AutoLoc Architectural Design and Components Description

# AutoLoc Script App Components

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| **Component** | **Description** | **Objects** | **Requirements** | **Inputs** | **Outputs** | **Objective** | **SLA** |
| **File Scanner** | Scans directories for HTML and JS files. | Filesystem navigator | Access to the file system. | Root directory path | List of file paths | To locate all HTML and JS files within the given directory tree. | 99.9% uptime |
| **String Extractor** | Extracts translatable strings from HTML and JS files. | Parser, Regex matcher | Read access to files. | HTML and JS files | Extracted strings | To identify and extract all potentially translatable strings. | 95% accuracy |
| **ID Assigner** | Assigns unique IDs to HTML elements. | DOM tree editor | Write access to HTML files. | HTML content | Modified HTML content | To tag translatable elements with unique identifiers. | 100% unique IDs |
| **JSON Manager** | Manages creation and updating of JSON localization files. | JSON file handler | Read/Write access to localization directory. | Extracted strings, locale info | JSON files | To store extracted strings into structured JSON format per locale. | 99% data integrity |
| **Output Manager** | Saves modified files and handles output operations. | File writer | Write access to project directories. | Modified HTML/JS content, JSONs | Updated files in directories | To save all changes back to the filesystem with minimal disruption. | 100% file accuracy |

# AutoLoc Plugin App Components

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| **Component** | **Description** | **Objects** | **Requirements** | **Inputs** | **Outputs** | **Objective** | **SLA** |
| **Content Detector** | Monitors CMS for new or updated content to be localized. | CMS hook, Listener | Integration capabilities with CMS. | CMS content updates | List of content needing translation | To detect and queue updated content for translation. | Real-time detection |
| **API Caller** | Manages API calls between the CMS and TMS. | API client | Reliable internet connection, API access to TMS. | Content to translate | Translated content from TMS | To send content for translation and receive translated material. | 99.9% uptime |
| **Translation Applier** | Updates CMS database with translated texts. | Database manager | Write access to CMS database. | Translated texts | Updated CMS entries | To integrate translations back into the CMS effectively. | 100% data integrity |
| **Error Handler** | Manages errors and ensures smooth operation. | Error logger | Robust logging system. | Errors and exceptions | Error logs, alerts | To provide stability and error feedback for operational continuity. | 99.99% error handling |
| **Localization Updater** | Handles dynamic updates to content based on user language preference. | Content renderer | Access to localized content and user settings. | User language selection, content | Localized content display | To dynamically update displayed content based on user preferences. | Instantaneous updates |