

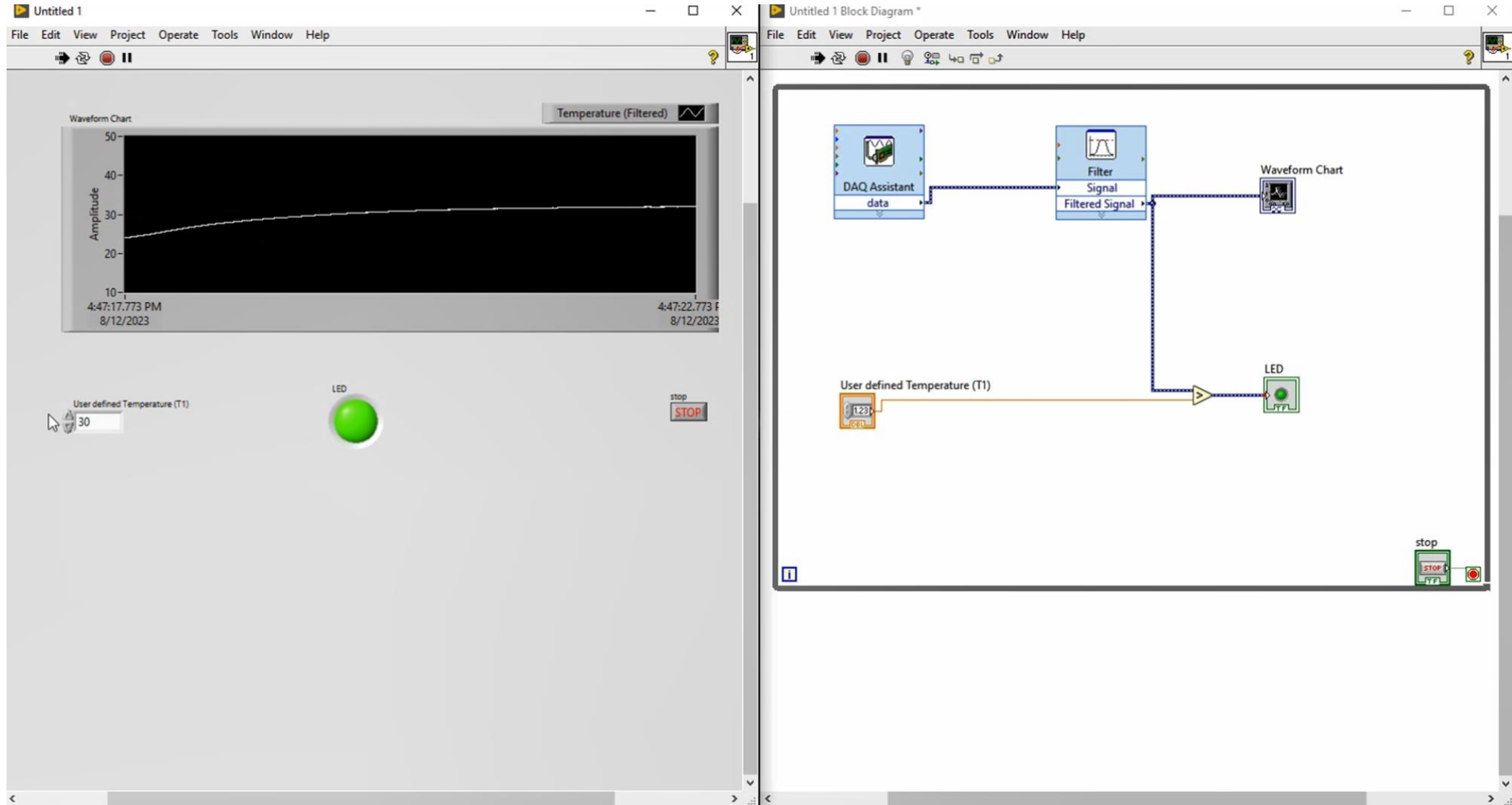
Lecture #09

Droplet fluorescence analysis with LabVIEW

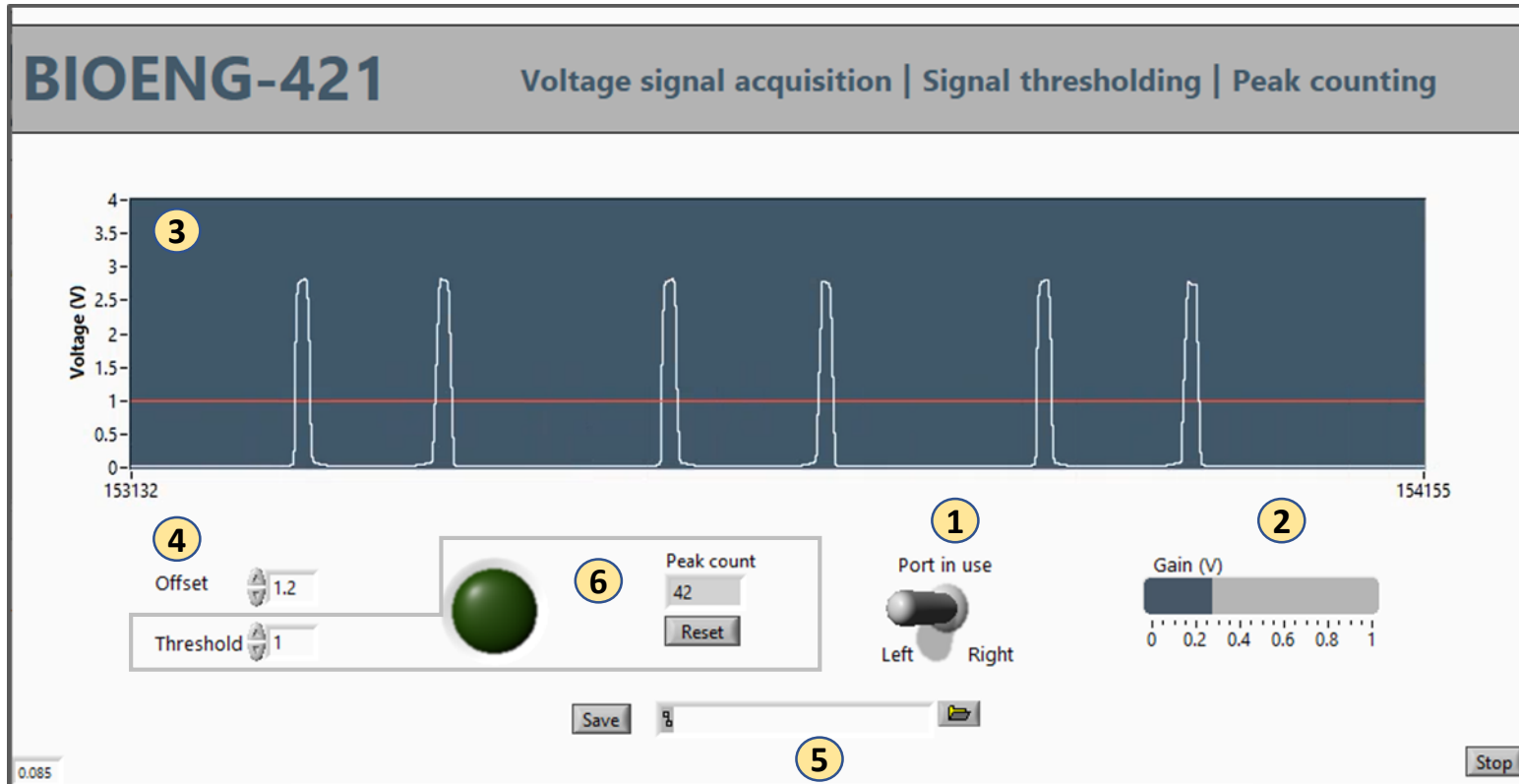
Aims:

- Understand the logic flow to analyze droplet fluorescence.
- Write a LabVIEW code for droplet fluorescence analysis.

