**Project Scope: Web Scraping for Mobile Phones under 30k on Flipkart**

**Objective:** The primary aim of this project is to develop a Python-based web scraping tool to extract information about mobile phones available on the Flipkart website that are priced under 30,000 INR and convert it into .csv file

**Target Website:** The project will focus specifically on the Flipkart website, leveraging its publicly accessible pages and structure.

**Data Extraction:** Utilizing Python libraries such as BeautifulSoup and Requests, the project will scrape relevant information including product names, prices, specifications, and customer ratings from the Flipkart website.

**Filtering Criteria:** The scraper will be programmed to filter out mobile phones based on their price, ensuring that only those priced under 30,000 INR are considered for extraction.

**Data Structuring:** Extracted data will be structured into a structured format such as CSV or JSON for easy analysis and manipulation.

**Automation:** The scraping process will be automated to periodically fetch updated information from Flipkart, ensuring the data remains current and relevant.

**Error Handling:** Robust error handling mechanisms will be implemented to address issues such as network errors, page structure changes, or server-side protections to maintain the reliability of the scraper.

**Legal Compliance:** The scraping process will adhere to Flipkart's terms of service and robots.txt directives to ensure legality and ethical use of web scraping techniques.

**User Interface (Optional):** Optionally, a simple user interface may be developed to allow users to interact with the scraper, providing input parameters such as desired brands, features, or specifications.

**Documentation and Deployment:** Comprehensive documentation will be provided for ease of understanding and future maintenance. Deployment strategies will be outlined for users to utilize the scraper efficiently.

**Scalability**: The project will be designed with scalability in mind, allowing for potential expansion to scrape data from other e-commerce platforms or incorporate additional features based on user feedback and requirements.

**Testing and Validation:** Rigorous testing procedures will be employed to validate the accuracy and reliability of the scraped data, ensuring it meets the project's objectives effectively.

**Maintenance Plan:** A maintenance plan will be established to address any updates or changes in the Flipkart website structure, ensuring the continued functionality of the scraper over time.

Feedback and Improvement: Mechanisms will be implemented to gather user feedback for further improvements and enhancements to the scraping tool, ensuring it remains valuable and effective in fulfilling its purpose.