

Enhancing SharePoint List Management with a Custom Copy/Move Panel Using SPFx and Fluent UI

Overview:

This case study explores the development of a Copy/Move Panel in SharePoint as an Application Customizer using the SharePoint Framework (SPFx) and Fluent UI. The panel provides users with a seamless way to transfer items between SharePoint lists by selecting a source list, target list, and an action (Copy/Move).

Unlike traditional web parts, this functionality is implemented as an SPFx Application Customizer, meaning that it is not added to a specific page but is globally accessible across the SharePoint site. Users can open the panel by clicking on the custom app in the Site Contents.

The application leverages SPHttpClient for making REST API calls to SharePoint, ensuring real-time validation, success/error messaging, and automatic input clearing when the panel is closed. By integrating this functionality into an Application Customizer, the solution enhances user efficiency by enabling list item management across the site without requiring navigation between multiple SharePoint pages.

Key Features:

1. SPFx Application Customizer
 - The panel is triggered by clicking on the custom app in Site Contents, ensuring easy access across the site.
 - Unlike a web part, users do not need to add it manually to a page.
2. Dynamic List Fetching
 - The panel dynamically retrieves all available SharePoint lists, filtering visible lists (BaseTemplate 100, Hidden=false) to display only relevant options.
3. Copy/Move Functionality
 - Users can select a source list, a target list, and an action (Copy or Move) to transfer list items.
 - The application copies/moves only the Title field of items for simplicity, but can be extended to include more fields.
4. REST API Communication with SPHttpClient
 - GET Request: Fetches items from the source list.
 - POST Request: Adds items to the target list.
 - DELETE Request: Removes items from the source list if the Move action is selected.
5. Validation & Error Handling
 - Users cannot proceed unless they have selected a source list, target list, and an action.
 - Displays an error message if no items are found in the source list.
 - Catches and logs errors if REST API requests fail.
6. Success & Error Messaging in the Panel
 - Success Message: Displays confirmation that items were copied or moved successfully.
 - Error Message: Displays in red text inside the panel if an operation fails.
7. Automatic Input Reset on Panel Close
 - When users close the panel, all selections are reset to their default state.
 - This prevents users from accidentally reusing previous selections.

Technology Used:

1. SharePoint Framework (SPFx) - Application Customizer

- Injects custom logic and UI components into SharePoint site pages.
- Ensures seamless integration without modifying master pages.

2. React + ReactDOM

- Dynamically renders the **Copy/Move Panel** within the SharePoint UI.
- Provides an interactive and responsive user experience.

3. SharePoint REST API + SPHttpClient

- Fetches document libraries and lists dynamically.
- Facilitates communication between the panel and SharePoint for executing Copy/Move operations.

4. jsPDF & autoTable Plugin

- **jsPDF**: Generates PDF documents dynamically.
- **autoTable**: Helps in structuring tables within PDFs for better formatting.

5. TypeScript & JavaScript

- Ensures strong typing, better maintainability, and enhanced error handling in SPFx.
- Utilizes **DOM manipulation** (e.g., `document.querySelector`, `document.createElement`) to inject UI components.

6. Office UI Fabric/Fluent UI

- Provides a consistent and modern UI experience.
- Enhances usability through Fluent UI components like buttons, dropdowns, and panels.

