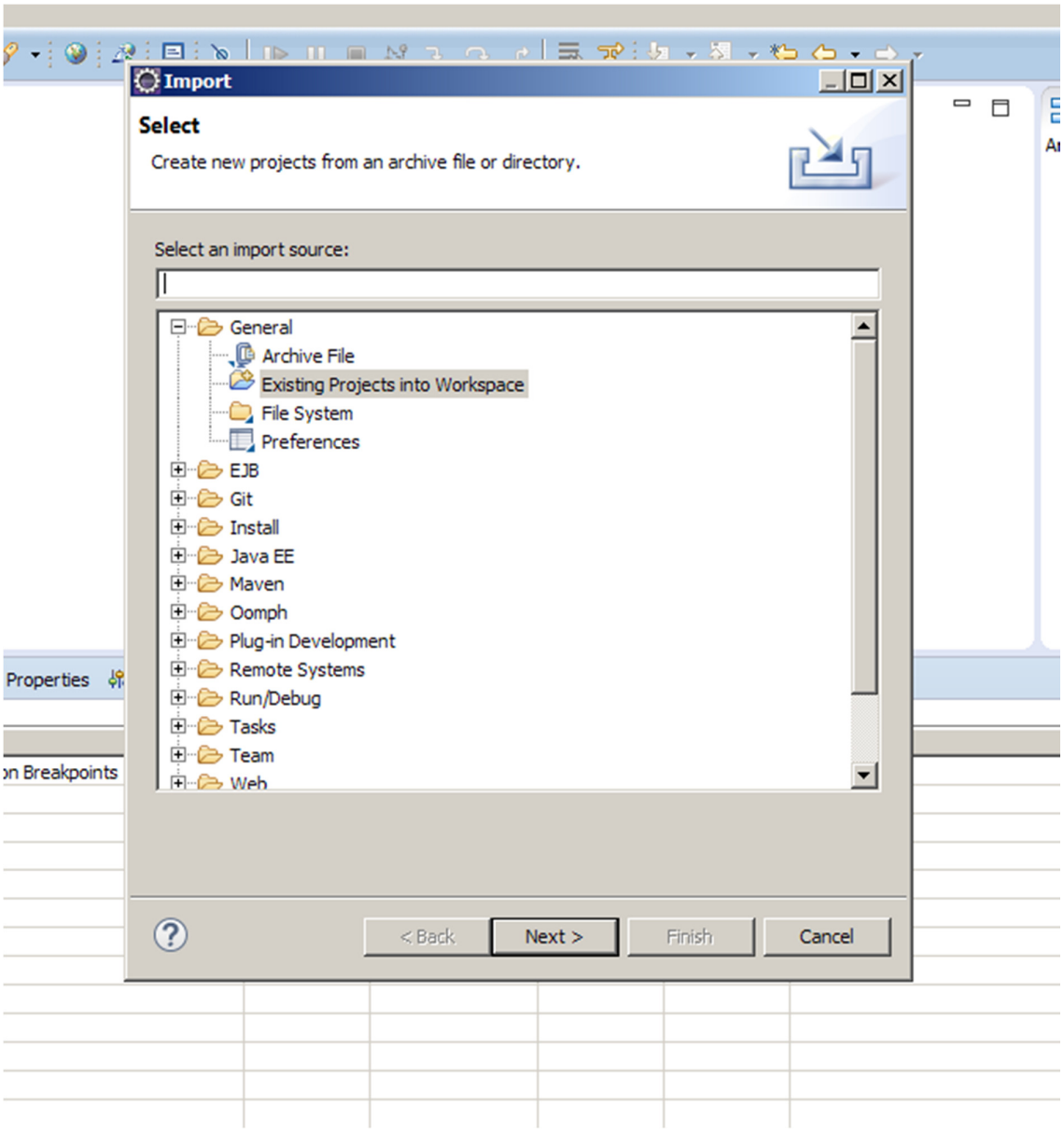
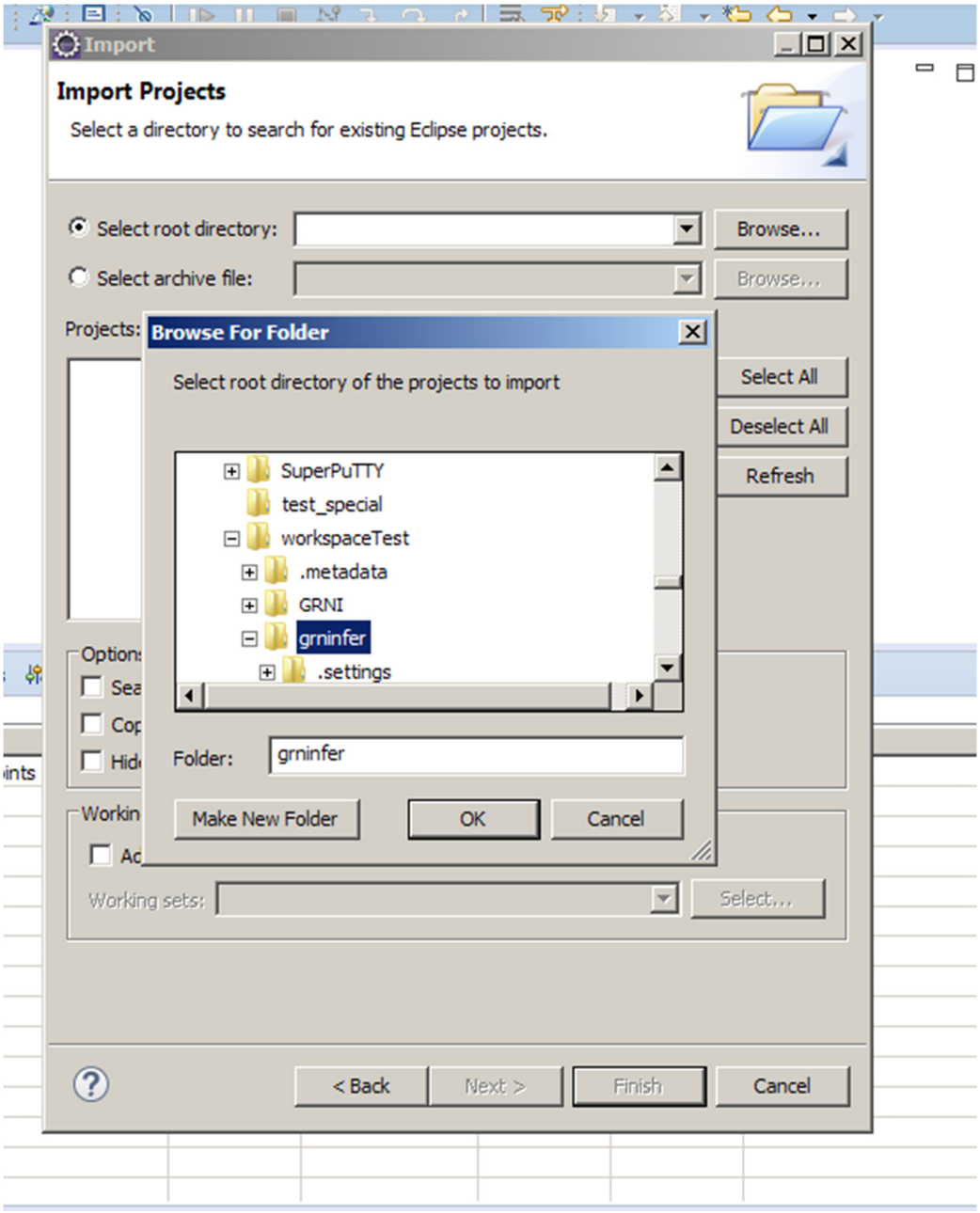
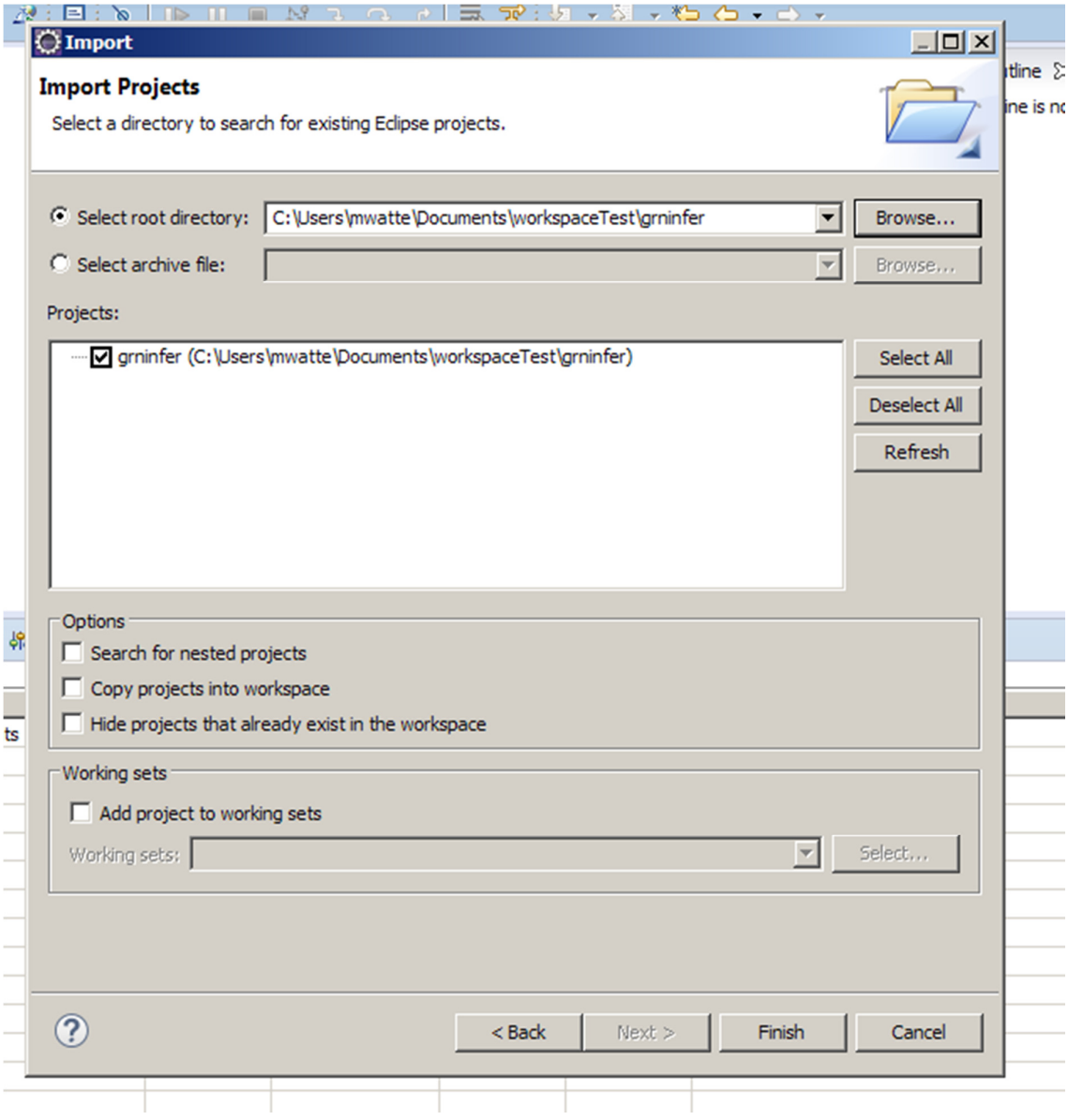
please follow below given steps to load grninfer project to eclipse and execute dbn network inference

