

WEINTEK LABS., INC.

SysFile & SysDir Library **Folder & File Management**

Demo Project

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1. Overview

SysFile and SysDir are libraries that can be used to manage File System.

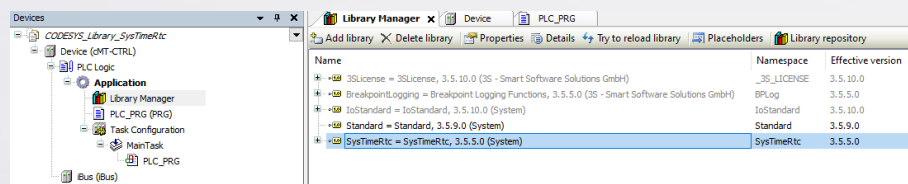
Users can use these libraries to read/write files in File System, and move the files between PC and CODESYS.

SysDir Library can manage the directories in File System.

SysFile Library can open the files in File System.

2. Adding Library

Step 1. Add SysDir & SysFile Libraries in CODESYS software.



Step 2. Use the Function in the Library to manage File System in CODESYS.

3. Function

SysDir Library

| Function Name | Description |
|------------------|---|
| SysDirGetCurrent | Get the current directory. The default directory is /PlcLogic/. |
| SysDirCreate | Create a folder. |
| SysDirRename | Rename a folder. |
| SysDirOpen | Directory and the first directory entry. |
| SysDirRead | Read the next directory entry. |
| SysDirSetCurrent | Set a directory. |
| SysDirClose | Close a directory. |

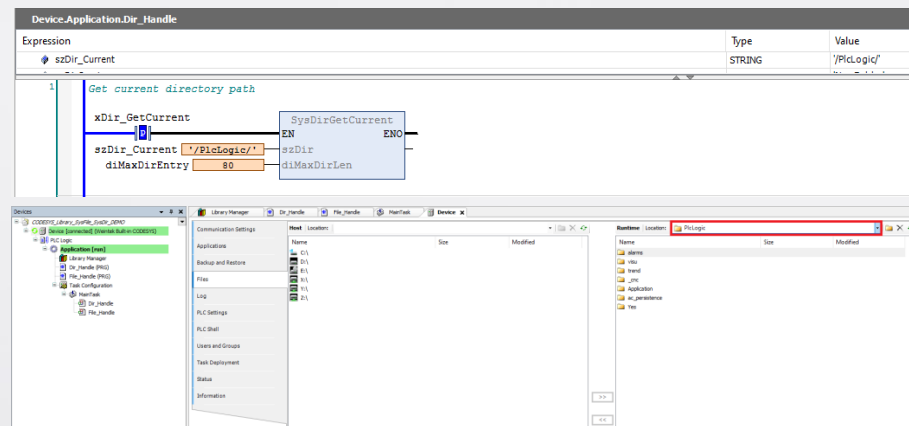
SysFile Library

| Function Name | Description |
|---------------|--|
| SysFileOpen | Open a file under the current directory. |
| SysFileWrite | Write the data to a file. |
| SysFileRead | Read a file. |
| SysFileClose | Close and save a file. |

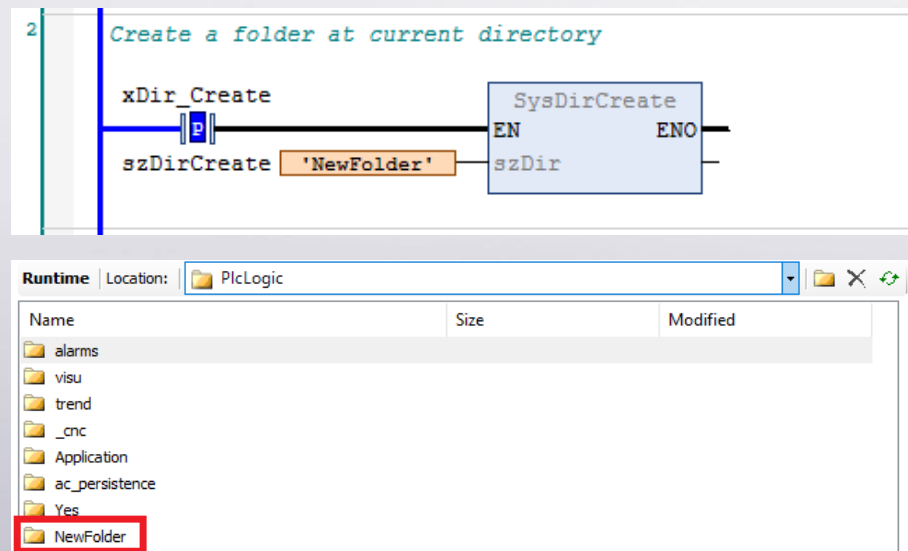
4. Demonstration

Step 1. Get the current directory and by default the directory is '/PlcLogic/'.

