1- if the issues tracker system is bugzilla then download the bugs of the project as csv file , the filter the issues via filter\_issues\_bugzilla.py , if the system is jira then download issues and rename the features to be the same as bugzilla via the script rename\_features , if the the issues are hosted in github issues then run the script fetch\_version\_github.py . those scripts will give the issues of the project filtered

2- clone the project and go to it then run the script tags.py which will create tags\_commits.csv

3- run the script szz\_vfinal with the specified input mentioned in the script (eg : python3 szz\_vfinal.py tags\_commits.csv "#\d+" https://github.com/eclipse/paho.mqtt.java.git fetch\_jira\_bugs/github/issues/paho.mqtt.java.json projects/paho.mqtt.java , where argument1 is the list of the tags and it’s correspond commit , argument 2 is the pattern of the issue used in the project , argument 3 is url git repo of the project , argument 4 is the list of issues and finally is the path of the project locally ) you have to create the jar file mentioned here <https://github.com/wogscpar/SZZUnleashed> also (this file and git\_log\_toarray should be in the same directory where you run the script)