**“Mapping Process Documentation”**

**Integration of Consumer Data into SMART360**

1. Introduction:

The integration of consumer data into the SMART360 platform is a critical initiative undertaken by ABC Utility Company to enhance operational efficiency and streamline consumer data management processes. This documentation outlines the comprehensive data mapping process involved in this endeavor.

1. Objective:

The primary objective of this data mapping process is to facilitate the seamless integration of consumer data from ABC Utility Company's databases into the SMART360 platform. This includes extracting relevant consumer information, mapping it to corresponding fields in the SMART360 schema, performing necessary transformations, and ensuring data accuracy and consistency.

1. Source Data:

The source data originates from ABC Utility Company's databases and includes the following fields:

* Consumer ID
* Name
* Address
* Contact Number
* Email Address
* Account Number
* Meter Number
* Tariff Plan
* Consumption History
* Payment Status

1. Target Schema:

The target schema is defined by the SMART360 platform and includes the following fields:

* Consumer ID
* First Name
* Last Name
* Address Line 1
* Address Line 2
* City
* State
* Zip Code
* Phone Number
* Email Address

1. Data Mapping and Transformation:
2. Consumer ID: Direct mapping to the corresponding field in the SMART360 schema.
3. Name: Split into First Name and Last Name to align with the SMART360 schema structure.
4. Address: Parsed into Address Line 1, Address Line 2, City, State, and Zip Code to ensure consistency with SMART360 schema requirements.
5. Contact Number: Renamed to Phone Number for consistency with SMART360 schema naming conventions.
6. Email Address: Direct mapping to the corresponding field in the SMART360 schema.
7. Account Number, Meter Number, Tariff Plan, Consumption History, Payment Status: Additional fields in SMART360 schema, mapped accordingly to ensure comprehensive integration.
8. Data Validation and Testing:
9. Data validation involves ensuring the accuracy, completeness, and consistency of the integrated data.
10. Testing procedures include testing the Python scripts with sample data to validate the accuracy of data extraction, transformation, and loading processes.
11. Endtoend testing is conducted to verify the reliability and robustness of the automated mapping process under various scenarios and edge cases.
12. Conclusion:

The data mapping process outlined in this documentation provides a structured approach to integrate consumer data into the SMART360 platform effectively. By adhering to the defined mapping plan and conducting rigorous validation and testing, ABC Utility Company can ensure the successful implementation of this data migration initiative.