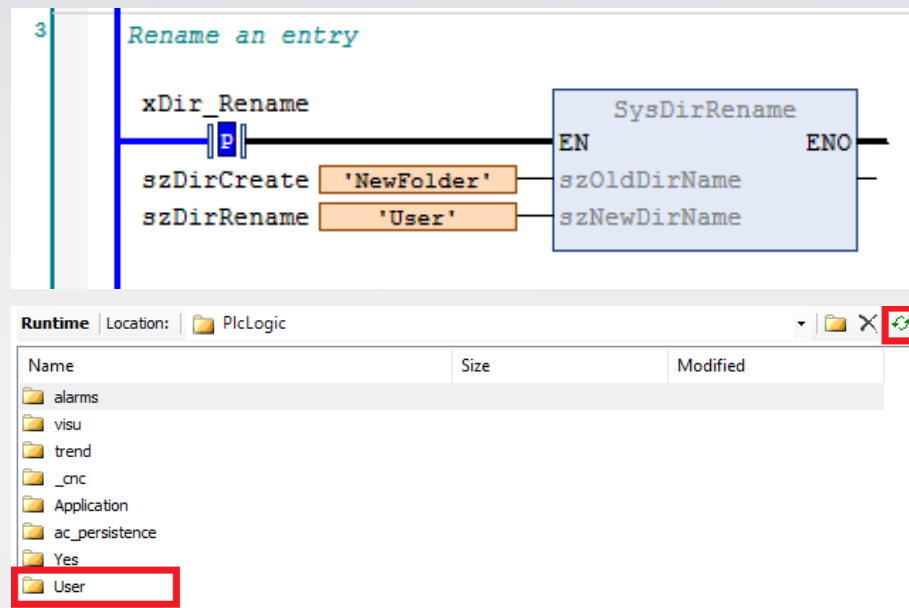
Go to [Device] -> [File] to browse for a folder or file name in File System.



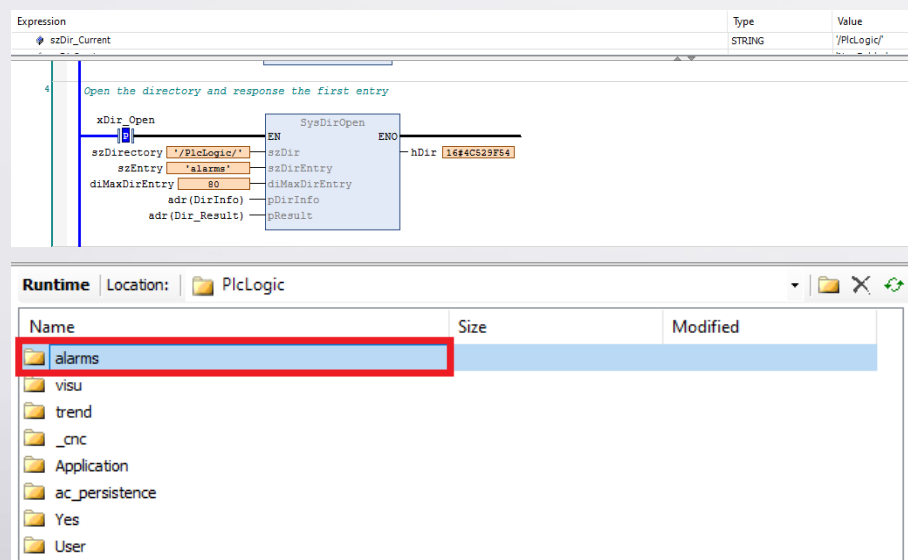
Step 2. Create a new folder and name it "NewFolder". This folder is added under PlcLogic directory.



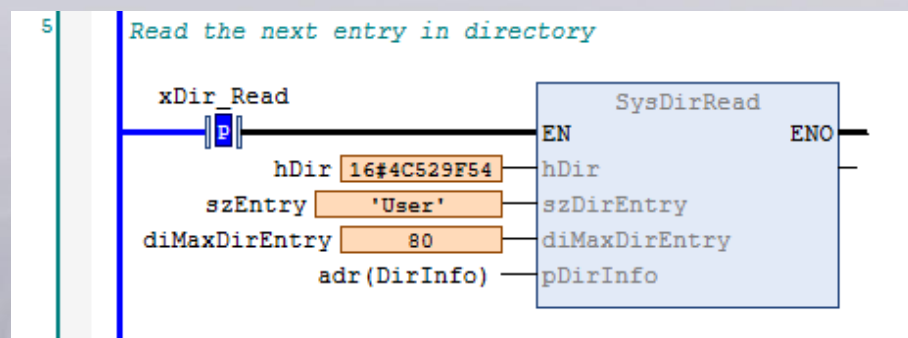
Step 3. Change the folder name from "NewFolder" to "User".