1. start eclipse
2. import grninfer project to the eclipse as shown below



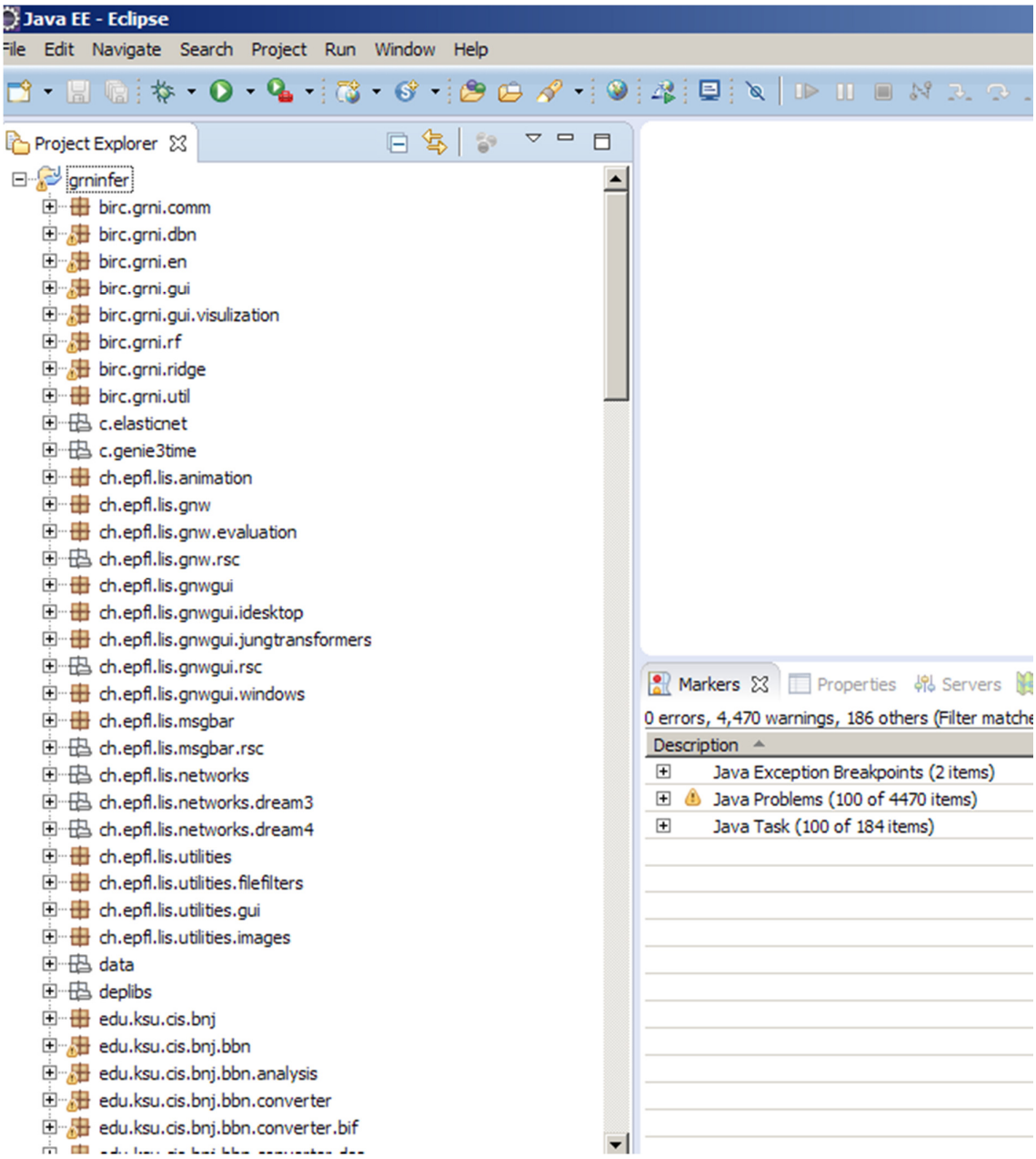
3. select existing project to eclipse and next window select your grninfer project folder


Import
Import Projects
Select a directory to search for existing Eclipse projects.
Select root directory:
Browse...
Select archive file:
Browse...
Projects:
Select All
Deselect All
Refresh
Options:
Working sets:
Select...
< Back
Next >
Finish
Cancel
Browse For Folder
Select root directory of the projects to import
SuperPuTTY
test_special
workspaceTest
.metadata
GRNI
grninfer
.settings
Folder:
grninfer
Make New Folder
OK
Cancel

