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| RAZDA Co. | | |
| **Filename: [factory\_api\_integration.py]** | | |
| **Summary***:*  Integrates with a factory's API to handle order submissions, status checks, cancellations, and batch processing. It includes retry logic, order data validation, and batch operations, providing a centralized interface for managing external factory interactions. | | |
| ***Processes*** | | |
| * **Submit Order** | **submit\_order submits order data to the factory API with exponential backoff retry if a request fails. Each attempt is logged, and upon failure after all retries, a critical log entry is made.** | |
| * **Check Order Status** | **check\_order\_status queries the factory API for the current status of an order. Logs the status and errors if the request fails.** | |
| * **Confirm Order Completion** | **confirm\_order\_completion confirms with the factory API that an order is completed.** | |
| * **Cancel Order** | **cancel\_order sends a cancellation request for a specific order to the factory API. It handles any exceptions and logs errors if the cancellation fails.** | |
| * **Process Batch Orders** | **process\_batch\_orders processes multiple orders by calling submit\_order for each. It provides a summary of successes and failures, and logs each result** | |
| * **Validate Order Data** | **validate\_order\_data verifies that required fields are present in the order data before submission, logging warnings for missing fields** | |
| * **Retry Failed Orders** | **retry\_failed\_orders resubmits previously failed orders, first validating each order. Logs successful resubmissions and failed attempts.** | |
| * **Get Request Metrics** | **get\_request\_metrics calculates the success and failure rates of requests by analyzing the log data. Metrics are logged for monitoring.** | |
| **Files it Gets Information From:** | | **Files it Sends too:** |
| * **Environment Variables**: For API URL, key, retry parameters, etc. | * **Factory API**: Sends orders, status checks, confirmation, and cancellation requests. | |
| * **Error Log Cache**: Analyzes logs for request metrics calculations. | * **Logs Directory**: Stores logs for successful and failed requests in factory\_api\_integration.log. | |
| **Expected input into file:** | | **Expected output from file:** |
| * **Order Data**: JSON data for order submissions, which should contain required fields for validation and processing. * **Order ID**: String identifiers for order status checks, confirmations, and cancellations. | | * **Factory API Response**: Returns JSON responses with order statuses, confirmations, or error details. * **Request Metrics**: Logs success and failure rates for monitoring API interactions. * **Batch Processing Summary**: Reports the number of successful and failed orders in batch processing |
| **Things that need to be taking place:** | | |
| |  | | --- | | **- Retry Management: Monitor retry attempts for critical operations and adjust RETRY\_ATTEMPTS or RETRY\_DELAY as necessary based on factory API stability.** |  |  | | --- | | **- Validation Consistency: Ensure validate\_order\_data is comprehensive and includes all required fields, adjusting as necessary for new data requirements.** |  |  | | --- | | **- Metrics Collection: Regularly review request metrics to detect any patterns in failures or latency, potentially prompting API optimization or alerts for frequent issues.** |  |  | | --- | | **- Error and Exception Handling: Continuously log errors and track any common failures to refine error handling and identify any issues with API connectivity or response formats.** |  |  | | --- | | **- Batch Processing and Caching: Maintain cache efficiency to store order data and avoid repeated API calls for commonly checked statuses, enhancing performance.** |  |  | | --- | |  | | | |
| Edit log (update each time you make changes to doc or file). | | |
| * Oliver Smith (Razda Admin) Nov 8, 2024: | | |