**Workflow Overview**

**1) Frontend**

* **User Interface:** Design an interface where users follow a guided flow to select their desired product (brand, model, variant).
* **User Input:** User selections are sent to the server as a request.

**2) Server**

* **Request Handling:** Receive the product details (brand, model, variant) from the frontend.
* **Database Query:** Search for the exact product in the database.
* **Response:** Return product details (including price, rating, availability) to the frontend.

**3) Database**

* **Structure:**
  + Columns: Brand, Model, Color, Storage, amazon\_price, amazon\_rating, flipkart\_price, flipkart\_rating, availability, etc.
* **Manual Entry:** Populate the database manually with the list of products.
* **E-commerce Data:** Automatically updated via web scraping.

**4) Automatic Scraping**

* **Dynamic URL Generation:** Construct URLs using brand, model, and variant.
* **Data Extraction:** Scrape the lowest price, rating, and availability from platforms like Amazon and Flipkart.
* **Periodic Updates:** Schedule scraping at regular intervals to keep the database updated.
* **Single Seller Selection:** Implement logic to choose the seller offering the lowest price for the exact product.
* **Out-of-Stock Handling:**
  + Mark products as unavailable if they are out of stock.
  + Update the database accordingly.
  + Inform the frontend to display the out-of-stock staptus to users.