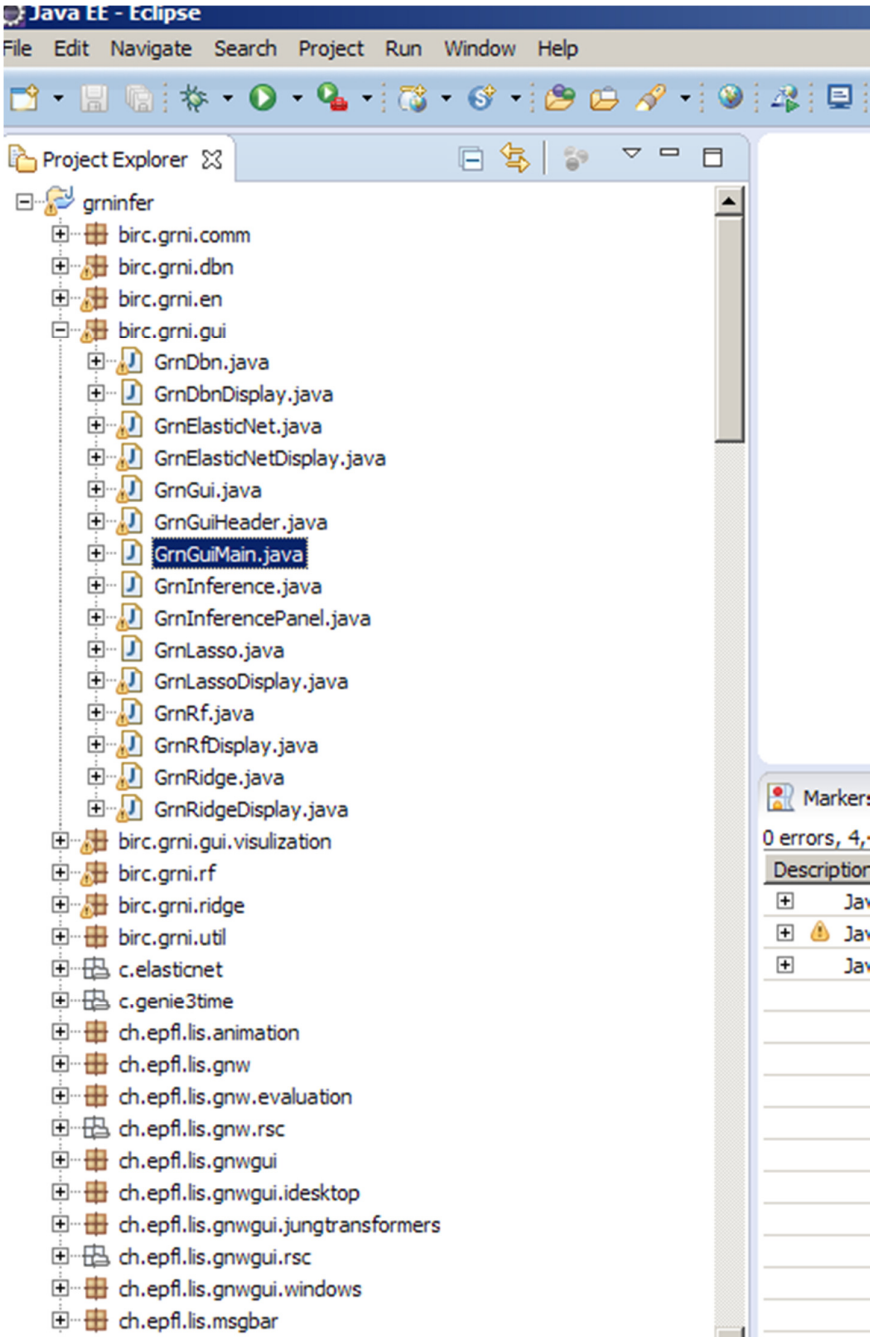


4. complete import by click finish. then eclipse will load grninfer project to the eclipse

5. after load complete you can see grninfer project like below

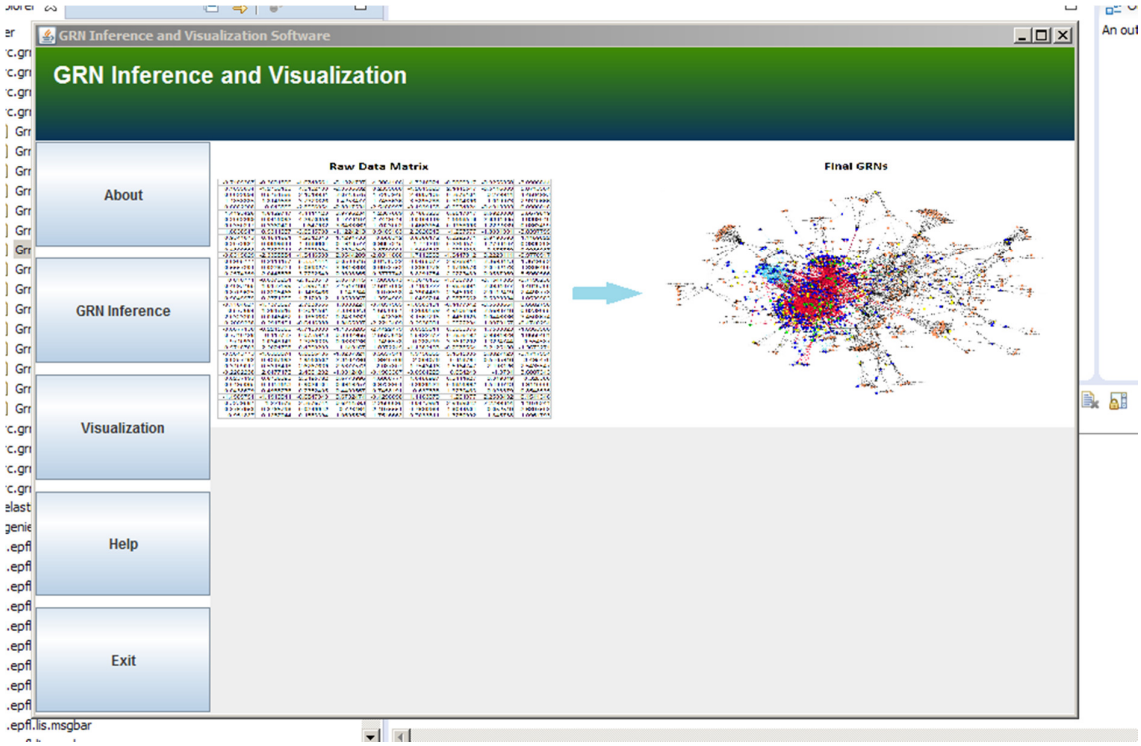


6. expand birc.grni.gui sub project and select GrnGuiMain.java class as shown below. this class contains main method.