LabVIEW programming so far...



The VI to acquire and analyze fluorescence signals from the droplets



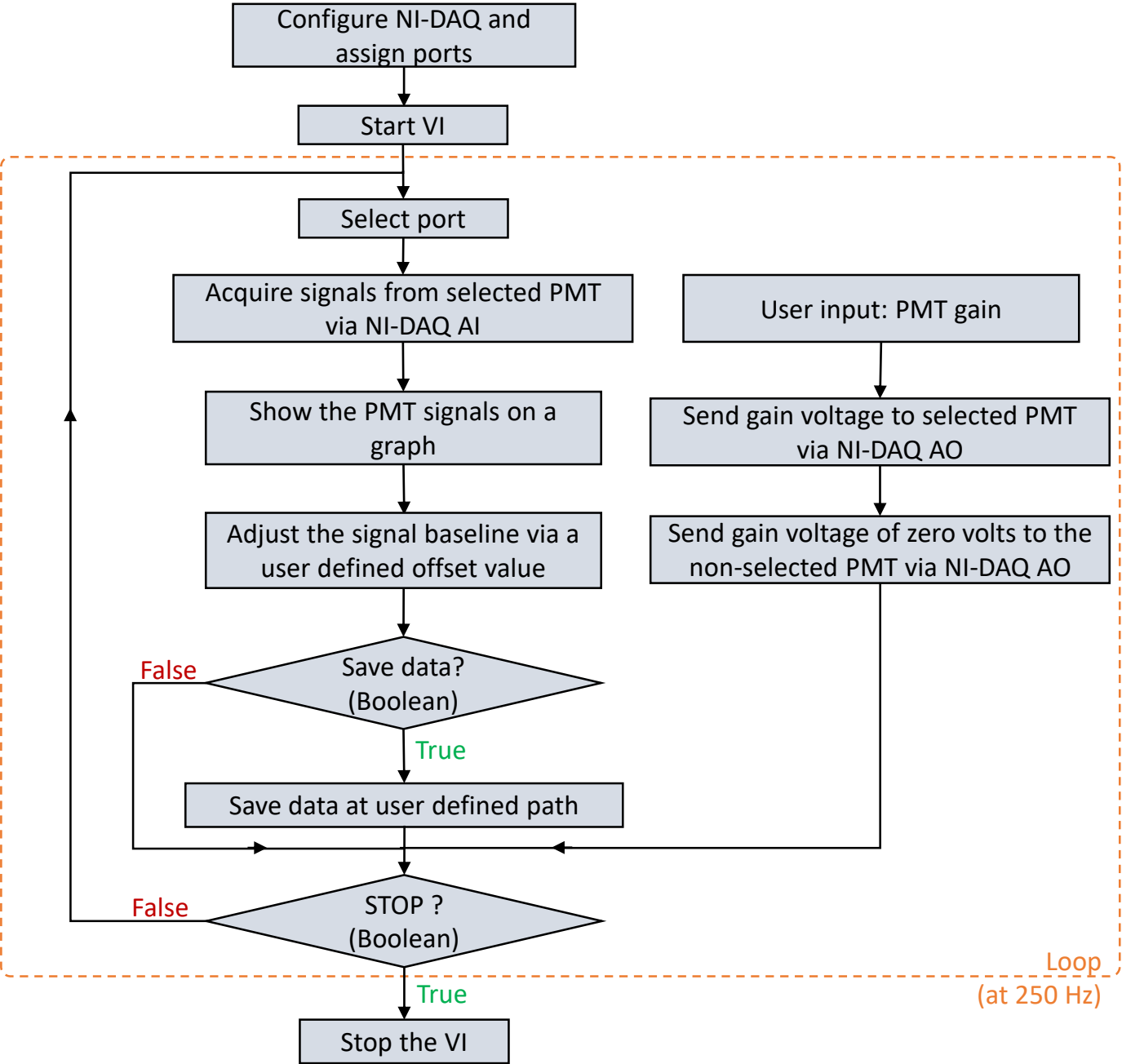
Operations

1. Selecting the setup port
2. Providing gain voltage to the PMT
3. Collecting fluorescence data from PMT in real time
4. Offset correction
5. Saving the data
6. Defining a threshold for droplet detection and count the droplets

