**Web Scraping Assignment: Extracting and Analyzing Data**

**Objective:**

The objective of this assignment is to introduce students to web scraping using Python and BeautifulSoup/ Scrapy library. Students will be required to extract data from a website, clean the data, and perform basic analysis.

**Choose a Website:**

Select a website that contains tabular data. It could be a news website, sports statistics page, or any other site with relevant data.

Make sure the website allows scraping by checking its **robots**.**txt** file or terms of service.

**Install Necessary Libraries:**

**Write a Python script that:**

* Sends an HTTP request to the chosen website.
* Parses the HTML content using BeautifulSoup/Scrapy.
* Extracts relevant data from the HTML (e.g., tables, lists).
* Converts the data into a structured format (e.g., DataFrame).

**Data Cleaning:**

Perform data cleaning tasks, such as handling missing values, removing duplicates, and converting data types.

**Data Analysis:**

Use basic data analysis techniques to answer some questions or gain insights from the scraped data.

Examples of analysis tasks:

* Calculate summary statistics (mean, median, standard deviation).
* Visualize the data using matplotlib or seaborn.
* Identify trends or patterns in the data.