            Elements products = doc.select( cssQuery: "ul.productGrid li.product");

            for (Element product : products) {
                // Extract the image URL
                String imageUrl = product.select( cssQuery: "img.card-image").attr( attributeKey: "src");

                // Extract the product link
                String link = product.select( cssQuery: "h4.card-title a").attr( attributeKey: "href");

                // Extract the summary
                String summary = product.select( cssQuery: ".card-text--summary").text();
```
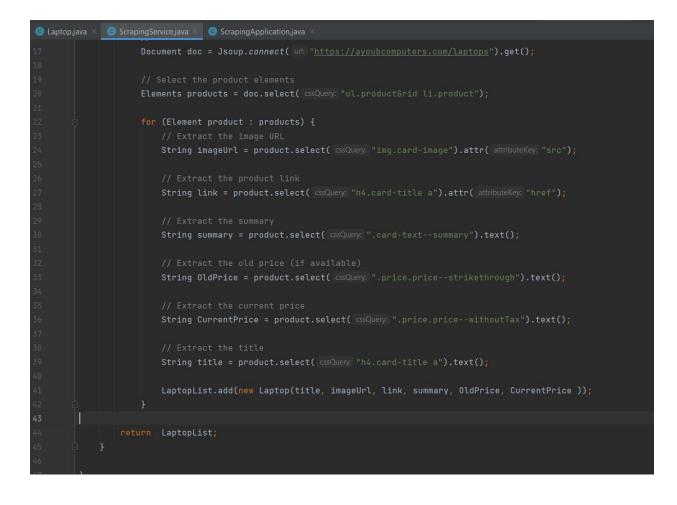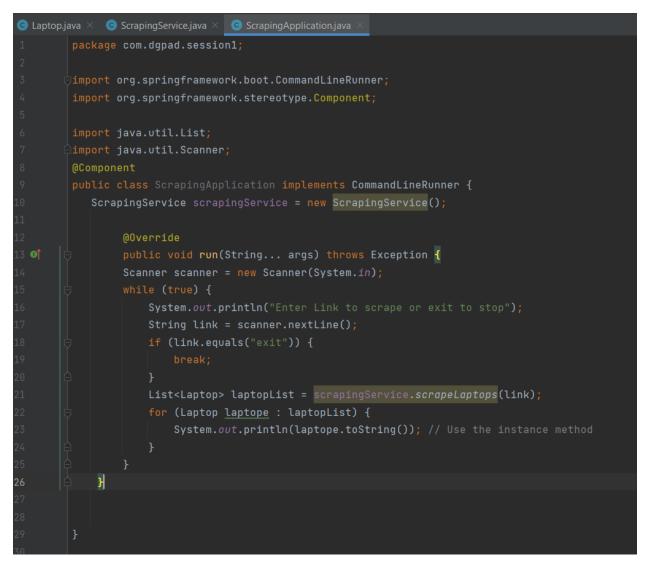
```java
            Document doc = Jsoup.connect( url: "https://ayoubcomputers.com/laptops").get();

            // Select the product elements
            Elements products = doc.select( cssQuery: "ul.productGrid li.product");

            for (Element product : products) {
                // Extract the image URL
                String imageUrl = product.select( cssQuery: "img.card-image").attr( attributeKey: "src");

                // Extract the product link
                String link = product.select( cssQuery: "h4.card-title a").attr( attributeKey: "href");

                // Extract the summary
                String summary = product.select( cssQuery: ".card-text--summary").text();

                // Extract the old price (if available)
                String OldPrice = product.select( cssQuery: ".price.price--strikethrough").text();

                // Extract the current price
                String CurrentPrice = product.select( cssQuery: ".price.price--withoutTax").text();

                // Extract the title
                String title = product.select( cssQuery: "h4.card-title a").text();

                LaptopList.add(new Laptop(title, imageUrl, link, summary, OldPrice, CurrentPrice ));
            }

        return LaptopList;
    }
```

Scraping Application Class:

```java
package com.dgpad.session1;

import org.springframework.boot.CommandLineRunner;
import org.springframework.stereotype.Component;

import java.util.List;
import java.util.Scanner;
@Component
public class ScrapingApplication implements CommandLineRunner {
    ScrapingService scrapingService = new ScrapingService();

    @Override
    public void run(String... args) throws Exception {
        Scanner scanner = new Scanner(System.in);
        while (true) {
            System.out.println("Enter Link to scrape or exit to stop");
            String link = scanner.nextLine();
            if (link.equals("exit")) {
                break;
            }
            List<Laptop> laptopList = scrapingService.scrapeLaptops(link);
            for (Laptop laptope : laptopList) {
                System.out.println(laptope.toString()); // Use the instance method
            }
        }
    }

}
```

Testing:


```
Run:  Task1Application ×

     .   ____          _            __ _ _
    /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
   ( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
    \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
     '  |____| .__|_| |_|_| |_\__, | / / / /
    =========|_|==============|___/=/_/_/_/

    :: Spring Boot ::                (v3.3.2)