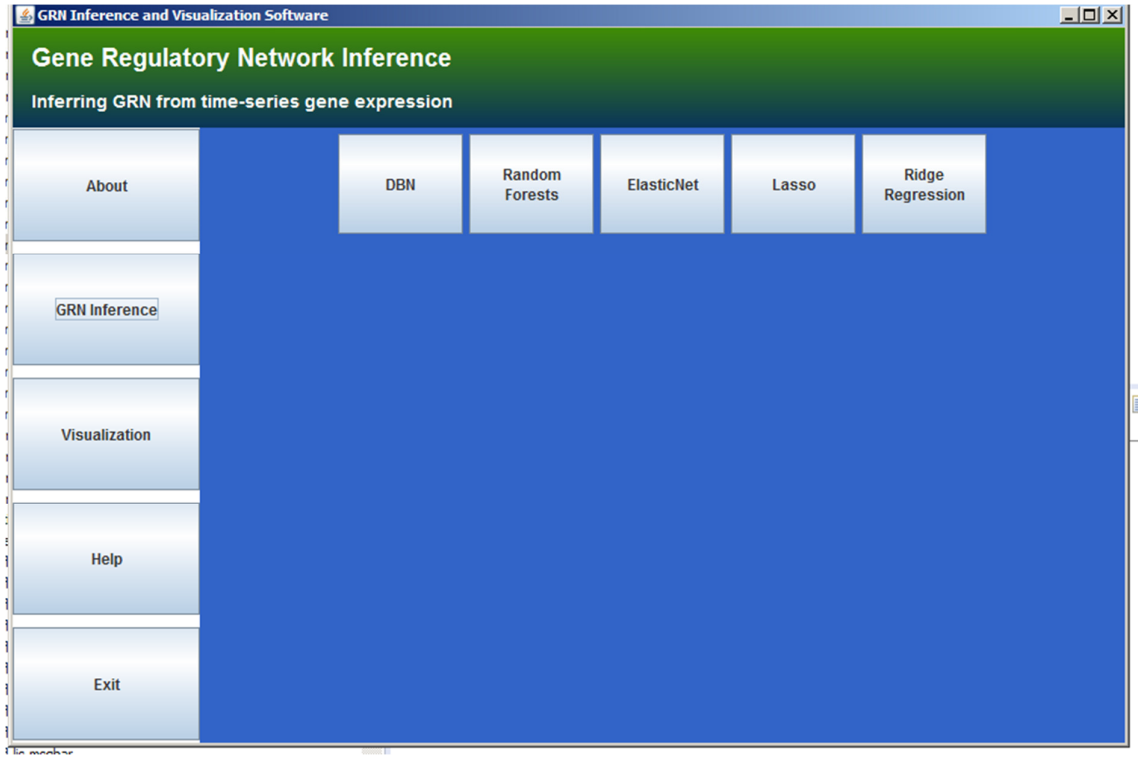


7. right click on GrnGuiMain.java → Run As → Java application

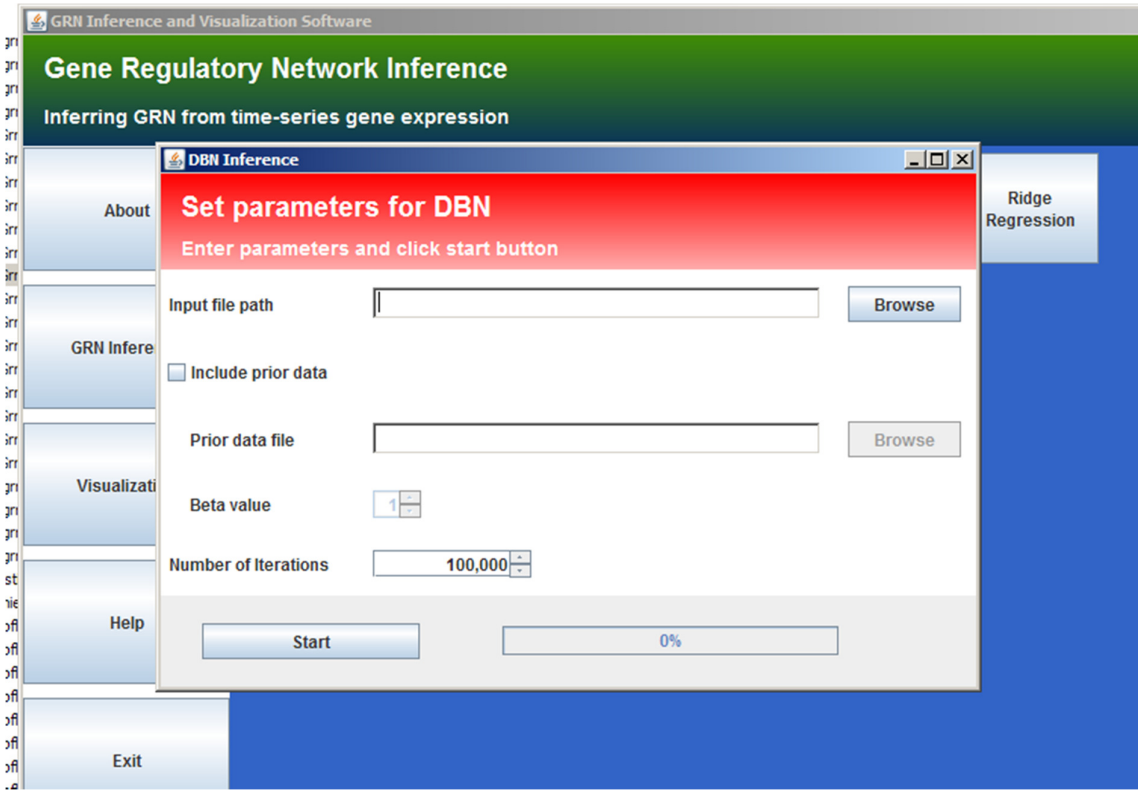
8. after main method complete, grninfering gui will start



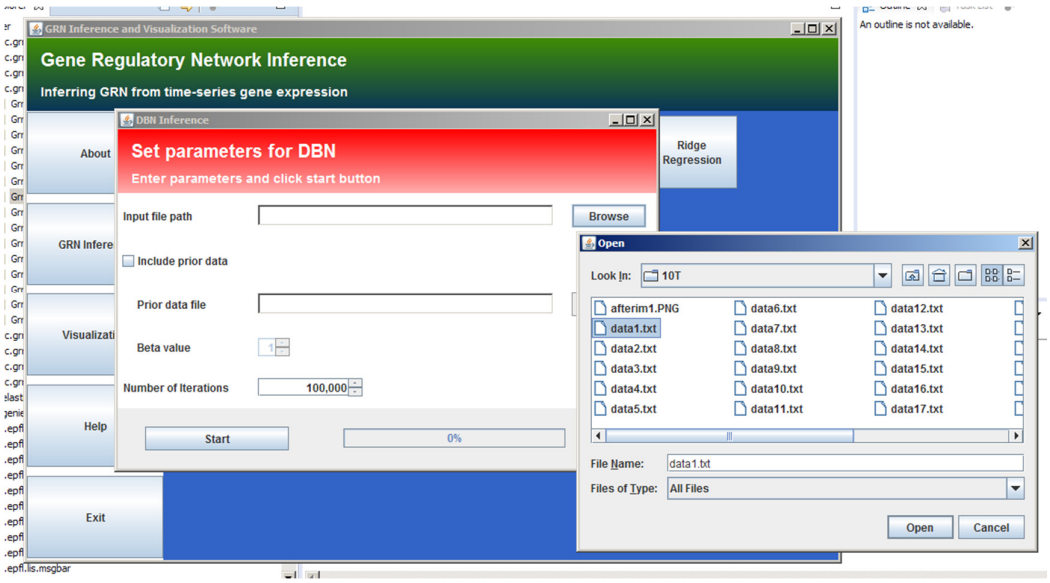
9. click GRN Inference tab . this will pop up below window

