|  |  |
| --- | --- |
| Light sensor - x1  Inside temp sensor - x2  Outside temp sensor - x3  People sensor - x4 | Y1 - floor heating  Y2 - air conditioning  Y3 - electric curtains  Y4 - ventilation |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **X1**  **light** | **X2**  **I-T** | **X3**  **O-T** | **X4 Ppl** | **Y1 heat** | **Y2**  **AC** | **Y3**  **curt** | **Y4**  **vent** |  |
| 0 | 00 | 00 | 00 | 0 | 1 | 0 | 1 | 00 | Night, I+O cold, nobody home |
| 1 | 00 | 00 | 00 | 1 | 1 | 0 | 1 | 00 | Night I+O cold, people home |
| 2 | 00 | 00 | 01 | 0 | 0 | 0 | 1 | 00 | Night,I cold, O norm, people away |
| 3 | 00 | 00 | 01 | 1 | 0 | 0 | 1 | 01 | Night,I cold, O norm, people home(must be cooled down room summer night) |
| 4 | 00 | 00 | 10 | 0 | 0 | 0 | 1 | 01 | Night, I cold, O hot, nobody home - turn on vent to get warm air inside. |
| 5 | 00 | 00 | 10 | 1 | 0 | 0 | 1 | 01 | Night, I cold, O hot, people home - turn on vent to get warm air inside. |
| 6 | 00 | 01 | 00 | 0 | 0 | 0 | 1 | 00 | Night, I norm, O cold, nobody home |
| 7 | 00 | 01 | 00 | 1 | 1 | 0 | 1 | 00 | Night, I norm, O cold, people home - we might start heating as it can get colder |
| 8 | 00 | 01 | 01 | 0 | 0 | 0 | 1 | 00 | Perfect balance, just close the curtains for the night. |
| 9 | 00 | 01 | 01 | 1 | 0 | 0 | 1 | 00 |  |
| 10 | 00 | 01 | 10 | 0 | 0 | 0 | 1 | 00 |  |
| 11 | 00 | 01 | 10 | 1 | 0 | 0 | 1 | 00 |  |
| 12 | 00 | 10 | 00 | 0 | 0 | 0 | 1 | 00 | It can be hot when nobodys home, no need to coold down (unless there’s a fire?) |
| 13 | 00 | 10 | 00 | 1 | 0 | 0 | 1 | 01 | Turn on vent to get cold air from outside. |
| 14 | 00 | 10 | 01 | 0 | 0 | 0 | 1 | 00 | It can be hot when nobody’s home. |
| 15 | 00 | 10 | 01 | 1 | 0 | 0 | 1 | 10 | Turn vent to max to get rid of excess heat |
| 16 | 00 | 10 | 10 | 0 | 0 | 0 | 1 | 01 | Ensure some ventilation when nobody’s home and it’s very hot. |
| 17 | 00 | 10 | 10 | 1 | 0 | 1 | 1 | 00 | AC on on summer night, no air from outside to warm up. |
| 18 | 01 | 00 | 00 | 0 | 1 | 0 | 1 | 00 |  |
| 19 | 01 | 00 | 00 | 1 | 1 | 0 | 0 | 00 |  |
| 20 | 01 | 00 | 01 | 0 | 0 | 0 | 1 | 01 |  |
| 21 | 01 | 00 | 01 | 1 | 0 | 0 | 0 | 10 | Get all the normal temp air you can from outside |
| 22 | 01 | 00 | 10 | 0 | 0 | 0 | 1 | 01 |  |
| 23 | 01 | 00 | 10 | 1 | 0 | 0 | 0 | 01 | Get some warmer air from outside |
| 24 | 01 | 01 | 00 | 0 | 0 | 0 | 1 | 00 |  |
| 25 | 01 | 01 | 00 | 1 | 1 | 0 | 0 | 00 | Start heating as it might get colder for people. |
| 26 | 01 | 01 | 01 | 0 | 0 | 0 | 1 | 00 |  |
| 27 | 01 | 01 | 01 | 1 | 0 | 0 | 0 | 01 | Ensure some air flow |
| 28 | 01 | 01 | 10 | 0 | 0 | 0 | 1 | 00 |  |
| 29 | 01 | 01 | 10 | 1 | 0 | 0 | 0 | 00 |  |
| 30 | 01 | 10 | 00 | 0 | 0 | 0 | 1 | 00 |  |
| 31 | 01 | 10 | 00 | 1 | 0 | 0 | 0 | 01 | Get some fresh cold air from outside |
| 32 | 01 | 10 | 01 | 0 | 0 | 0 | 1 | 00 |  |
| 33 | 01 | 10 | 01 | 1 | 0 | 0 | 0 | 10 | Get fresh air from outside |
| 34 | 01 | 10 | 10 | 0 | 0 | 0 | 1 | 01 | Ensure some air flow |
| 35 | 01 | 10 | 10 | 1 | 0 | 1 | 0 | 00 | Cool down home |
| 36 | 10 | 00 | 00 | 0 | 1 | 0 | 0 | 0 | Heat / open curtains for sunlight to warm home up. |
| 37 | 10 | 00 | 00 | 1 | 1 | 0 | 0 | 0 |  |
| 38 | 10 | 00 | 01 | 0 | 0 | 0 | 0 | 01 | Get warmer air from outside |
| 39 | 10 | 00 | 01 | 1 | 1 | 0 | 0 | 00 | Heat home up |
| 40 | 10 | 00 | 10 | 0 | 0 | 0 | 0 | 01 |  |
| 41 | 10 | 00 | 10 | 1 | 0 | 0 | 0 | 01 | Get some warmth from outside |
| 42 | 10 | 01 | 00 | 0 | 0 | 0 | 0 | 00 |  |
| 43 | 10 | 01 | 00 | 1 | 0 | 0 | 0 | 00 |  |
| 44 | 10 | 01 | 01 | 0 | 0 | 0 | 0 | 00 |  |
| 45 | 10 | 01 | 01 | 1 | 0 | 0 | 0 | 01 | Ensure some circulation |
| 46 | 10 | 01 | 10 | 0 | 0 | 0 | 1 | 00 | Close curtains to avoid overheating from sun |
| 47 | 10 | 01 | 10 | 1 | 0 | 0 | 0 | 00 |  |
| 48 | 10 | 10 | 00 | 0 | 0 | 0 | 0 | 00 |  |
| 49 | 10 | 10 | 00 | 1 | 0 | 0 | 0 | 01 | Ensure some fresh air from outside |
| 50 | 10 | 10 | 01 | 0 | 0 | 0 | 0 | 00 |  |
| 51 | 10 | 10 | 01 | 1 | 0 | 0 | 0 | 10 | Cool via outside air to normal |
| 52 | 10 | 10 | 10 | 0 | 0 | 0 | 1 | 01 | Ensure circulation, but close curtains for overheating |
| 53 | 10 | 10 | 10 | 1 | 0 | 1 | 0 | 00 | AC ON, curtains down to avoid overheating? |