# Integration and Testing Document: Importing Data into Excel and Ensuring Consistency

# 1. Introduction

This document outlines the process for importing data into Microsoft Excel and ensuring data consistency. It provides detailed steps for importing data from various sources, mapping and transforming the data, and performing consistency checks. This ensures that the data is accurate, reliable, and suitable for use in the Excel dashboard.

## 2. Source Identification

**2.1 Data Sources**

* **CSV Files:** Data exported from systems or collected externally.
* **Databases:** SQL Server, MySQL,

**2.2 Permissions**

Ensure appropriate access rights and permissions are obtained for all data sources to facilitate smooth data import.

## 3. Importing Data into Excel

**3.1 Importing CSV Files**

1. **Open Excel:**
   * Start with a new or existing workbook.
2. **Navigate to Data Tab:**
   * Click on the “Data” tab on the Ribbon.
3. **Get Data from Text/CSV:**
   * Select “Get Data” > “From Text/CSV.”
4. **Select File:**
   * Locate and select the CSV file from your computer.
5. **Import Wizard:**
   * Follow the prompts to preview and import the data. Choose the appropriate delimiter (e.g., comma, semicolon) and adjust data type settings as required.
6. **Load Data:**
   * Click “Load” to insert the data into a new worksheet or an existing one.

**3.2 Importing from Databases**

1. **Open Excel:**
   * Start with a new or existing workbook.
2. **Navigate to Data Tab:**
   * Click on the “Data” tab on the Ribbon.
3. **Get Data from Database:**
   * Select “Get Data” > “From Database” > choose the relevant database type (e.g., “From SQL Server”).
4. **Connect to Database:**
   * Enter connection details including server name, database name, and authentication method.
5. **Select Data:**
   * Choose the relevant tables or views to import.
6. **Load Data:**

## 4. Data Mapping and Transformation

**4.1 Data Mapping**

* Ensure that data columns from the source map correctly to the intended columns in Excel.
* Verify that data types (e.g., text, number, date) match between source and destination.

**4.2 Data Transformation**

* **Power Query:** Use Power Query for necessary data transformations such as filtering, merging, or splitting columns.
* **Excel Functions:** Apply built-in Excel functions to clean and format data as needed.

## 5. Ensuring Data Consistency

**5.1 Validation Checks**

* **Compare Records:** Cross-check a sample of records against the source to ensure accuracy.
* **Format Consistency:** Verify that data formats (dates, numbers) are consistent with the expected format.
* **Data Completeness:** Ensure no data is missing or incorrectly imported.

**5.2 Consistency Across Sheets**

* **Verify Links:** Ensure that data references across different sheets or workbooks are linked correctly.
* **Check Formulas:** Review formulas and functions to confirm they are working with the intended data ranges.

**5.3 Regular Updates**

* **Data Refresh:** Set up automated refresh options if the data sources are updated regularly.
* **Update Documentation:** Maintain up-to-date documentation of data sources, import procedures, and transformations.

## 6. Documentation of the Process

**6.1 Import Steps**

* Document each step taken to import data, including configurations and settings used.

**6.2 Transformation Details**

* Record any transformations applied to the data, including formulas and Power Query steps.

**6.3 Consistency Checks**

* Keep a log of validation checks performed and any issues identified during the import process.

**6.4 Issue Resolution**

* Document any discrepancies or issues encountered, along with the steps taken to resolve them.

## 7. Conclusion

This document provides a comprehensive guide for importing data into Excel and ensuring consistency. Following these procedures will help maintain data accuracy and integrity, which is essential for effective analysis and decision-making.