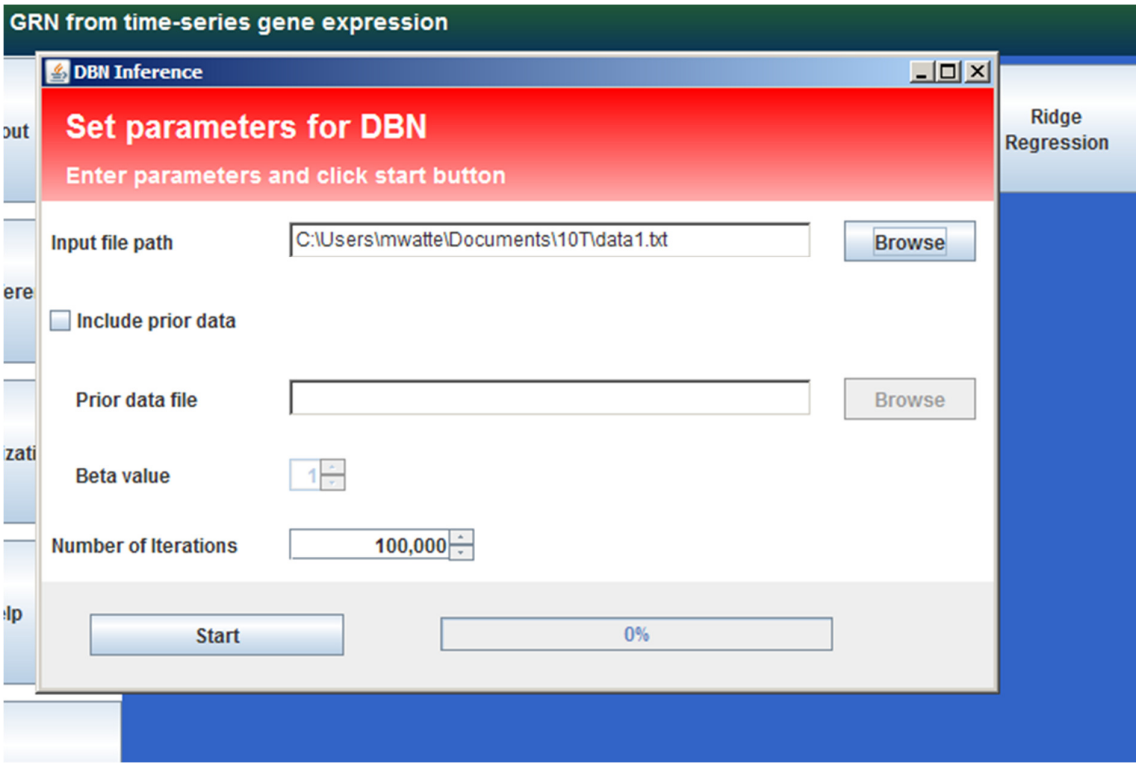


10. select dbn , this will show dbn parameters window



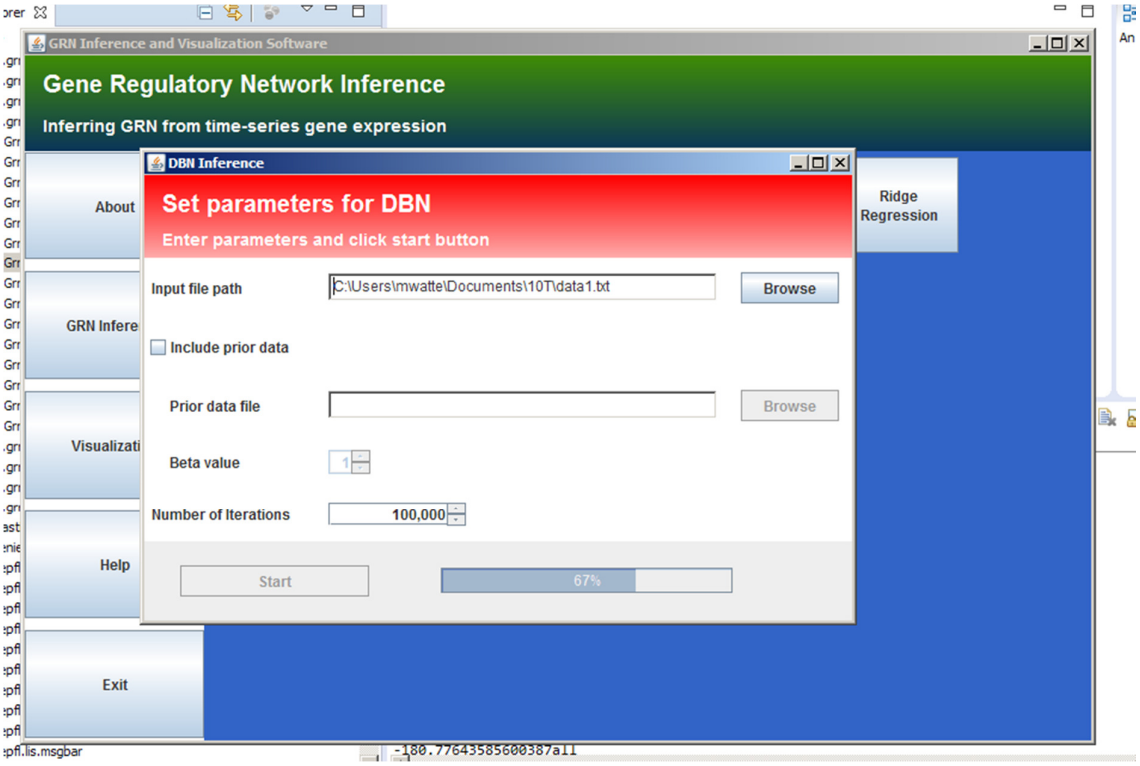
11. now fill dbn parameters
    a. browse and select input fille