    2024-08-19T12:26:16.994+03:00  INFO 21648 --- [session1] [         main] com.dgpad.session1.Task1Application      : Starting Task1Application using Java 17.0.6 with PID 21648
    2024-08-19T12:26:16.998+03:00  INFO 21648 --- [session1] [         main] com.dgpad.session1.Task1Application      : No active profile set, falling back to 1 default profile: "d
    2024-08-19T12:26:17.467+03:00  INFO 21648 --- [session1] [         main] com.dgpad.session1.Task1Application      : Started Task1Application in 0.789 seconds (process running
    Enter Link to scrape or exit to stop
    https://ayoubcomputers.com/laptops/
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    Product{title='Acer Aspire 5 A515-58P-57LU 15.6" Laptop - Intel Core i5-1335U- RAM 8GB - SSD 256GB,Intel Iris Xe | NX.KHJEM.003', imagrUrl='https://cdn11.bigcommerce.com/s-sp9oc
    Product{title='ASUS Vivobook 15 15.6" FHD Gaming Laptop - Intel Core i5-1235U - RAM 8GB - SSD 512GB - Intel Iris Xe | X1504A-NJ061', imagrUrl='https://cdn11.bigcommerce.com/s-sp
    Product{title='HP 250 G9 15.6" Laptop - Intel Core I7-1255U - RAM 8GB - SSD 512GB | 6S6V4EA#BH5', imagrUrl='https://cdn11.bigcommerce.com/s-sp9oc95xrw/images/stencil/590x590/pro
    Enter Link to scrape or exit to stop
```



```
amd-radeon-nx-eg9em-005/', summary='Acer Extensa 15 15.6''FHD Laptop - AMD Ryzen 3 3250U - RAM 4GB - HDD 1TB - AMD Radeon | NX.EG9EM.005 Processor: AMD Ryzen 3 3250U Memory: 4G
-3500u-ram-4gb-hdd-1tb-amd-radeon-nx-eg9em-006/', summary='Acer Extensa 15 15.6''FHD Laptop - AMD Ryzen 5 3500U - RAM 4GB - HDD 1TB - AMD Radeon | NX.EG9EM.006 Processor: AMD R
a315-58-34x1/', summary='Acer Aspire 3 A315-58 15.6" Laptop - Intel Core i3-1115G4 - RAM 4GB - SSD 256GB | A315-58-34X1 Processor: Intel Core i3-1115G4 Memory: 4GB RAM Storage:
-4gb-ssd-256gb-intel-uhd-win-11-82qd008hax/', summary='Lenovo IdeaPad 1 15IAU7 15.6" Laptop - Intel Core i3-1215U - RAM 4GB - SSD 256GB - Intel UHD - Win 11 | 82QD008HAX Proces
-ram-4gb-ssd-256gb-intel-uhd-graphics-dos-82tt00j3ue/', summary='Lenovo V15 G3 IAP 15.6" Laptop - Intel Core i3-1215U - RAM 4GB- SSD 256GB - Intel UHD Graphics - DOS | 82TT00J3
-ssd-256gb-nx-kdhem-00a/', summary='Acer Aspire 3 A315-510P-35ZJ 15.6" Laptop - Intel Core i3-N305- RAM 8GB - SSD 256GB | NX.KDHEM.00A Processor: Intel Core i3-N305 Memory: 4GB
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-uhd-82c4s0fl00/', summary='Lenovo Ideapad V14 14" Laptop - Intel Core i5-1035G1 - RAM 8GB - SSD 512GB - Intel UHD | 82C4S0FL00 Processor: Intel® Core™ i5-1035G1 Memory: 8GB RA
n-3-5300u-ram-4gb-ssd-512gb-integrated-amd-radeon-82ku00gped/', summary='Lenovo IdeaPad 3 15ALC6 15.6"FHD Laptop - AMD Ryzen 5 5300U - RAM 4GB - SSD 512GB - Integrated AMD Rade
-1335u-ram-8gb-ssd-256gb-intel-iris-xe-nx-khjem-003/', summary='Acer Aspire 5 A515-58P-57LU 15.6" Laptop - Intel Core i5-1335U- RAM 8GB - SSD 256GB,Intel Iris Xe | NX.KHJEM.003
ram-8gb-ssd-512gb-intel-iris-xe-x1504a-nj061/', summary='ASUS Vivobook 15 15.6" FHD Gaming Laptop - Intel Core i5-1235U - RAM 8GB - SSD 512GB - Intel Iris Xe | X1504A-NJ061 Pro
'HP 250 G9 15.6" Laptop - Intel Core I7-1255U - RAM 8GB - SSD 512GB | 6S6V4EA#BH5 Processor: Intel Core i7-1255U Memory: 8GB Storage: 512GB Display: 15.6"', OldPrice='', Curren
```



```
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n 5 3500U(3.7GHZ,4Cores) Memory: 4GB RAM Storage: 1TB HDD Size: 15.6" FHD Screen-Size Graphics: AMD Radeon', OldPrice='', CurrentPrice='$255.00 $255.00 $255.00'}
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: Intel® Core™ i3-1215U, 6C (2P + 4E) / 8T, P-core 1.2 / 4.4GHz, E-core 0.9 / 3.3GHz, 10MB Memory: 4GB Soldered...', OldPrice='', CurrentPrice='$270.00 $270.00 $270.00'}
Processor: Intel® Core™ i3-1215U, 6C (2P + 4E) / 8T, P-core 1.2 / 4.4GHz, E-core 0.9 / 3.3GHz, 10MB Memory: 4GB Soldered...', OldPrice='', CurrentPrice='$275.00 $275.00 $275.00'}
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