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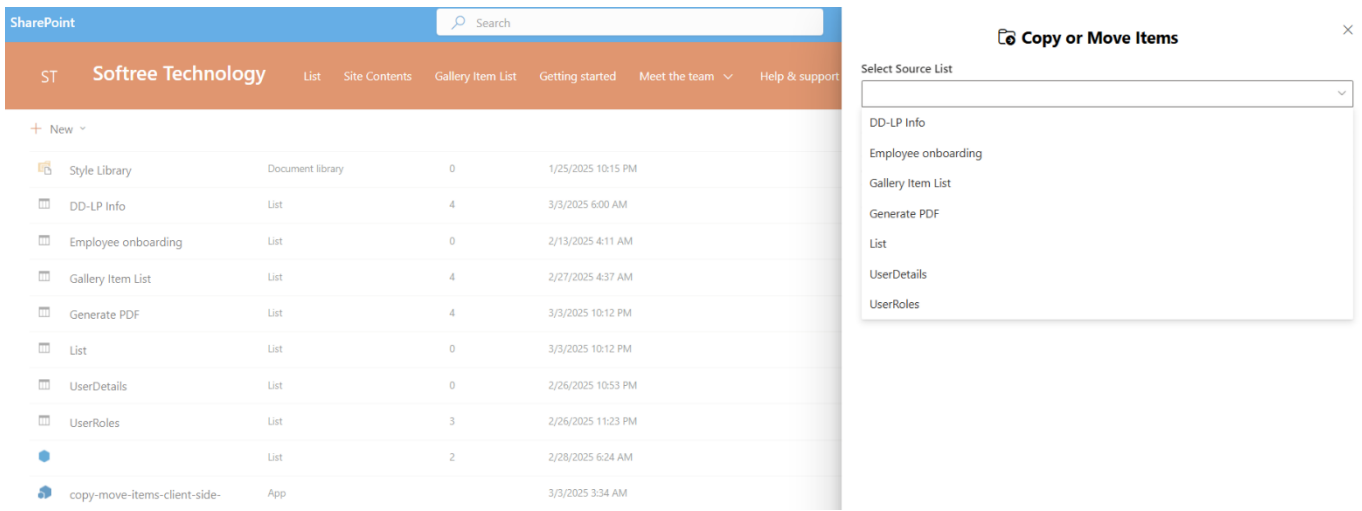
Output Screenshots:

Users can access the Copy/Move panel by clicking on the custom application listed under **Site Contents** in SharePoint. This application customizer is designed to seamlessly integrate with SharePoint, allowing users to initiate the Copy/Move operation without navigating through multiple pages. Once clicked, the panel opens as an overlay, providing an intuitive and efficient interface for selecting source and target lists, choosing the desired action, and executing the operation. This streamlined approach enhances user productivity by enabling quick and direct content management within SharePoint.

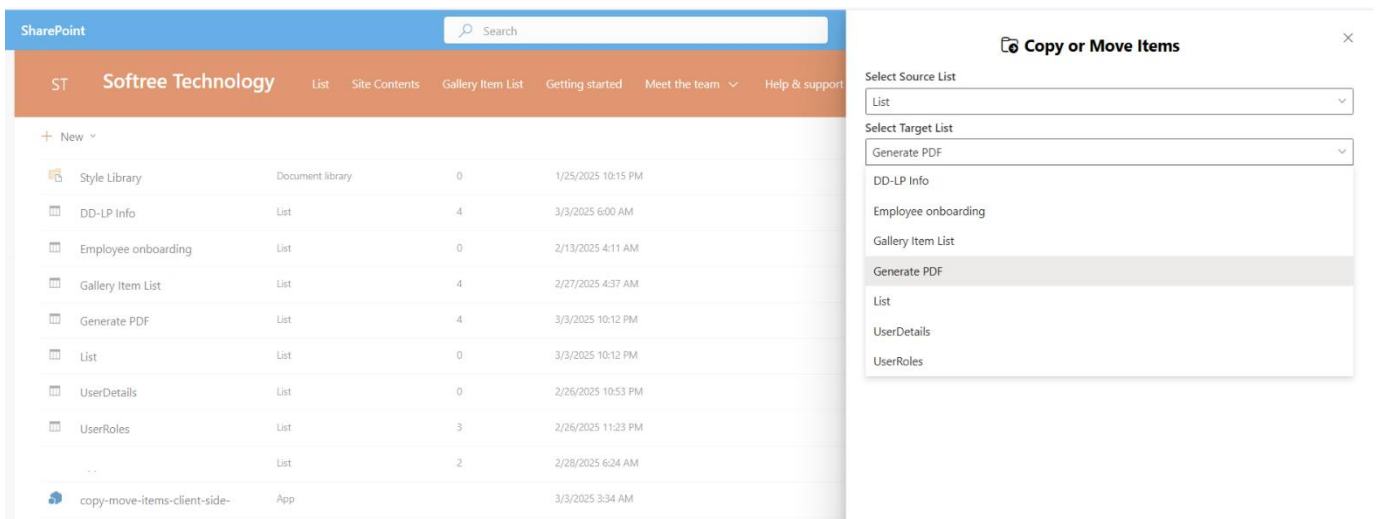
The screenshot displays the SharePoint interface for a site named 'Softree Technology'. The main content area shows a table of site contents with columns for name, type, item count, and last modified date. A red box highlights the application 'copy-move-items-client-side-' in the table. An overlay panel titled 'Copy or Move Items' is open on the right, featuring three dropdown menus: 'Select Source List', 'Select Target List', and 'Choose Action'. Below the dropdowns are 'Execute' and 'Cancel' buttons.

