**Execution Steps:**

Step1: Download the go.obo file from this link (<http://purl.obolibrary.org/obo/go.obo>). Step2: Give this file as input to Splitfile.java program, which is run by

Getparents.java program. This program produces 3 output files.

1. go-node-parents-mf.txt
2. go-node-parents-bp.txt
3. go-node-parents-cc.txt

Step3: Prepare the molecular-input.txt/biological-input.txt/cellular-input.txt file,

which contains sets of nodes, among which distances need to be calculated.

Sample File format: input line which is {GO:0004079, GO:0016628,

GO:0035252, GO:0016301}.

Step4: Give the go-node-parents-mf.txt and molecular-input.txt/go-node-

Parents-bp.txt and biological-input.txt/ go-node-parents-cc.txt and

cellular-input.txt to shortestpath.java program, which is calculate the

distance between the nodes in input file. This program produces one

output file go-mf-shortestp.txt/go-bp-shortestp.txt/go-cc-shortestp.txt.

Sample output file format is: 4 nodes 5 8 - 7 8 7 7 6 5.

First how many nodes in line, then minimum distance, then maximum

distance, then maximum distance, then followed by the symbol – the

write all distance values.