SWARM

Overview

- Is a software used to visualize seismic waveforms in real time
- https://volcanoes.usgs.gov/software/swarm/index.shtml

Application architecture

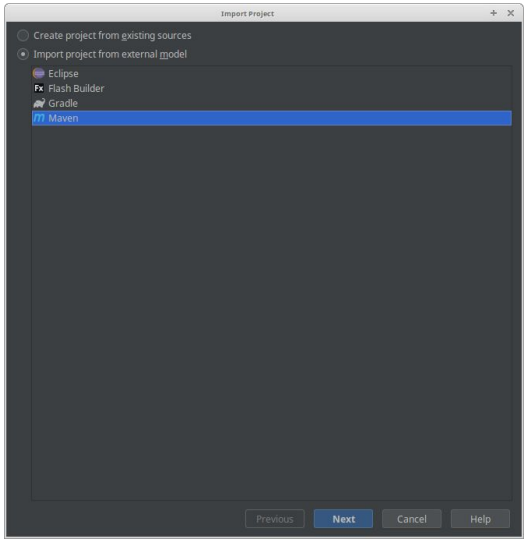
- Uses Swing to implement the GUI
- A good way of finding a functionality is by text searching a GUI label, for example “Open Wave as Data Source” from the File > Open File menu

Recommendations

- As you open the application, you can use the data source “AVO Winston” to visualize some waves. This will let you test constraints that have to do with the Map or Helicorder view, for example
- For each constraint, read the context in the user manual where it is found. This will help you understand which functionality it corresponds to
- Please spend a few minutes for each constraint making sure that the statements that you selected correspond to the constraint
    - Debug the program and check that the statements are executed and the data is as expected
    - If it is not possible to debug that specific functionality, try to follow the execution path from the main method or from a screen that you can access. For example, even if you can access a new data source, you can open the new data source dialog and see what happens after the data is filled out

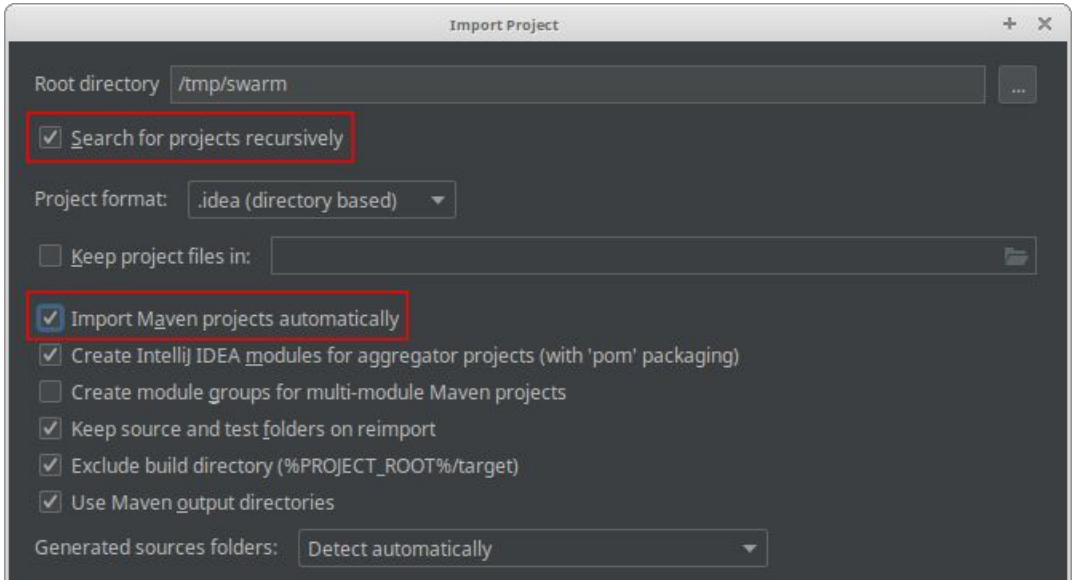
Importing and running

1. Download: <link>
2. In IntelliJ, New project from existing sources and select the **folder** ‘swarm’
3. Select “Import from external model” and then “Maven”



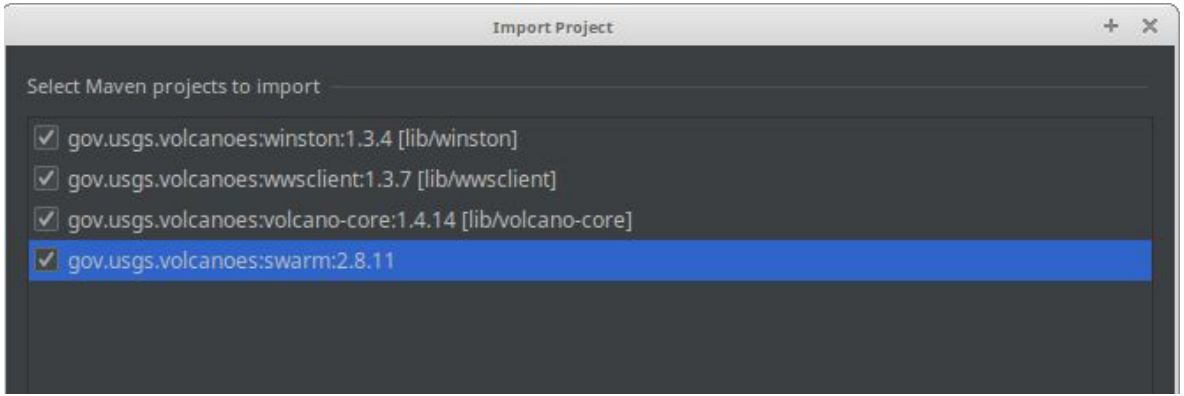
Importing and running 2

4. Enable “Search for projects recursively” and “Import Maven projects automatically”



Importing and running 3

5. Make sure that you can see all the projects shown here



Importing and running 4

6. Run class gov.usgs.volcanoes.swarm.Swarm to run the program. You can also debug this class
   a. If you get errors when trying to run or debug the program, click on “Maven” in the menu to the right of the IDE window and then on “Swarm”, and double click “clean” and then “compile”
   b. Try running or debugging again