Code :
```java
import java.io.InputStream;
import java.io.PrintStream;
import java.util.Scanner;
public class Bully {
static boolean[] state = new boolean[5];
int coordinator;
public static void up(int up)
{
 if (state[up - 1])
                {
                        System.out.println("process" + up + "is already up");
                }
else {
                int i;
                Bully.state[up - 1] = true;
                System.out.println("process " + up + "held election");
 for (i = up; i < 5; ++i)
        {
        System.out.println("election message sent from process" + up + "to process" + (i + 1));
        }
 for (i = up + 1; i <= 5; ++i)
        {
        if (!state[i - 1]) continue;
        System.out.println("alive message send from process" + i + "to process" + up);
        break;
        }
    }
}
public static void down(int down) {
if (!state[down - 1]) {
System.out.println("process " + down + "is already dowm.");
} else {
Bully.state[down - 1] = false;
}
}


public static void mess(int mess) {
if (state[mess - 1]) {
if (state[4])
{ System.out.println("0K");
} else
if (!state[4])
{ int i;
System.out.println("process" + mess + "election");
 for (i = mess; i < 5; ++i) {
System.out.println("election send from process" + mess + "to process " + (i+ 1));
}
for (i = 5; i >= mess; --i) {
if (!state[i - 1]) continue;
System.out.println("Coordinator message send from process" + i + "to all");
break;
```

```java
          }
        }
      } else {
        System.out.println("Prccess" + mess + "is down");
      }
    }
    public static void main(String[] args) {
      int choice;
      Scanner sc = new Scanner(System.in);
      for (int i = 0; i < 5; ++i) {
        Bully.state[i] = true;
      }
      System.out.println("5 active process are:");
      System.out.println("Process up = p1 p2 p3 p4 p5");
      System.out.println("Process 5 is coordinator");
      do {
        System.out.println(" ........ ");
        System.out.println("1 up a process.");
        System.out.println("2.down a process");
        System.out.println("3 send a message");
        System.out.println("4.Exit");
        choice = sc.nextInt();
        switch (choice) {
        case 1: {
          System.out.println("bring proces up");
          int up = sc.nextInt();
          if (up == 5) {
            System.out.println("process 5 is co-ordinator");
            Bully.state[4] = true;
            break;
          }
          Bully.up(up);
          break;
        }
        case 2: {
          System.out.println("bring down any process.");
          int down = sc.nextInt();
          Bully.down(down);
          break;

        }
        case 3: {
          System.out.println("which process will send");
          int mess = sc.nextInt();
          Bully.mess(mess);
        }
        }
      } while (choice != 4);
    }
  }
```

Save the File As **Bully.java in Downloads**

Go to terminal
it@IT-SWL-18:~/Downloads$ javac Bully.java
it@IT-SWL-18:~/Downloads$ java Bully

5 active process are:
Process up = p1 p2 p3 p4 p5
Process 5 is coordinator
 ....
1 up a process.
2.down a process
3 send a message
4.Exit
1
bring proces up
2
process2is already up
 ....
1 up a process.
2.down a process
3 send a message
4.Exit
3
which process will send
5
0K
 ....
1 up a process.
2.down a process
3 send a message
4.Exit
2
bring down any process.
3
 ....
1 up a process.
2.down a process
3 send a message
4.Exit
3
which process will send
5
0K
 ....
1 up a process.
2.down a process
3 send a message
4.Exit
1
bring proces up

5
process 5 is co-ordinator
 ....
1 up a process.
2.down a process
3 send a message
4.Exit
4