Overlay

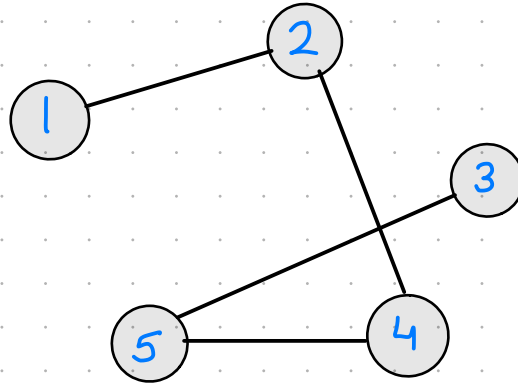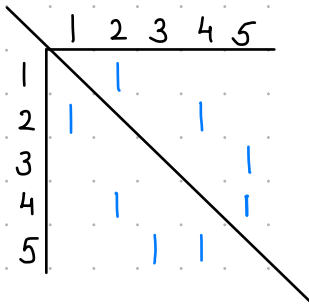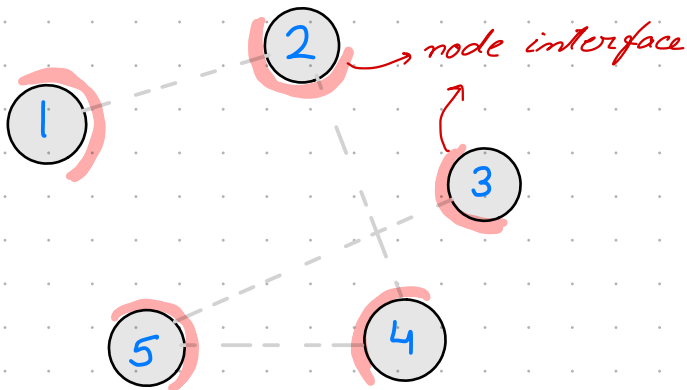|	1	2	3	4	5
1						
2							
3						
4							
5						

Q: Matrix pre-defined (fixed), or to be constructed
first time the program is run (user prompt)?

→ Every node has its own interface

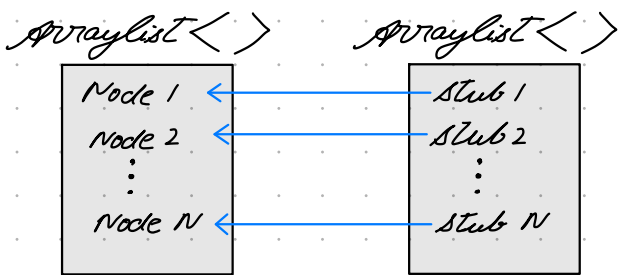→ during initialization :
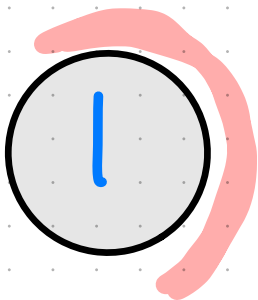 ↳ associate every node with
    its interface
      How?
  ↳ Create a stub for every node
    instance and associate them.
      how to manage?

  ↳ Make a list of stubs (Arraylist?)
    and keep adding stubs to it.
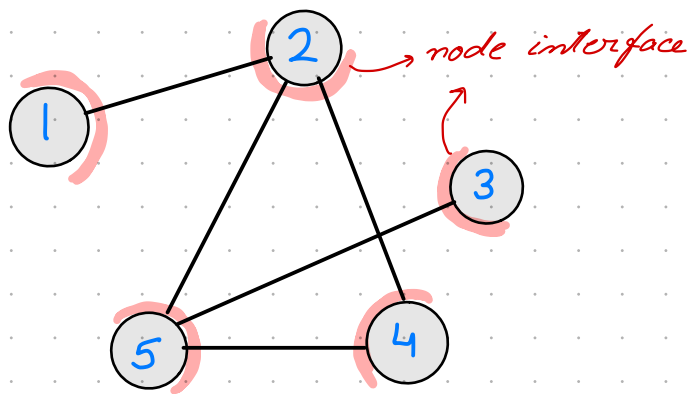
node interface

Arraylist< >   Arraylist< >

Node 1	←	Stub 1
Node 2	←	Stub 2
⋮		⋮
Node N	←	Stub N

What IS a node ?

→ each node is a seperate running entity.

