Project status
Completed.

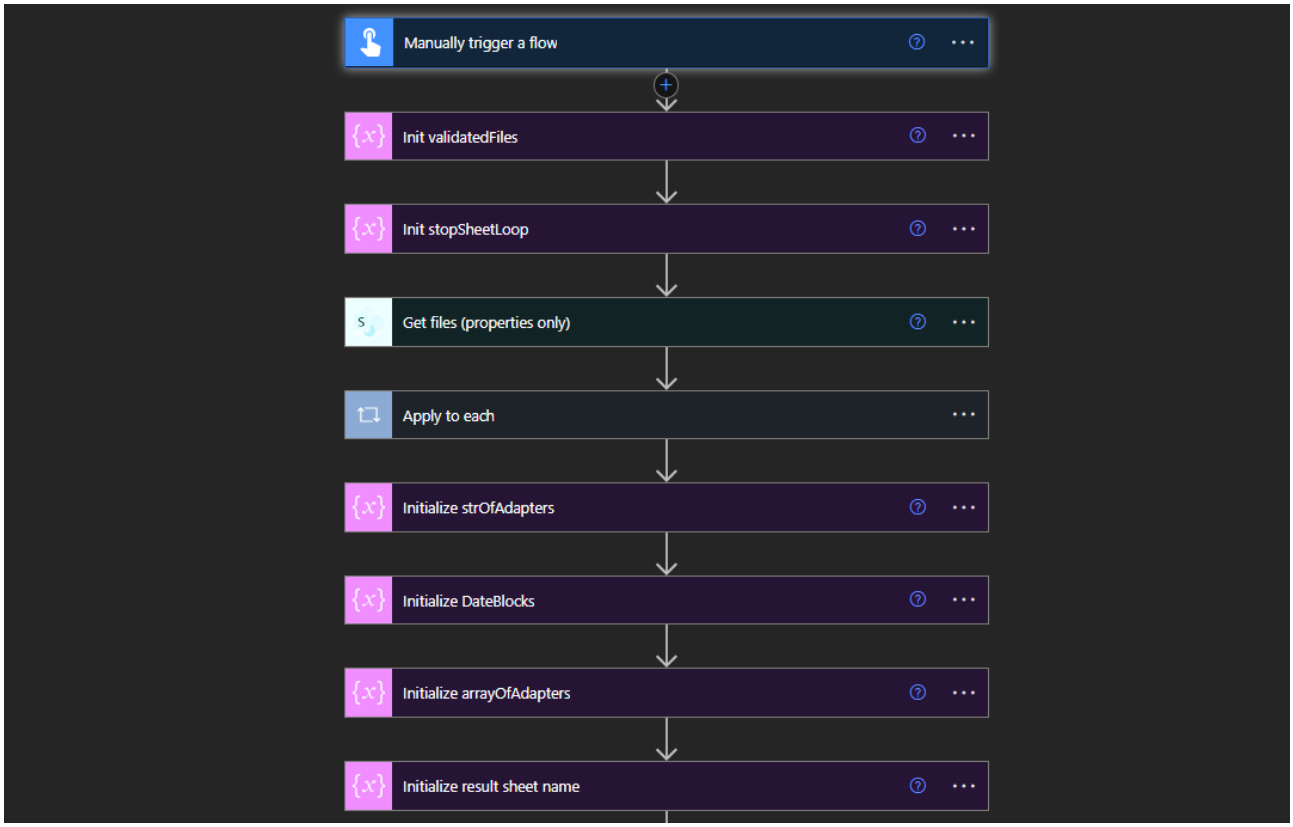
Technology used
TypeScript, Power Automate
https://learn.microsoft.com/en-us/office/dev/scripts/overview/excel

General info

Office Scripts Compiler is a project created using Power Automate (part of Power Platform) and TypeScript technologies. It implements Decorator and Adapter coding patterns. Project reflects the main functionalities of the SCM_Compiler project, however this time created in Excel Online environment. Project has been implemented successfully.

