Question 1: Write a Mapper and Reducer code for analyzing customer transactions data to determine the total sales amount per product category.

Mapper:
You are provided with a dataset containing customer transaction records. Each record consists of the following fields: customer_id, product_id, category_id, and sale_amount. Your task is to write a Mapper code that takes this dataset as input and emits key-value pairs where the key is the category_id and the value is the sale_amount.

Reducer:
Using the output from the Mapper code, write a Reducer code that calculates the total sales amount per product category. The Reducer should receive key-value pairs where the key is the category_id and the values are the sale_amounts associated with that category. The Reducer should aggregate the sales amounts and emit key-value pairs where the key is the category_id and the value is the total sales amount for that category.
Your code should be able to handle large datasets efficiently and produce accurate results

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Write a Mapper and Reducer code to find the average rating for each movie from a dataset containing movie ratings.

Write a Mapper and Reducer code to count the number of occurrences of each word in a text document

Write a Mapper and Reducer code to find the minimum and maximum temperatures for each month from a dataset containing daily temperature records.

Write a Mapper and Reducer code to calculate the total sales amount per customer from a dataset containing customer transaction records.

Write a Mapper and Reducer code to calculate the average sale amount per customer from a dataset containing customer transaction records.

Write a Mapper and Reducer code to find the total number of occurrences of each alphabet in a text document (case-insensitive).

Write a Mapper and Reducer code to calculate the average rating for each product from a dataset containing product ratings.