Report

This assignment first constructs two targeted prompt templates via the get_prompt function: the first one is for calculating the total discounted amount of 7 receipts, dedicated to answering Question 1, instructing the model to identify the actual paid amount of each receipt, sum them up, and return only a pure numerical result rounded to one decimal place; the second one focuses on extracting the undiscounted price of a single receipt to support the calculation for Question 2, which reversely deduces the original undiscounted total price by adding the actual paid amount to the absolute values of various item-level discounts (such as instant deductions and threshold-based discounts).

To implement the two core tasks, the system builds two dedicated chains—chain1 and single_chain: chain1 supports batch analysis of all receipt images with one single call and outputs the total discounted cost efficiently; single_chain operates iteratively relying on the calculate_single_receipt function, processes each receipt one by one to extract the undiscounted price, and then accumulates these prices to obtain the overall undiscounted total price of all receipts.

To ensure the reliability of the model's outputs, the system integrates the test_query function to verify whether the error between the model's calculation results and the ground truth falls within the acceptable range of ±2; in addition, to test the model's ability to comply with role boundaries, a temporary temp_chain with clear rejection rules is constructed, which uses irrelevant questions like weather inquiries to verify if the model will strictly follow the protocol of "only responding to receipt price-related questions" and explicitly reject irrelevant inquiries with a fixed statement.