Lab 3: Pig

Note: Use the provided 'customer_purchase.csv' dataset for this lab.

1. **Load Data:**
   - Load the dataset into Pig, defining an appropriate schema for the data.
2. **Calculate Total Purchase Amount per Customer:**
   - Group the data by `customer_id`.
   - For each customer, calculate the total purchase amount (sum of `total_amount`).
3. **Find the Most Purchased Product:**
   - Determine the product that has been purchased the most (highest total quantity across all customers).
4. **Calculate Average Purchase Amount per Customer:**
   - Calculate the average purchase amount per customer.
5. **Identify High-Value Customers:**
   - Determine customers who have made purchases with a total amount greater than $100.
6. **Sort Customers by Purchase Frequency:**
   - Sort the customers based on the number of purchases they have made.
7. **Generate a Report:**
   - Create a report that includes the customer ID, total purchase amount, most purchased product, average purchase amount, and whether the customer is a high-value customer.

Record and upload an execution video demonstrating your code.

- Start the video by showing your name and the Lab topic.
- Navigate through your code, explaining key sections and highlighting any customizations you made.
- Execute the code and showcase the output/results.
- Ensure the code and output are clearly visible in the video.

Note:

- The execution video is a mandatory part of the submission. Failure to provide the execution video will result in the Lab not being graded.
- Late submissions will not be accepted or marked.
- Please ensure that you follow the instructions carefully and submit your Lab within the given timeframe.