Step 4. Open the directory and get the first directory entry of the default path.



Step 5. Read the next directory entry.



Step 6. Set a folder under “/PlcLogic/User/”. The folder is currently empty.

The screenshot shows the SysDir library functions in a ladder logic editor and the resulting runtime directory view.

Function 4: Open the directory and response the first entry

| Expression | Type | Value |
|--------------------|--------|-----------------|
| szDirDirectory_New | STRING | /PlcLogic/User/ |

Function 5: Read the next entry in directory

Function 6: Set the current directory path

Runtime View: Location: PlcLogic/User

| Name | Size | Modified |
|------|------|----------|
| | | |

Step 7. Open a file in User folder. If the file with the same name cannot be found, a new file named “NewFile.txt” will be generated.

✂ Select read or write as Access_Mode.

The screenshot shows the SysFile library function and the resulting runtime directory view.

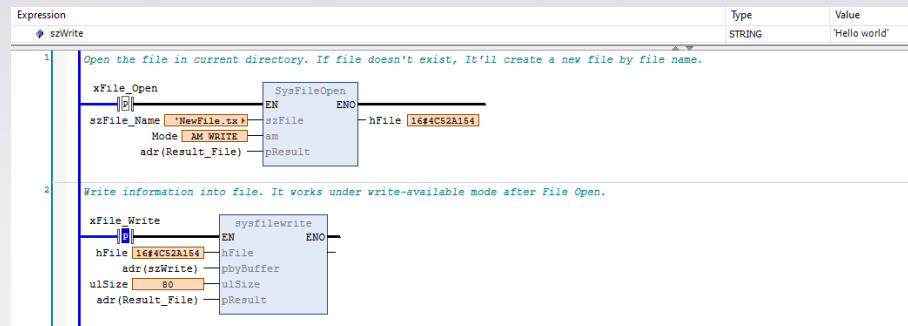
Function 1: Open the file in current directory. If file doesn't exist, it'll create a new file by file name.

| Expression | Type | Value |
|-------------|--------|-------------|
| szFile_Name | STRING | NewFile.txt |

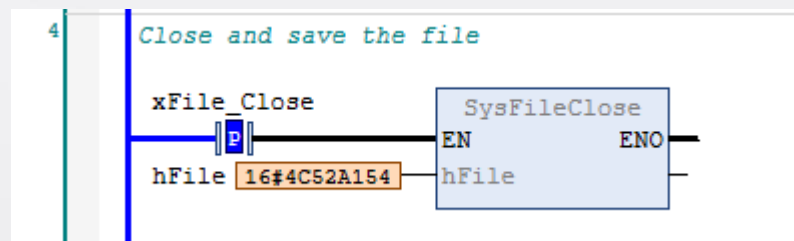
Runtime View: Location: PlcLogic/User

| Name | Size | Modified |
|-------------|---------|-------------------|
| NewFile.txt | 0 bytes | 8/13/2019 2:53 PM |

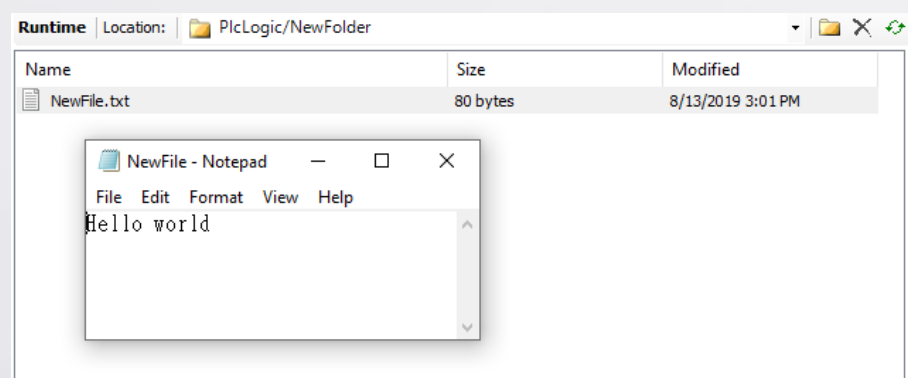
Step 8. Write “Hello world” string.



Step 9. Close and save the file.



Step 10. Move “NewFile” to PC and open the file.



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