BRD Analysis - 2025-08-12

Okay, let's craft some basic Python code to illustrate the flow you've described, particularly focusing on the core elements of the SimplyFi BRD: reading data from Excel files, applying the "Clean Trim" formula, and utilizing VLOOKUPs. **Important Disclaimer:** This is a simplified illustration. A real-world implementation would require robust error handling, logging, data validation, and potentially more complex data manipulation. This code focuses on the core flow and is not production-ready.

```
import pandas as pd

def process_data(excel_file_path):
    """
    Reads data from an Excel file, applies the "Clean Trim" formula,
    and performs VLOOKUPs.
    """

    try:
        # 1. Read Excel File
        df = pd.read_excel(excel_file_path)

        # 2. Apply "Clean Trim" Formula (Simplified - Assumes Column 'Reference_Number')
        # This is a placeholder -  You need to replace with your actual formula
        df['Reference_Number'] = df['Reference_Number'].str.strip()  # Remove leading/traili

        # 3. VLOOKUP Example (Illustrative)
        # Assuming you have a 'TPP_Working_File' with a 'Transaction_ID' column
        # and you want to map it to a 'Details' column:

        # Example data in TPP_Working_File (replace with your actual data)
        # tpp_data = {'Transaction_ID': ['TXN001', 'TXN002', 'TXN003']}
        # tpp_df = pd.DataFrame(tpp_data)

        # Example Mapping (replace with your actual mapping)
        # mapping = {'TXN001': 'Details for Transaction 1', 'TXN002': 'Details for Transactio

        # # Perform VLOOKUP
        # tpp_df['Details'] = tpp_df['Transaction_ID'].map(mapping)  #  or use pd.merge if n

        print("Data processing completed successfully.")
        return df  # Return the processed DataFrame
    except FileNotFoundError:
        print(f"Error: File not found at {excel_file_path}")
        return None
    except Exception as e:
        print(f"An error occurred: {e}")
        return None


# Example Usage:
file_path = "your_excel_file.xlsx"  # Replace with your Excel file path
```

```
processed_df = process_data(file_path)

if processed_df is not None:
    print(processed_df.head())  # Print the first few rows of the processed data
```

Explanation and Key Points: 1. **`import pandas as pd`**: Imports the Pandas library, which is essential for data manipulation in Python. 2. **`process_data(excel_file_path)` Function**: * Takes the Excel file path as input. * Uses `pd.read_excel()` to read the Excel file into a Pandas DataFrame. * **`df['Reference_Number'].str.strip()`**: This line demonstrates applying the "Clean Trim" formula. It removes leading and trailing whitespace from the 'Reference_Number' column. *Crucially, you'll need to replace this with your *actual* formula logic.* * Illustrative VLOOKUP Example: This section demonstrates how you might perform a VLOOKUP. *Replace the example data and mapping with your actual data and mapping rules.* * Error Handling: Includes `try...except` blocks to handle potential errors (e.g., file not found, other exceptions). 3. **Example Usage**: Shows how to call the `process_data` function and print the processed data. **Next Steps and Important Considerations:** * **Replace Placeholder Formula:** The `df['Reference_Number'].str.strip()` is just a placeholder. Implement your *actual* "Clean Trim" formula here. * **Implement VLOOKUP:** Populate the `tpp_data` and `mapping` variables with your actual data and mapping rules. * **Data Validation:** Add robust data validation checks to ensure the data quality after each transformation step. * **Logging:** Implement logging to track the flow of data and any errors that occur. * **Testing:** Thoroughly test the code with various scenarios to ensure it works correctly. * **Dependencies:** Make sure you have Pandas installed: `pip install pandas` This provides a starting point. Remember to adapt this code to your specific requirements and thoroughly test it throughout the development process. Let me know if you'd like help with any specific aspect of the implementation!