**SKU Product Listing**

**Table Columns for All Products**

1. **Product Image**: A small thumbnail of the product for quick identification.
2. **Product Name**: Full name of the product.
3. **SKU**: Unique SKU code for the product.
4. **Category**:
   * Displays the category name (e.g., Plumbing, Electrical).
   * When navigating within a category, show the **Sub-Category Name** under this column (e.g., Pipes, Fittings).
5. **Brand Group Name & Brand Vertical**: The brand associated with the product (e.g., Bosch, Havells – Havells Lighting).
6. **Modified Date and Time**: Date and time of the last update to the product.
7. **Status**:
   * Indicates the SKU status (e.g., Active, Archived, Draft).
   * Use color coding for better visibility (e.g., green for active, gray for archived).
8. **UPID Linked**: Displays the Unique Product Identifier (UPID) linked to the SKU, if any.
9. **Actions**:
   * Options include:
     + **Edit SKU**
     + **Go to UPID**
     + **Change Status** (e.g., change SKU status from Active to Archived or Draft)
     + **Delete**
     + **View Details**

**Additional Features**

1. **Pagination**:
   * Show the number of SKUs per page (e.g., 20, 50, 100).
   * Provide clear pagination controls for large datasets.
2. **Filters and Sorting:**
   * Filter options above the table for:
     + Category
     + Sub-Category
     + Brand
     + Status
   * Enable column sorting by Name, SKU, Modified Date, or Status.
3. **Bulk Actions:**
   * Include checkboxes for selecting multiple SKUs.
   * Actions include:
     + Bulk Edit
     + Bulk Archive
     + Bulk Delete
     + Bulk Change Status

**Sub-Category View**

* When navigating into a specific category, the table updates to:
  + Include **Sub-Category** column.
  + Show only SKUs relevant to the selected category.
  + Maintain all other columns for consistency.

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**Bulk SKU Upload Workflow and Review Page**

**Workflow Description**

1. **Upload Initiation**:
   * The user starts the process by clicking on the **Upload** button.
   * A modal or dropdown appears to select the **category** for the SKU upload, such as **Plumbing**, **Electrical**, etc.
2. **Download Custom Spec Sheet**:
   * Once the category is selected, the system generates and provides a downloadable **CSV template** specific to the chosen category.
   * The template includes predefined columns and fields relevant to the category, including mandatory and optional specifications.
3. **Fill the Sheet**:
   * The user downloads the custom spec sheet.
   * The user fills in the required information, ensuring the data adheres to the format and field requirements specified in the sheet.
4. **Upload SKU Sheet**:
   * The user uploads the completed SKU sheet back into the system using the **Upload SKU Sheet** functionality.
5. **Review Page**:
   * After successful upload, the system redirects the user to the **Review Page**.
   * The Review Page displays all uploaded SKUs in a tabular format for validation.

**Review Page Functionality**

1. **Discrepancy Identification**:
   * The system highlights rows with errors or discrepancies, such as missing mandatory fields, incorrect formatting, or mismatched data types.
   * Error messages or tooltips are provided for each discrepancy to guide corrections.
2. **UPI Mapping**:
   * Each SKU row includes a column for **UPI (Unique Product Identifier)**.
   * Users can manually select or map the correct UPI for each SKU row using dropdowns or auto-suggest fields populated with existing UPIs.
3. **Bulk Actions**:
   * Users can perform bulk actions, such as assigning the same UPI to multiple SKUs, using a checkbox selection and batch editing tools.
4. **Real-Time Validation**:
   * As the user updates data or maps UPIs, the system performs real-time validation to ensure the corrections are valid.
   * Validated rows are marked as resolved (e.g., using a green checkmark or status column).
5. **Export and Re-Upload Options**:
   * Users can export the review sheet with unresolved discrepancies for offline corrections.
   * Once corrected, the updated sheet can be re-uploaded for validation.
6. **Submission**:
   * Once all rows are validated and discrepancies resolved, the user clicks on the **Submit** button to finalize the SKU upload.
   * The system processes and confirms successful SKU submission.

