Factory Payroll Program

Task requirements:

- Develop a program to track factory payroll.
- Workers are paid by hour, from 8am to 12noon and from 1pm to 5pm. No pay during lunch break (from 12noon to 1pm).
- Program should read from **stdin** and write to **stdout** and **stderr**.

- On the next page, you can find Sample input for the program where first line has factory worker IDs separated by spaces and ended by a new line. The following lines show the date for which attendance is taken, hours from 8:00 to 17:00 for the specific attendance date which is followed by the line of worker IDs present at each attendance hour.
- Sample output should include specific attendance date followed by the line of hours. The next line should show specific worker ID that was present on that date followed by **Y** or **N** under each hour showing his attendance for each hour. **Y** if worker was present at specific hour and **N** if he was not.

  And after that, one more separate line that will show the same attendance date followed by the worker IDs and their respective total hours of presence at work separated by semi-column.

  And finally as a separate information, output should contain Unexpected worker IDs for the same attendance date. All unexpected worker IDs should be indicated by hour.

  All the above output description was referring to one specific attendance date which should be applied to all attendance dates from sample input.

Additional requirement:

Write first program as according to above requirements. And write second program which is will perform the same task as first program but with small different implementation.
In second program use inter-process communication. The second program must spawn at least one child process to do same work.

Sample Input

```
12345 23456 34567 45678 56789 67890
3/14/2016 8:00   12345 23456 34567              67890
3/14/2016 9:00   12345          34567 45678
3/14/2016 10:00 12345 23456 34567
3/14/2016 11:00 12345 23456 34567 45678
3/14/2016 12:00 12345 23456          45678     67890
3/14/2016 13:00 12345 23456 34567              67890
3/14/2016 14:00 12345 23456 34567 45678
3/14/2016 15:00 12345 23456 34567
3/14/2016 16:00 12345 23456 34567 45678
3/14/2016 17:00 12345 23456 34567 45678      67890

3/15/2016 08:00 12345 23456 34567 45671 67890 78901
3/15/2016 09:00 12345 23451 34567 45678 78901
3/15/2016 10:00 12345 23456 34567 45671 78901
3/15/2016 11:00 12345 23456 34567 45678 78901
3/15/2016 12:00 12345 23456 34568 45678 67890
3/15/2016 13:00 12345 23456 34567 45671 67890
3/15/2016 14:00 12345 23456 34567 45678 78901
3/15/2016 15:00 12345 23456 34567 45671 78901
3/15/2016 16:00 12345 23456 34567 45678 78901
3/15/2016 17:00 12345 23456 34567 45678 67890
```

Sample Output

```
======================================================================
OUTPUT RESULT
======================================================================

3/14/2016  08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00
12345       Y     Y     Y     Y     Y     Y     Y     Y     Y     Y
23456       Y     N     Y     Y     Y     Y     Y     Y     Y     Y
34567       Y     Y     Y     Y     N     Y     Y     Y     Y     Y
45678       N     Y     N     Y     Y     N     Y     N     Y     Y
56789       N     N     N     N     N     N     N     N     N     N
67890       Y     N     N     N     Y     Y     N     N     N     Y

3/14/2016 12345:10 23456:9 34567:9 45678:6 56789:0 67890:4


3/15/2016 08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00
12345       Y     Y     Y     Y     Y     Y     Y     Y     Y     Y
23456       Y     N     Y     Y     Y     Y     Y     Y     Y     Y
34567       Y     Y     Y     Y     N     Y     Y     Y     Y     Y
45678       N     Y     N     Y     Y     N     Y     N     Y     Y
56789       N     N     N     N     N     N     N     N     N     N
67890       Y     N     N     N     Y     Y     N     N     N     Y
```

3/15/2016 12345:10 23456:9 34567:9 45678:6 56789:0 67890:4

Unexpected worker ID on 3/15/2016 at 08:00 [45671, 78901]
Unexpected worker ID on 3/15/2016 at 09:00 [23451, 78901]
Unexpected worker ID on 3/15/2016 at 10:00 [45671, 78901]
Unexpected worker ID on 3/15/2016 at 11:00 [78901]
Unexpected worker ID on 3/15/2016 at 12:00 [34568]
Unexpected worker ID on 3/15/2016 at 13:00 [45671]
Unexpected worker ID on 3/15/2016 at 14:00 [78901]
Unexpected worker ID on 3/15/2016 at 15:00 [45671, 78901]
Unexpected worker ID on 3/15/2016 at 16:00 [78901]