Assignment 4

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| **Name** | Abhishek Dilip Agashe |
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| **Batch** | P9 |
| **Problem Statement** | To develop any distributed algorithm for leader election. |

**Code**

**Bully.java**

**import** java.io.InputStream;

**import** java.io.PrintStream;

**import** java.util.Scanner;

**public** **class** Bully {

**static** **int** num\_proc = 6;

**static** **boolean**[] state = **new** **boolean**[num\_proc];

**static** **int** coordinator =0;

**public** **static** **void** elect(**int** startid)

{

**int** tmpcoord = startid;

**int** i=startid;

**int** j=i+1;

**for** ( i=startid; i<num\_proc ; i++) {

**for** ( j = i+1; j<num\_proc ; j++) {

**if**(state[i]==**true**) {

System.out.println("\nMessage sent from "+i+" to "+j);

}

}

**for** ( j = i+1; j<num\_proc ; j++) {

**if**(state[j]==**true** && state[i] == **true**) {

System.out.println("\nOK sent from "+j+" to "+i);

tmpcoord = j;

}

}

}

coordinator = tmpcoord;

System.out.println("\nCoordinator is "+coordinator);

}

**public** **static** **void** bringUp(**int** proc\_id)

{

state[proc\_id]=**true**;

elect(proc\_id);

}

**public** **static** **void** bringDown(**int** proc\_id)

{

state[proc\_id]=**false**;

}

**public** **static** **void** main(String[] args) {

**int** choice;

Scanner sc = **new** Scanner(System.in);

**for** (**int** i = 0; i < Bully.num\_proc; ++i) {

Bully.state[i] = **true**;

}

*// Bully.coordinator = 5;*

System.out.println("5 active process are:");

System.out.println("Process up = p1 p2 p3 p4 p5");

System.out.println("Process 5 is coordinator");

Bully.bringDown(5);

Bully.bringDown(4);

Bully.elect(2);

Bully.bringUp(5);

Bully.bringUp(4);

}

}

**Output**

