5 An automated digital camera system is used to take a sequence of pictures of animals in a garden. During the design of the system, a state-transition diagram is produced.

The table details the states in the automated digital camera system along with the events which cause the states to change.

The system starts in standby mode. The sequence of pictures is taken when in active mode.

Current state	Event	Next state
standby mode	turn on	detect mode
detect mode	turn off	standby mode
detect mode	movement detected	active mode
active mode	20 seconds elapsed	sequence complete
active mode	turn off	standby mode
sequence complete	time saved	detect mode

(b) At the end of each sequence of pictures, the time is saved as a string in the format `<HH><MM><SS>` where:

- `HH` represents the hours using two digits
- `MM` represents the minutes using two digits
- `SS` represents the seconds using two digits.

For example:

- `"081230"` is stored to represent the time 8:12:30, in the morning
- `"152235"` is stored to represent the time 15:22:35, in the afternoon.

Each string is stored on a new line in the text file `TimeTaken.txt`

An algorithm is required to process the content of the text file `TimeTaken.txt` once it has been transferred to the computer.

For each hour when pictures are taken, output a suitable message showing the hour and the total number of sequences of pictures taken within that hour.

Example outputs:

```
Hour : 15  Total : 32
Hour : 18  Total : 1
```

Write pseudocode for this algorithm.

Assume the text file `TimeTaken.txt` contains at least **one** line.

[8]