**Updated Review Page Workflow (Based on Example)**

1. **Upload and Review Data**:
   * The uploaded data is displayed in a **tabular grid** format.
   * Tabs such as **All Records**, **Error Records**, and **Warning Records** are provided for easy navigation:
     + **All Records**: Displays all uploaded data.
     + **Error Records**: Focuses on rows with critical issues that must be resolved before proceeding.
     + **Warning Records**: Shows rows with non-critical issues that may still require review.
2. **Data Table Features**:
   * **Column Headers**: Each column is clearly labeled (e.g., Product, Message, Category, HSN/SAC Code, Barcode, etc.).
   * **Row-Level Details**:
     + Rows are color-coded to indicate the current status:
       - Green rows: Valid data with no issues.
       - Highlighted rows: Require user attention due to errors or warnings.
     + Inline error/warning messages are provided in the **Message** column.
     + Editable fields for correcting discrepancies directly in the table.
3. **Interactive Actions**:
   * **Inline Editing**:
     + Users can click on cells to edit data (e.g., correcting price, tax, or product category).
     + Real-time validation ensures corrections are immediately validated.
   * **Bulk Actions**:
     + Select multiple rows using checkboxes.
     + Apply bulk edits to resolve repetitive issues efficiently (e.g., fixing tax rates for a group of products).
   * **Validation Button**:
     + Clicking **Validate Products** triggers revalidation of the updated records.
4. **Final Actions**:
   * **Cancel**: Exits the process without saving changes.
   * **Confirm**: Submits validated and corrected data to finalize the SKU upload.
   * **Pagination**:
     + Page size selection and navigation (e.g., “Page Size: 20” and pagination controls) are provided for large datasets.

**Key Features**

* **Dynamic Spec Sheets**: Generate category-specific templates dynamically.
* **Error Highlighting**: Clearly display and explain discrepancies in the uploaded data.
* **UPI Integration**: Provide tools to search, select, and map UPIs efficiently.
* **Real-Time Feedback**: Validate corrections instantly to reduce iteration cycles.
* **Bulk Edits**: Enable quick actions for larger datasets.
* **Export for Offline Work**: Allow users to correct discrepancies in offline tools and re-upload.

**UI/UX Considerations**

1. **Category Selection Dropdown**:
   * Simple, searchable dropdown for selecting the category.
2. **Review Table**:
   * Use a grid layout with sortable and filterable columns for ease of use.
   * Color-coded cells to distinguish valid and invalid data.
3. **Inline Editing**:
   * Allow users to edit directly within the table for quicker resolution.
4. **Action Toolbar**:
   * Include options for bulk UPI mapping, exporting discrepancies, and submitting final data.
5. **Success Confirmation**:
   * Display a confirmation message or summary after successful submission, including SKU counts and category details.

**Review Page should look like this only -**

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**Category View - List View like this and grid view**

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**1. Category List/Table View**

* **Columns**:
  1. **Category Name**:
     + Displays the name of the category with an image or icon for visual representation.
  2. **Category ID**:
     + A unique identifier for the category (e.g., CID1245).
  3. **Number of Sub-Categories**:
     + Displays the count of sub-categories under each category.
     + Clicking the count redirects to the **Sub-Category Management Page**.
  4. **Number of Products**:
     + Shows the count of products or UPIDs associated with the category, including those within sub-categories.
     + Clicking redirects to the product or UPID listing for the selected category.
  5. **Actions**:
     + **Edit Category**: Modify category details such as name, description, or image (Probably a Popup or something)
     + **View Sub-Categories**: Redirects to a page listing all sub-categories under this category.
     + **View Products/UPIDs**: Redirects to the product or UPID list under this category.
     + **Delete Category**: Deletes the category after confirmation.

**2. Sub-Category Management**

* **Sub-Category Table**:
  + **Columns**:
    1. **Sub-Category Name**:
       - Displays the name of the sub-category.
    2. **Sub-Category ID**:
       - A unique identifier for the sub-category (e.g., SCID5678).
    3. **Number of Products**:
       - Shows the count of products or UPIDs associated with the sub-category.
       - Clicking the count redirects to the product or UPID listing for the selected sub-category.
    4. **Actions**:
       - **Edit Sub-Category**: Modify sub-category details.
       - **View Products/UPIDs**: Redirects to the product or UPID list under this sub-category.
       - **Delete Sub-Category**: Deletes the sub-category after confirmation.
* **Features**:
  + **Add New Sub-Category**:
    1. Fields:
       - Sub-Category Name
       - Sub-Category Description
    2. Saves the sub-category under the selected parent category.
  + **Search and Filters**:
    1. Filters sub-categories by name, ID, or product count.