→ Some attributes:
  ↳ node ID
  ↳ All (connected) neighbours' IDs
      → How??

→ node interface

How to 'connect' nodes

$1 \rightarrow 2$
$2 \rightarrow 1,4,5$
$3 \rightarrow 5$
$4 \rightarrow 2,5$

basically store the IDs of all connected neighbours

?? (Not sure rn.)

INITIALIZE:

→ ID or x

```
Node node = new Node();
NodeInterface nitf = (NodeInterface) UnicastRemoteObject.export object ...
//add the node and nitf to their respective arraylists.     ... (node, 0)

Registry registry = LocateRegistry.getRegistry();
registry.bind("Node x source", nitf);
```
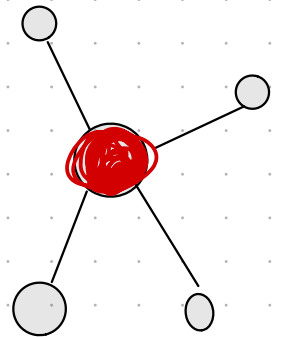
Can we get rid of this part ??

CONNECT:

Iterate through ALL IDs in input matrix:
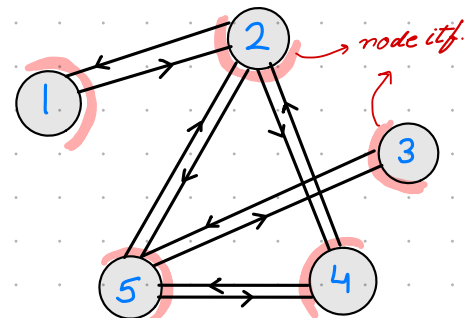
⌐ if ID in input matrix matches: (== 1)

→ ID or x

```
Node node = new Node();
NodeInterface nitf = (NodeInterface) UnicastRemoteObject.export object ...
//add the node and nitf to their respective arraylists.     ... (node, 0)

Registry registry = LocateRegistry.getRegistry();
registry.bind("Node x source", nitf);
```

Iterate through ALL IDs in input matrix:
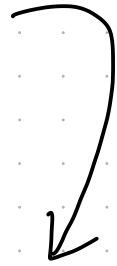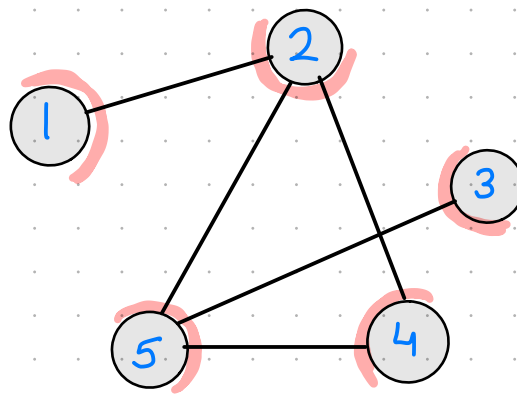
⌐ if ID in input matrix matches: (== 1) y

```
Registry registry = LocateRegistry.getRegistry("localhost");

NodeInterface nitf = (NodeInterface) registry.lookup("Node y source");

Node node = new Node(y, nitf);
```
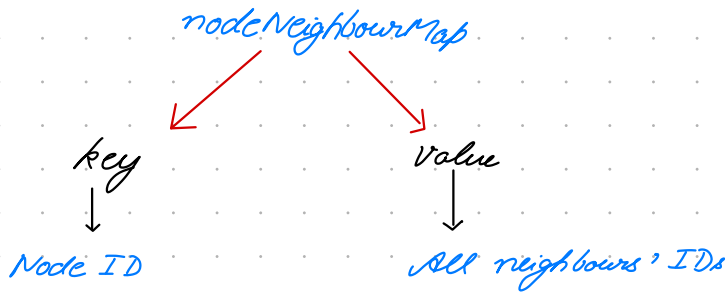
→ node itf.

readFile():

- read the matrix file
- Identify:
  - ↳ No. of nodes (line 1)
  - ↳ IDs of all nodes (line 2)
  - ↳ Neighbourhood connection (rest all lines)
- Create a hashmap:

  nodeNeighbourMap

  key → Node ID

  Value → All neighbours' IDs

inputMatrix.txt

C: > Users > archi > IdeaProjects > OverlayProject > inputMatrix.txt

```
1    5
2           (ignore space lines)
3    01234
4
5    01000
6    10011
7    00001
8    01001
9    01110
```