The algorithms are implemented on the computer with configuration: Samsung laptop with Core i5 processor, C programming language with Dev-C++ IDE.

The datasets are taken from the benchmark UCI (australian, dermatology, iris, wine, spambase, heart, balance-scale, wdbc, tae, waveform). For each dataset, we randomly select 20% to form the labeled subset and the rest to form the unlabeled subset. The ratio of the wrongly labeled elements changes from 0%–30% with step size 5%. This process is repeated 20 times.

After extracting, you will get the **source** folder and 2 subfolders (**data** folder include 10 datasets và The **result** folder includes subfolder containing files to run each method) and the rest are source files and files to run .exe

Run the program as follows:

1. Open file *shells.c*

On the ***Execute -> Parameters*** tab pass the parameters: If you want to run an algorithm, just insert the name of that algorithm (*fcm, sfcm\_original, cs3fcm, ts3fcm, ts3fcm\_remove*).

fcm: FCM algorithm

sfcm\_original: SSFCM algorithm

cs3fcm: Haitao Gan's algorithm

ts3fcm: propose algorithm in case Setting up low membership values for the labeled data having small impact

ts3fcm\_remove: propose algorithm in case Setting up zero membership values for the labeled data having small impact

2. After running the program, the **result** folder include subfolder **1** containing *.tx*t files containing the results of each iteration and other subfolder named by running methods containing *.csv* files. These *.csv* files include: Computational time, clustering accuracy on labeled data, clustering quality by ASWC, DB and BPM.