Name	Type	Item Count	Last Modified
Style Library	Document library	0	1/25/2025 10:15 PM
DD-LP Info	List	4	3/3/2025 6:00 AM
Employee onboarding	List	0	2/13/2025 4:11 AM
Gallery Item List	List	4	2/27/2025 4:37 AM
Generate PDF	List	4	3/3/2025 10:12 PM
List	List	0	3/3/2025 10:12 PM
UserDetails	List	0	2/26/2025 10:53 PM
UserRoles	List	3	2/26/2025 11:23 PM
copy-move-items-client-side-	App	2	2/28/2025 6:24 AM
Events	Events list	0	1/25/2025 10:15 PM
Site Pages	Page library	40	2/28/2025 3:26 AM

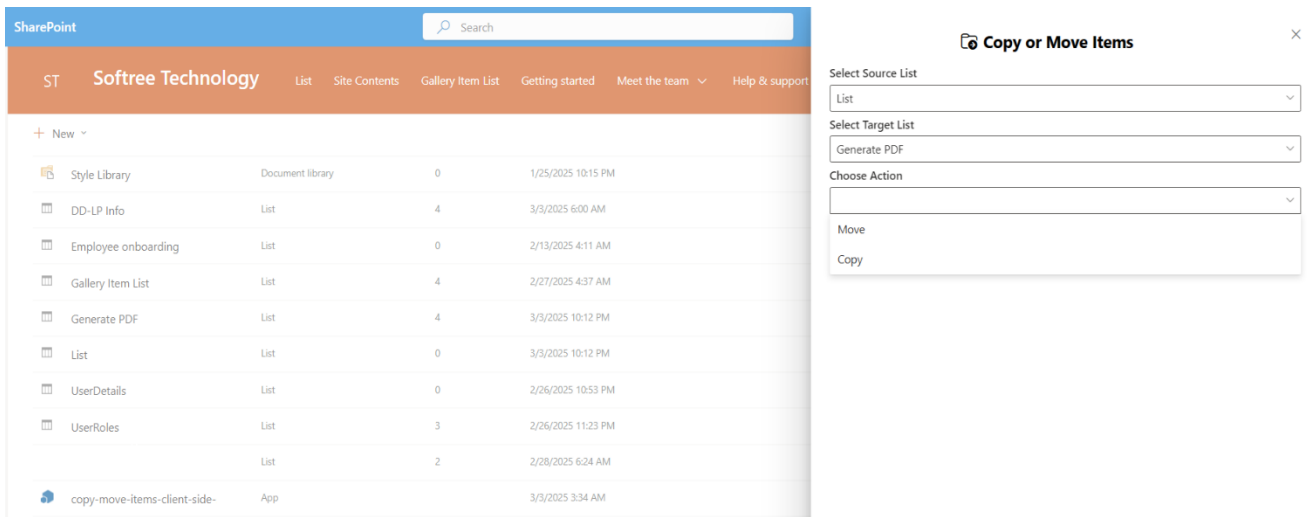
The dropdown component allows users to choose a source list from SharePoint, making it a crucial part of the Copy/Move functionality. The available list options are dynamically fetched from SharePoint using the SPHttpClient, ensuring that users always see an up-to-date selection of lists. When a user selects a list, the selected value is stored in the component's state using the setSelectedSourceList function. This selected list is then used as the source from which items will be copied or moved to a target list. By leveraging real-time data retrieval and state management, the dropdown enhances user experience by providing seamless and accurate list selection.