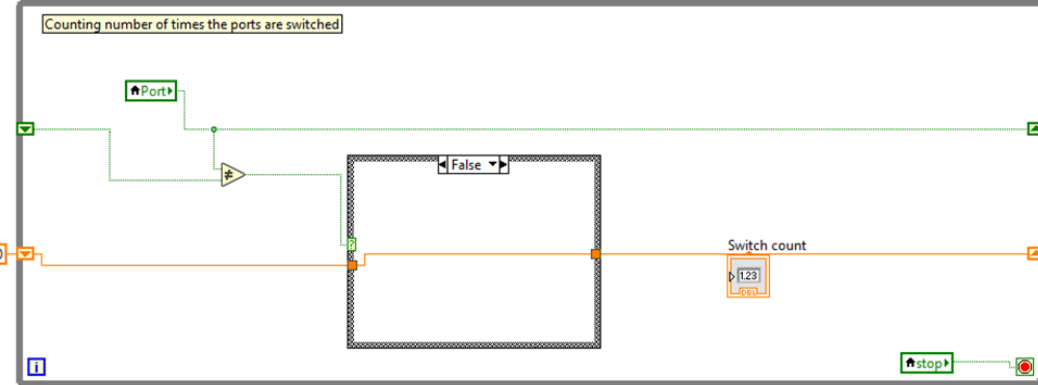
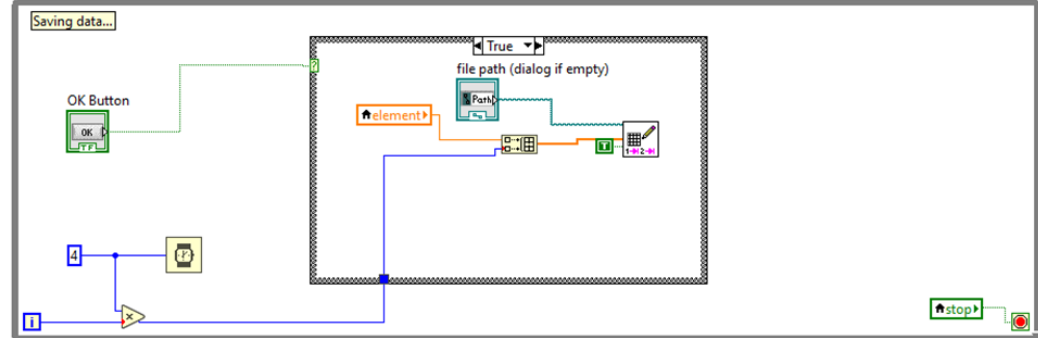
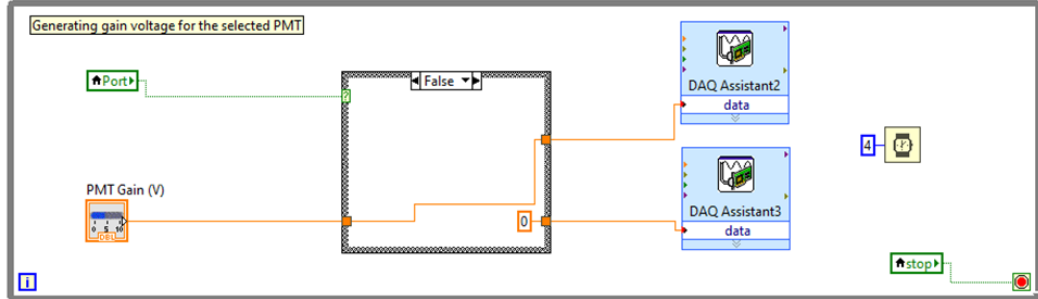
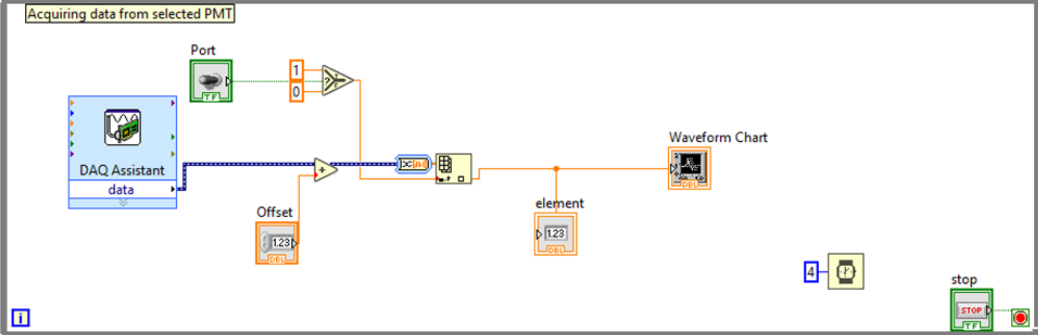
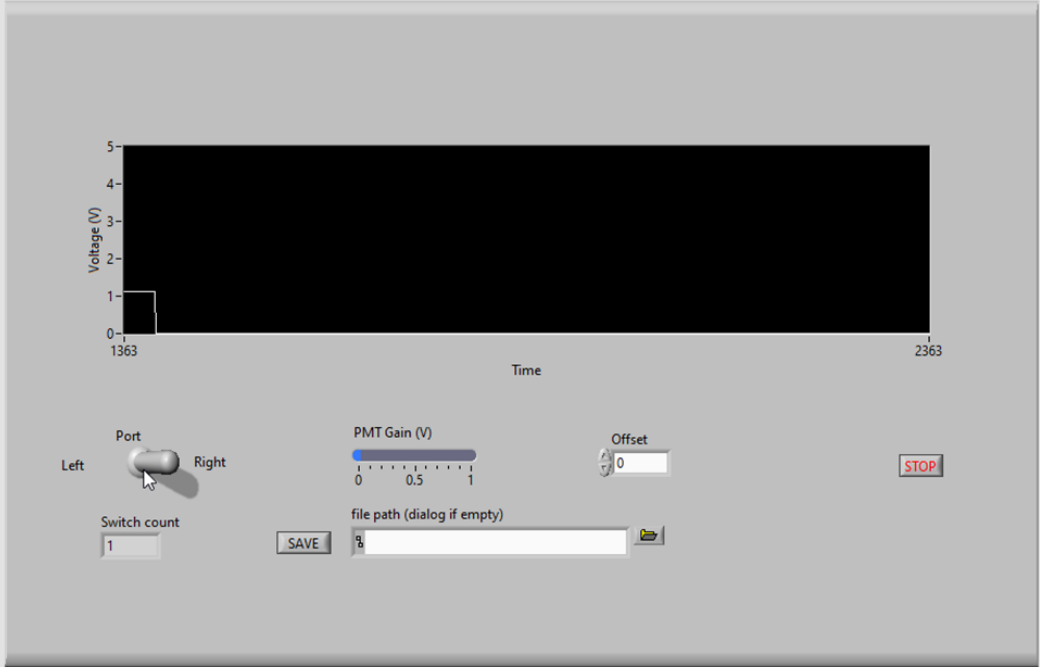
Logic flow to acquire and analyze fluorescence signals from the droplets

Operations

- 1. Selecting the setup port
- 2. Providing gain voltage to the PMT
- 3. Collecting fluorescence data from PMT in real time
- 4. Offset correction
- 5. Saving the data



Video: A VI to acquire and analyze fluorescence signals from the droplets



Assignment

Objective:

1. Set a threshold fluorescence intensity to detect the droplets as fluorescence peak.
2. Turn on an LED (virtual) every time a droplet is detected
3. Count the number of droplets detected.

*Please save the assignment in LabVIEW 2019 version, (File> save in previous version>2019)