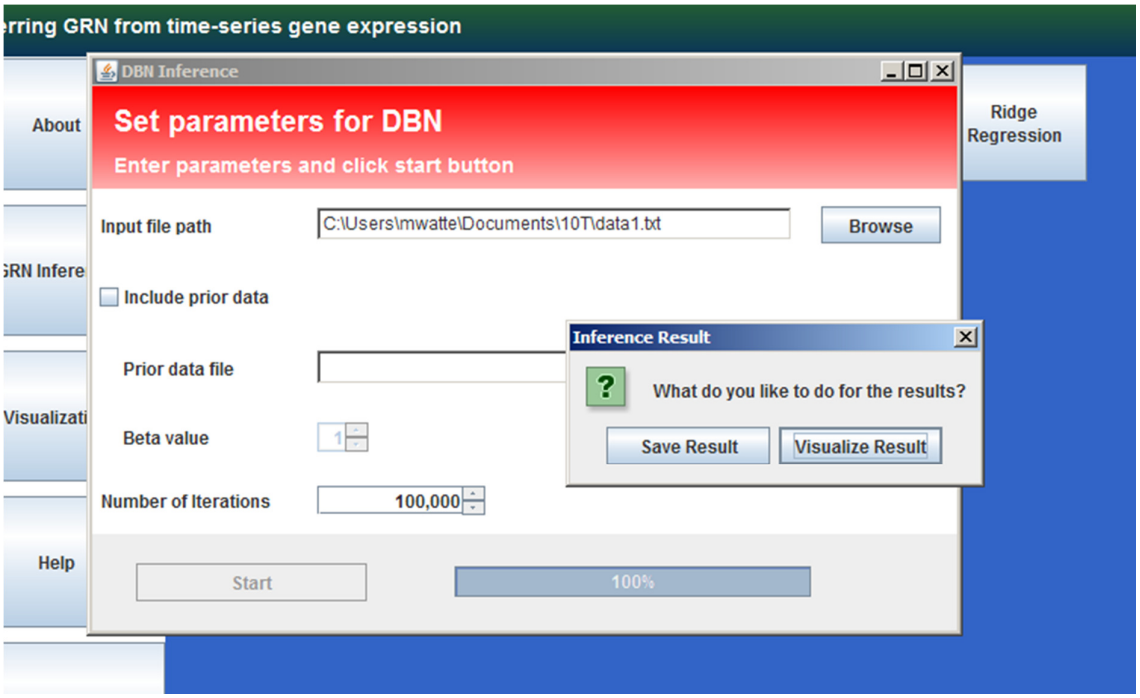


    b. change number of iterations if required
    c. then click start

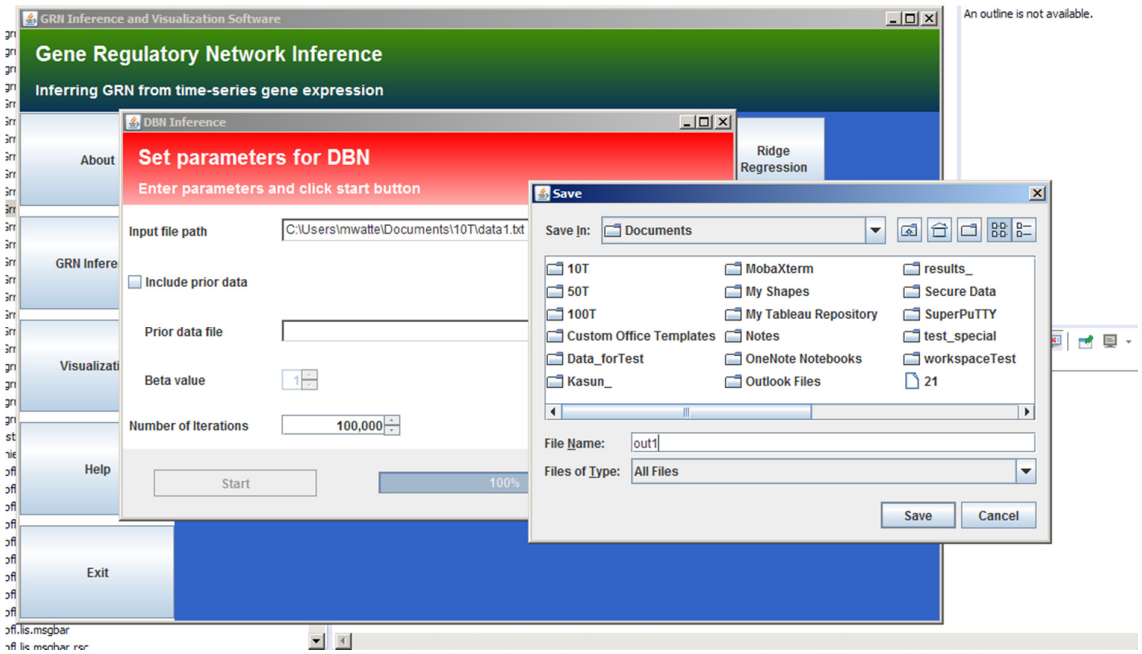
d. progress bar will update during dbn execution



e. after dbn execution complete , it will pop up save window

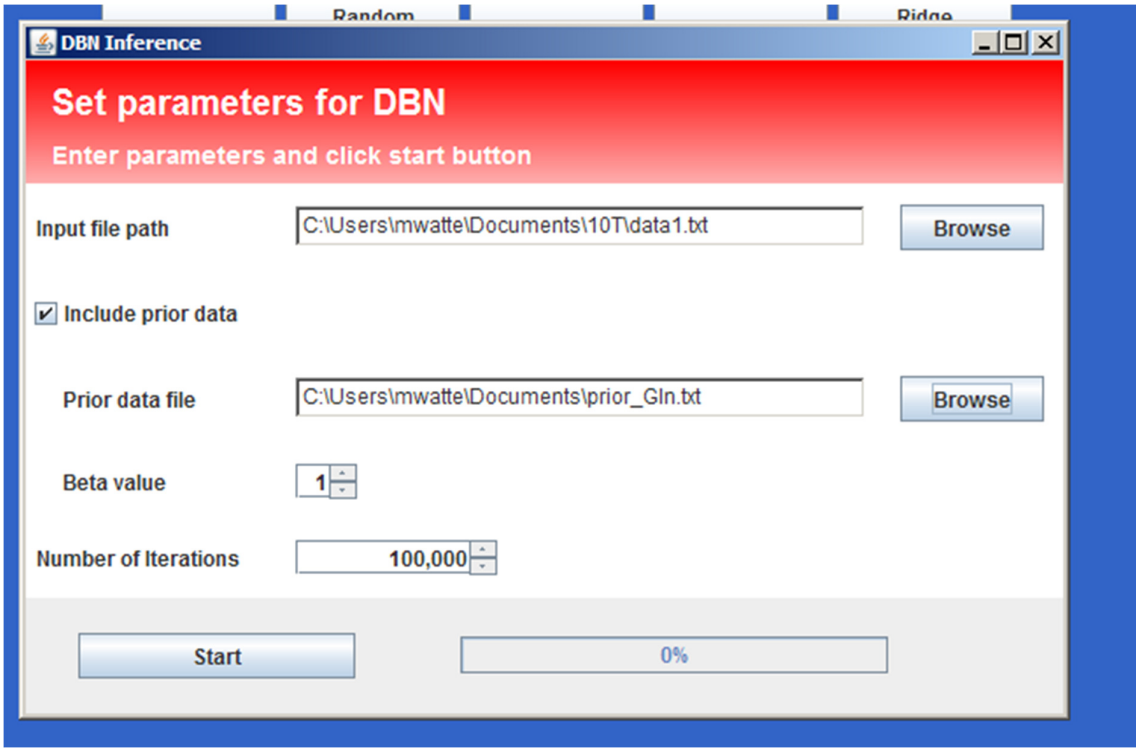


f. then select save result
g. do not select visualize part, this will not work as I modified GrnDbn.java class to evaluate the results (TP,FP,TN,precision,…etc)
h. give file name to save the results

