```java
import java.util.*;

public class Day94 {
    public static void main(String args[]) {
        Scanner input = new Scanner(System.in);
        int n = input.nextInt();
        long g[][][] = new long[30][500][9];

        for (int i = 0; i < n; i++)
            for (int j = 0; j < n; j++)
                if (input.nextInt() == 1)
                    g[0][i][j / 60] |= 1L << (j % 60);

        for (int t = 1; t < 30; t++)
            for (int i = 0; i < n; i++)
                for (int j = 0; j < n; j++)
                    if ((g[t - 1][i][j / 60] & (1L << (j % 60))) != 0)
                        for (int k = 0; k < 9; k++)
                            g[t][i][k] |= g[t - 1][j][k];

        int m = input.nextInt();
        while ((m--) > 0) {
            int len = input.nextInt(), x = input.nextInt() - 1;
            long mask[] = new long[9];
            mask[x / 60] = 1L << (x % 60);

            for (int t = 0; t < 30; t++)
                if ((len & (1L << t)) != 0) {
                    long newmask[] = new long[9];
                    for (int i = 0; i < n; i++)
                        if ((mask[i / 60] & (1L << (i % 60))) != 0)
```

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                for (int j = 0; j < 9; j++)
                    newmask[j] |= g[t][i][j];
            for (int i = 0; i < 9; i++)
                mask[i] = newmask[i];
        }


        int ans[] = new int[n];
        int cnt = 0;
        for (int i = 0; i < n; i++)
            if ((mask[i / 60] & (1L << (i % 60))) != 0)
                ans[cnt++] = i + 1;


        System.out.println(cnt);
        for (int i = 0; i < cnt; i++)
            System.out.print(ans[i] + (i == cnt - 1 ? "\n" : " "));


        if (cnt == 0)
            System.out.println(-1);
        }
    }
}
```