The dropdown allows users to select a target list from SharePoint, with available options dynamically retrieved using SPHttpClient. When a user selects a target list, the selected value is stored in the component's state. This value is then used to determine the destination where items will be copied or moved during the operation. The dynamic fetching of lists ensures that users always have an up-to-date selection of available lists within the SharePoint site.



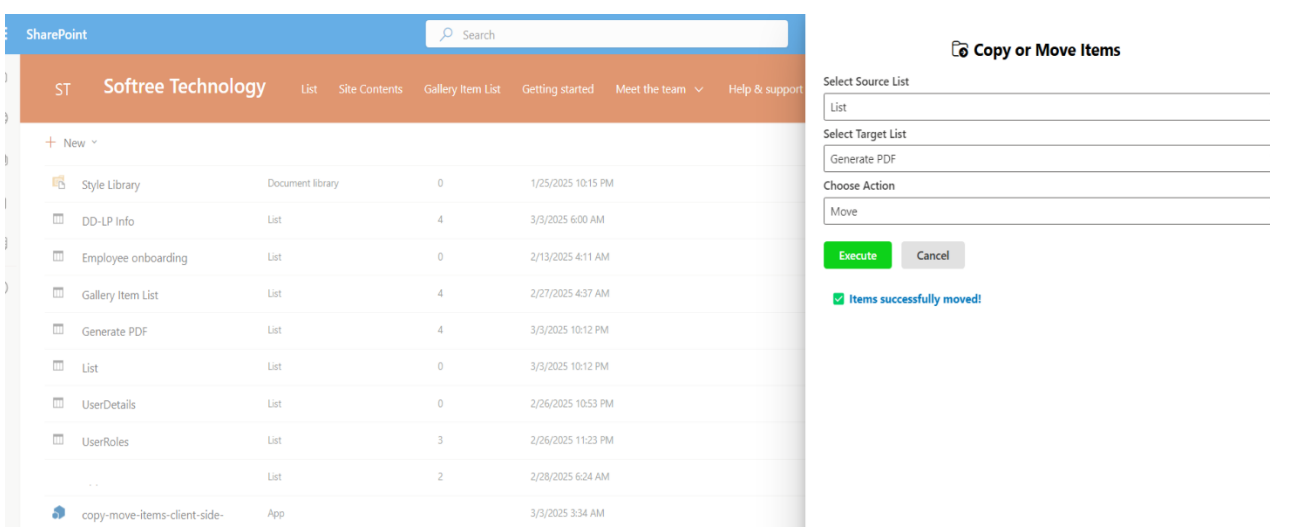
The dropdown provides users with the ability to select an action for managing SharePoint list items. It offers two options: Move and Copy. When a user selects an action, the onChange event handler updates the state with the chosen value, which determines whether items will be moved or copied from the source list to the target list. The selectedKey ensures that the dropdown reflects the current selection, enhancing user interaction and clarity.



The **Execute** button is a **primary action button** provided by Fluent UI, designed to initiate the Copy/Move operation within the SharePoint panel. When a user clicks this button, it triggers the `handleAction` function, which performs the following actions:

Validates Input: Ensures that the user has selected a source list, target list, and an action (Copy or Move). If any required field is missing, an error message is displayed.

Once the Copy/Move operation is completed, the application dynamically updates the success message to provide immediate feedback to the user. This real-time confirmation ensures that the user is informed about the outcome of their action without requiring them to navigate away or refresh the page. The displayed message explicitly states whether the selected items were successfully copied or moved, helping users understand the result of their operation at a glance. This improves user experience by reducing uncertainty and enhancing clarity in SharePoint list management.



+ New

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		List	2	2/28/2025 6:24 AM
	copy-move-items-client-side-	App		3/3/2025 3:34 AM

Copy or Move Items

Select Source List
List

Select Target List
Generate PDF

Choose Action
Copy

Execute Cancel

Items successfully copied!