**E-Commerce Product Scraper – Requirements**

**Project Overview:**

The goal of this project is to develop a web scraper to extract product data from e-commerce websites. This scraper gathers detailed information such product names, prices, descriptions, images, ratings, and other relevant details. Additionally, it generates a graph / chart for visualizing different price groups, facilitating easy price comparisons.

**Key Features:**

* **Multi-site Scraping:** The scraper will support scraping from multiple e-commerce websites such as Amazon, eBay etc.
* **Real-Time Price Monitoring** – Tracks and updates product prices dynamically.
* **Product Details Extraction** – Collects product name, price, description, reviews, images, and availability.
* **Automated Scheduling** – Enables scheduled scraping at predefined intervals.
* **Multiple-Currencies Support –** The extracted data can be converted into multiple currencies such as USD, EUR, JPY, INR, etc..

**Technology Stack:**

* **Programming Language -** Python
* **Frontend / Backend –** HTML, CSS, JavaScript (Flask)
* **Database –** PostgreSQL
* **Web Scrapping –** BeautifulSoup, Selenium
* **Scheduler –** Celery or Cron Job
* **Currency Conversion –** forex\_python
* **Graph / Chart –** matplotlib

**Additional Features:**

* **Automated Alerts & Notifications** – Notifies users about price drops, stock availability, etc. (smtplib)
* **Multi-Threading –** For generating faster web scrapping output. (ThreadpoolExecutor)
* **Product Data Analysis –** Graphs and statistics data of product for comparison and demand forecasting. (Pandas)