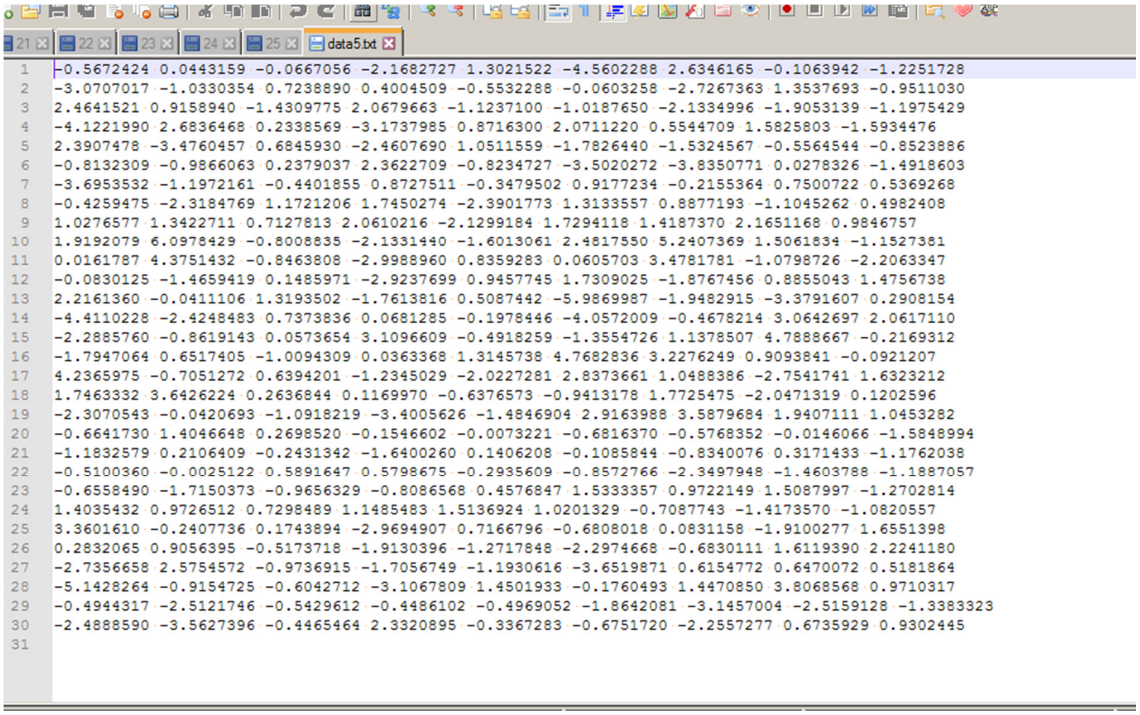


12. run dbn with prior data

A. CLICK “include prior data” option
B. browse and select prior data file
C. update beta parameter
D. then click start button



13. input file format
    a. should be continues values
    b. columns --→ genes
    c. rows --→ time points
    d. `DbnDiscretization` java class will convert this data to discrete format
    e. sample input file given below 9 genes and 30 time points

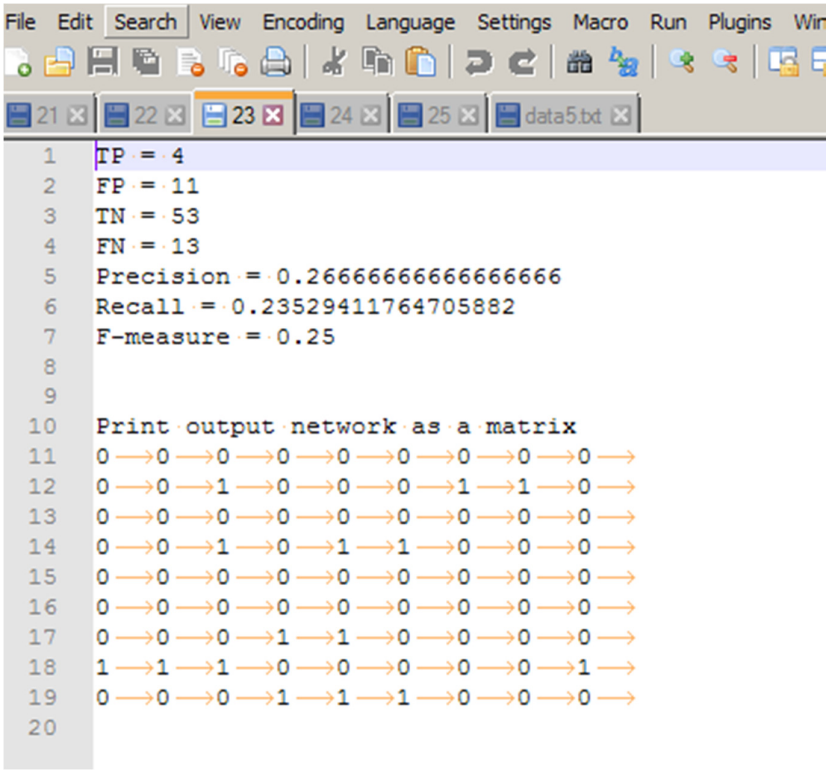


14. ouput file format

    below results will write to the file
    TP
    FP
    TN
    FN
    precision
    recall
    fmeasure

    final output network

    sample output file is given below



special note – execution process for synthetic data

1. if you have 20 time series -> 20 input files
2. so we have to execute dbn inference 20 times
3. this will generate 20 output files
4. it means 20 precision values, 20 recall values ,…etc
5. add all of them manually and take average and std

exeution process for real data

1. real data normally have only one data set
2. so , we don't need to run dbn for 20 times because we using same data set
3. we can run 5 or 10 times and then take average of the results.

gold standard network

1. 9 gene Spellman network is hard coded in the `GrnDbn.java class`
2. `go the public static void` **`evaluateNetwork`**`(int outputNetwork [][], int genes, String resultSavePath) method`
3. `in here you can see , how gold standard network is hard coded is done`
4. `If you want to put some other gold standard network , please update actualNetwork [][] matrix accordingly.`