**3. Breadcrumb Navigation**

* **Structure**:
  + **Categories > [Category Name] > Sub-Categories > Products/UPIDs**
* **Details**:
  + **Categories**: Redirects to the full list of categories.
  + **[Category Name]**: Displays the name of the current category and links to its sub-category list.
  + **Sub-Categories**: Displays the list of sub-categories under the selected category.
  + **Products/UPIDs**: Displays the list of products or UPIDs under the selected sub-category.

**4. Actions Summary**

* **Category Actions**:
  1. **Edit Category**: Modify category details such as name or image.
  2. **View Sub-Categories**: Navigate to the list of sub-categories.
  3. **View Products/UPIDs**: Navigate to the product/UPID listing under this category.
  4. **Delete Category**: Deletes the category after confirmation.
* **Sub-Category Actions**:
  1. **Edit Sub-Category**: Modify details such as name or description.
  2. **View Products/UPIDs**: Navigate to the product/UPID listing under the sub-category.
  3. **Delete Sub-Category**: Deletes the sub-category after confirmation.

**Category List Example**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Category ID** | **Sub-Categories Count** | **Number of Products** | **Actions** |
| Plumbing | CID1245 | 5 Sub-Categories | 500 Products – (Deep Linked to Product SKU listing page with a filter) | Edit, View Sub-Categories, View Products, Delete |
| Electrical | CID1246 | 3 Sub-Categories | 300 Products – (Deep Linked to Product SKU listing page with a filter) | Edit, View Sub-Categories, View Products, Delete |

**Sub-Category List Example**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sub-Category** | **Sub-Category ID** | **Number of Products** | **Actions** |
| Pipes | SCID5678 | 100 Products | Edit, View Products, Delete |
| Fittings | SCID5679 | 50 Products | Edit, View Products, Delete |

**Attributes and Attribute Groups**

Attributes and Attribute Groups are tools to define, organize, and manage data related to object records in a structured and flexible manner.

**1. Attribute Types**

Attributes are categorized based on the type of data they store. Examples include:

|  |  |  |
| --- | --- | --- |
| **Attribute Type** | **Definition** | **Example** |
| **Text** | Stores alphanumeric data. | Brand Name: "ACME Corp" |
| **Number** | Stores numeric data. | Length: 1500 mm |
| **Range** | Specifies a range of numeric values. | Width: 0–20 mm |
| **Multi-select** | Allows multiple options from a predefined list. | Color Options: Red, Blue, Green |
| **Boolean** | Stores yes/no or true/false values. | Is Eco-Friendly: True |
| **Date** | Stores a specific date. | Manufacture Date: 2025-01-09 |

**2. Attribute Groups**

Attribute Groups organize attributes into logical categories for better clarity and management. They ensure related attributes are grouped together.

|  |  |  |
| --- | --- | --- |
| **Group Name** | **Purpose** | **Example Attributes** |
| **Product Dimensions** | Defines size-related attributes. | Length, Width, Height |
| **Mechanical Properties** | Stores mechanical performance details. | Thickness, Strength, Elasticity |
| **Tolerance Properties** | Tracks allowable variations. | Width Range, Thickness Tolerance |
| **Packaging Details** | Captures packaging information. | Packaging Type, Packaging Size |
| **Brand Details** | Stores brand-specific information. | Brand Name, Product Line |

**3. Creating and Managing Attributes**

**Creating an Attribute**

1. Navigate to **Attributes** under **PIM**.
2. Click **Create Attribute**.
3. Define:
   * **Name**: E.g., "Thickness."
   * **Type**: E.g., "Number."
   * **Unit**: E.g., "mm."
   * **Group**: E.g., "Tolerance Properties."
4. Save.

**Example Table for Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute Name** | **Attribute Type** | **Unit** | **Group** | **Example Values** |
| Width Range (<1500) | Range | mm | Tolerance Properties | Min: 0 mm, Max: 20 mm |
| Thickness | Number | mm | Tolerance Properties | 1.6 ± 0.12 mm |
| Brand Name | Text | N/A | Brand Details | Acme Corp |
| Manufacture Date | Date | N/A | Production Information | 2025-01-09 |

**4. Examples of Attribute Usage**

**Scenario: Product Specification**

* **Product Dimensions Group**:
  + Length: 1500 mm
  + Width: 1200 mm
  + Height: 10 mm
* **Tolerance Properties Group**:
  + Width Range: 0–20 mm (for W < 1500)
  + Thickness Tolerance: 1.6–2.0 ± 0.12 mm
* **Brand Details Group**:
  + Brand Name: Acme Corp
  + Product Line: EcoSteel