

Code:

```
import java.io.*;

public class ChandyMisraHaas {
    public static int flag = 0;
    public static void main(String args[]) throws Exception {
        BufferedReader ob = new BufferedReader(new InputStreamReader(System.in));
        int init, aa, bb, x = 0, end = 5;

        File input = new File("C:/Users/admin/Documents/BATCH-3 DC/Ricart/Dependencies.txt");
        BufferedReader in = new BufferedReader(new InputStreamReader(new FileInputStream(input)));
        String line;
        int[][] a = new int[end][end];
        line = in.readLine();
        line = in.readLine();
        while ((line = in.readLine()) != null) {
            aa = 3;
            bb = 4;
            for (int y = 0; y < end; y++) {
                a[x][y] = Integer.parseInt(line.substring(aa, bb));
                aa += 2;
                bb += 2;
            }
            x++;
        }

        System.out.println("_____");
        System.out.println();
        System.out.println(" CHANDY-MISRA-HAAS DISTRIBUTED DEADLOCK DETECTION
ALGORITHM");
        System.out.println();
        System.out.println("\tS1\tS2\tS3\tS4\tS5");
        for (int i = 0; i < end; i++) {
            System.out.print("S" + (i + 1) + "t");
            for (int j = 0; j < end; j++) {
                System.out.print(a[i][j] + "t");
            }
            System.out.println();
        }

        System.out.println();
        System.out.print("Enter Initiator Site No. : ");
        init = Integer.parseInt(ob.readLine());
        int j = init - 1;

        System.out.println();
        System.out.println();
        System.out.println(" DIRECTION\tPROBE");
        System.out.println();
```

```

    for (int k = 0; k < end; k++) {
        if (a[j][k] == 1) {
            System.out.println(" S" + (j + 1) + " --> S" + (k + 1) + "    (" + init + "," + (j + 1) + "," + (k + 1)
+ ")");
            aman(a, j, k);
        }
    }
    if (flag == 0) {
        System.out.println();
        System.out.println(" NO DEADLOCK DETECTED");
    }
    System.out.println("_____");
    ob.readLine();

}

public static void aman(int[][] a, int init, int k) {
    int end = 5;
    for (int x = 0; x < end; x++) {
        if (a[k][x] == 1) {
            if (init == x) {
                System.out.println(" S" + (k + 1) + " --> S" + (x + 1) + "    (" + (init + 1) + "," + (k + 1) + ","
+ (x + 1) + ")") + " -----> DEADLOCK DETECTED");
                flag = 1;
                break;
            }
            System.out.println(" S" + (k + 1) + " --> S" + (x + 1) + "    (" + (init + 1) + "," + (k + 1) + "," +
(x + 1) + ")");
            aman(a, init, x);
        }
    }
}
}
}
}

```

Output:

	S1	S2	S3	S4	S5
S1	0	1	0	0	0
S2	0	0	1	0	0
S3	0	0	0	1	1
S4	0	0	0	0	0
S5	0	0	0	0	1

Enter Initiator Site No. : 5

DIRECTION	PROBE
S5 --> S5	(5,5,5)
S5 --> S5	(5,5,5) -----> DEADLOCK DETECTED