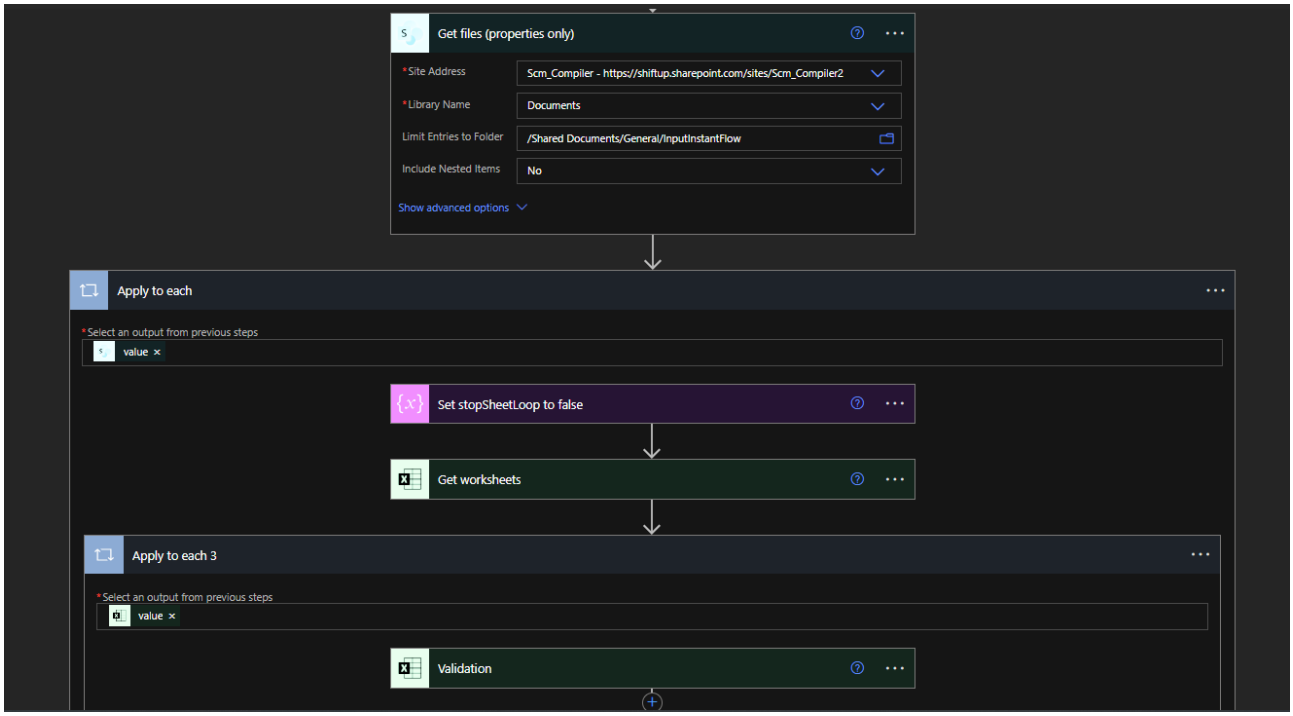
Structure of a project

Two workflows have been built. One launched from the Sharepoint website, the other cyclical, running once a day. Sharepoint website was created to deliver user interface for a specific flow. The page includes a button, that starts the flow by sending a GET http request, initiating the flow. There is also a possibility to manually trigger a flow.
On the Sharepoint website has been created file dialog window, giving a possibility to add files, that should converted.

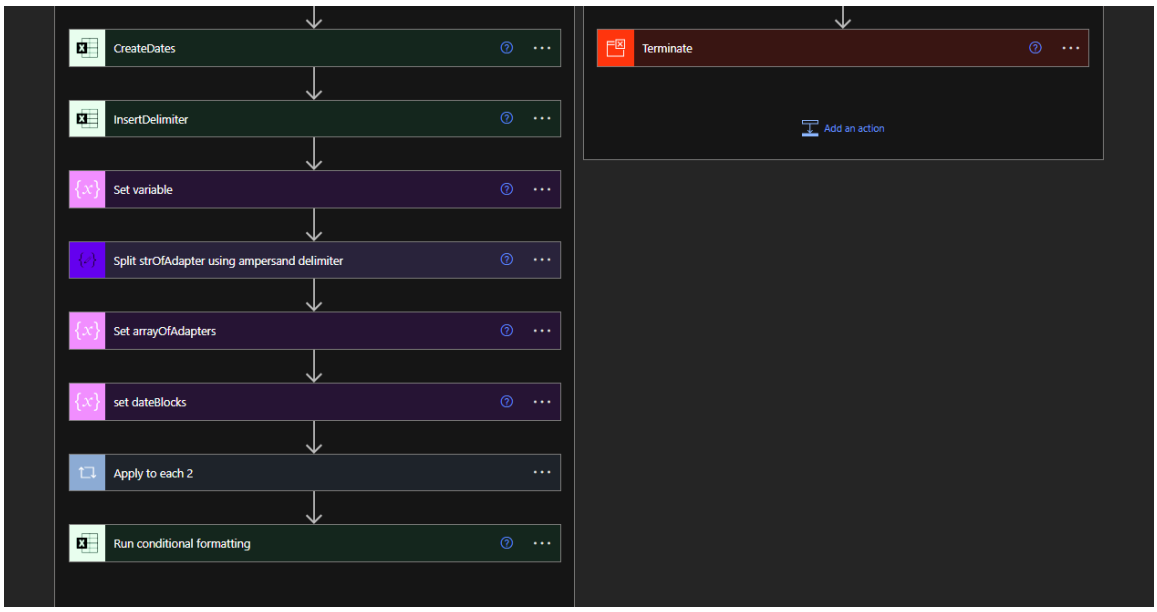


Further steps of the flow procedure consist of: running scripts in the right order and creating variables to store the data returned by them.

Thanks to specifing a Sharepoint link, each file is opened. For each file runs another for each loop, which this time is running through sheets. Data of excel sheet's used cells are stored in a form of an 2 dimensional array of strings, and later passed to first Validation script.



After deciding which sheet meets the requirements, the following scripts are running: DataHolder.ofts, CreateDates.ofts, InsertDelimiter.ofts, Adaptee.ofts. While it's impossible to import other script functions or classes, some of them were compressed in one script. Communication between scripts is handled by passing to a script as parameter stringified JSON – returned in main() function of previous script. However they have been later separated to individual TypeScript files and pushed to git repository.



Main goal of a project

Due to the widespread migration of many business processes to the Excel online environment, a vision of a tool converting layout of export data from the internal system emerged.

The main goal of the project was to standardize certain data, crucial for risk management departments, within the entire organization. Due to the diversified structure of layout exports from internal systems, there was a need to adapt the export to the selected common standard.

The common data standard was to enable crisis management departments to simulate the stock levels, for each day in the future, for the relevant time range, recognized by the macro in the source file. Inventories below 0 are colored red, calculating dynamically to the user thanks to adding from code level excel formulas.

The project introduced improvements in the form of time optimization and reduction of labor costs. It generally gives a possibility to run a scheduled flow on many articles during night, which helps better planning work.