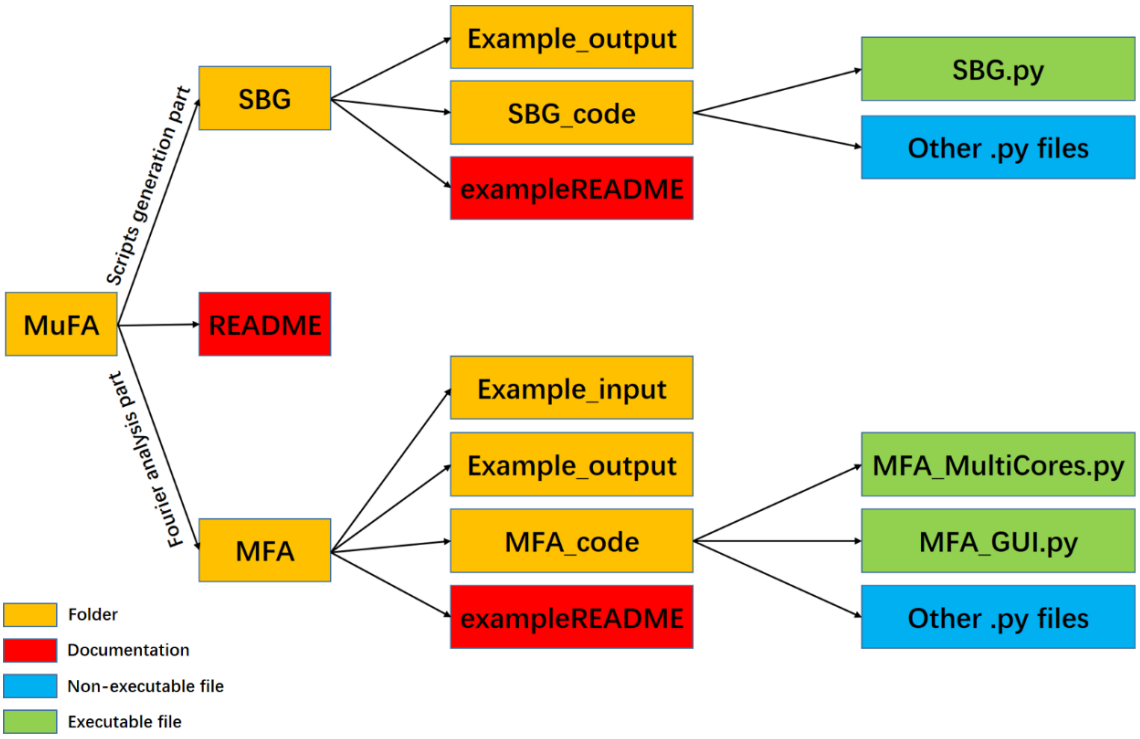
Package structure



The structure of the program package is depicted in the figure above. The description in detail as following:

1. README

Description of the requirements and the instructions of the programs.

2. SBG

2.1 Example_output: This folder contains the results of SBG program for the usage example described in the exampleREADME.

2.2 SBG_code: This folder contains the SBG program.

2.2.1 SBG.py: The executable main file of the program.

2.2.2 Other .py files: Non-executable files which provide functionalities to the program.

2.3 exampleREADME: The detailed instruction of the SBG usage example.

3. MFA

3.1 Example_input: This folder contains the data files which are the inputs of the MFA program for the usage example described in the article and the exampleREADME.

3.2 Example_output: This folder contains the results of the MFA program for the usage example described in the exampleREADME.

3.3 MFA_code: This folder contains the MFA program.

3.3.1 MFA_MultiCores.py: The job control script of multiprocessing version MFA. It is an executable file.

3.3.2 MFA_GUI: The executable main file of the GUI version MFA.

3.3.3 Other .py files: Non-executable files which provide functionalities to the program.

3.4 example_README: The detailed instruction of the MFA usage example.

The description of the non-executable .py files:

SBG_code

functions.py: Provides most of the functions used in SBG.
Loop.py: Provides the parameter sweeping function.
SubWin.py: Provides templates of subwins.

MFA_code

GetDoc1_1.py and GetDoc2_0.py: Responsible for the files reading operation.
FFT.py: Responsible for the computation of the quantitative frequency compositions.
Spectrum.py: Responsible for the computation of the spatial distribution of spin-wave powers at different frequencies.
Dispersion: Responsible for the computation of the dispersion curve.