Input

Temperature: Cold (24 – 36.4) Normal (35 - 38) Hot (36.6 - 44)

Headache: Slightly (0 - 5) Mild (2 – 8) Severe (5 -10)

Age: Young (0 - 45) Mid (40 - 65) Old (60 - 130)

Output:

Urgency: Low (0 - 22) Medium (11 - 44) High (33 - 66) Critical (55 - 88) Emergency (77 – 100)

Rule Base

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Temperature | Headache | Age | Urgency |
| Rule 1 | Normal | Slightly | Young | Low |
| Rule 2 | Normal | Slightly | Mid-Age | Low |
| Rule 3 | Normal | Slightly | Old | Low |
| Rule 4 | Normal | Mild | Young | Medium |
| Rule 5 | Normal | Mild | Mid-Age | Medium |
| Rule 6 | Normal | Mild | Old | High |
| Rule 7 | Normal | Severe | Young | High |
| Rule 8 | Normal | Severe | Mid-Age | High |
| Rule 9 | Normal | Severe | Old | Emergency |
| Rule 10 | Hot | Slightly | Young | Medium |
| Rule 11 | Hot | Slightly | Mid-Age | Medium |
| Rule 12 | Hot | Slightly | Old | High |
| Rule 13 | Hot | Mild | Young | High |
| Rule 14 | Hot | Mild | Mid-Age | High |
| Rule 15 | Hot | Mild | Old | Critical |
| Rule 16 | Hot | Severe | Young | Critical |
| Rule 17 | Hot | Severe | Mid-Age | Emergency |
| Rule 18 | Hot | Severe | Old | Emergency |
| Rule 19 | Cold | Slightly | Young | High |
| Rule 20 | Cold | Slightly | Mid-Age | High |
| Rule 21 | Cold | Slightly | Old | Critical |
| Rule 22 | Cold | Mild | Young | Critical |
| Rule 23 | Cold | Mild | Mid-Age | Critical |
| Rule 24 | Cold | Mild | Old | Emergency |
| Rule 25 | Cold | Severe | Young | Emergency |
| Rule 26 | Cold | Severe | Mid-Age | Emergency |
| Rule 27 | Cold | Severe | Old | Emergency |

Peak Data Sample Case 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Temperature | Headache | Age | Urgency | Predict |
| Rule 1 | 36.5 | 1 | 20 | 8.584/8.594 | 11 ± 5.5 |
| Rule 2 | 36.5 | 1 | 50 | 8.584/8.527 | 11 ± 5.5 |
| Rule 3 | 36.5 | 1 | 80 | 8.584/8.467 | 11 ± 5.5 |
| Rule 4 | 36.5 | 5 | 20 | 27.778/27.778 | 27.5 ± 5.5 |
| Rule 5 | 36.5 | 5 | 50 | 27.778/27.778 | 27.5 ± 5.5 |
| Rule 6 | 36.5 | 5 | 80 | 50.000/50.000 | 49.5 ± 5.5 |
| Rule 7 | 36.5 | 9 | 20 | 50.000/49.997 | 49.5 ± 5.5 |
| Rule 8 | 36.5 | 9 | 50 | 50.000/49.997 | 49.5 ± 5.5 |
| Rule 9 | 36.5 | 9 | 80 | 91.416/91.533 | 88 ± 5.5 |
| Rule 10 | 39 | 1 | 20 | 27.778/27.781 | 27.5 ± 5.5 |
| Rule 11 | 39 | 1 | 50 | 27.778/27.781 | 27.5 ± 5.5 |
| Rule 12 | 39 | 1 | 80 | 50.001/50.002 | 49.5 ± 5.5 |
| Rule 13 | 39 | 5 | 20 | 50.000/50.000 | 49.5 ± 5.5 |
| Rule 14 | 39 | 5 | 50 | 50.000/50.000 | 49.5 ± 5.5 |
| Rule 15 | 39 | 5 | 80 | 72.222/72.222 | 71.5 ± 5.5 |
| Rule 16 | 39 | 9 | 20 | 72.222/72.219 | 71.5 ± 5.5 |
| Rule 17 | 39 | 9 | 50 | 91.416/91.533 | 88 ± 5.5 |
| Rule 18 | 39 | 9 | 80 | 91.416/91.473 | 88 ± 5.5 |
| Rule 19 | 34 | 1 | 20 | 50.001/50.003 | 49.5 ± 5.5 |
| Rule 20 | 34 | 1 | 50 | 50.001/50.003 | 49.5 ± 5.5 |
| Rule 21 | 34 | 1 | 80 | 72.223/72.224 | 71.5 ± 5.5 |
| Rule 22 | 34 | 5 | 20 | 72.222/72.222 | 71.5 ± 5.5 |
| Rule 23 | 34 | 5 | 50 | 72.222/72.222 | 71.5 ± 5.5 |
| Rule 24 | 34 | 5 | 80 | 91.417/91.417 | 88 ± 5.5 |
| Rule 25 | 34 | 9 | 20 | 91.416/91.406 | 88 ± 5.5 |
| Rule 26 | 34 | 9 | 50 | 91.416/91.472 | 88 ± 5.5 |
| Rule 27 | 34 | 9 | 80 | 91.417/91.417 | 88 ± 5.5 |

Peak Data Sample Case 2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Temperature | Headache | Age | Urgency(avg/max) | Predict |
| Rule 1 | 36.4-36.6 | 0-2 | 0-17 | 8.5599/8.5836 | 11 ± 5.5 |
| Rule 2 | 36.5 | 1 | 50 | 8.584/8.527 | 11 ± 5.5 |
| Rule 3 | 36.5 | 1 | 80 | 8.584/8.467 | 11 ± 5.5 |
| Rule 4 | 36.5 | 5 | 20 | 27.778/27.778 | 27.5 ± 5.5 |
| Rule 5 | 36.5 | 5 | 50 | 27.778/27.778 | 27.5 ± 5.5 |
| Rule 6 | 36.5 | 5 | 80 | 50.000/50.000 | 49.5 ± 5.5 |
| Rule 7 | 36.5 | 9 | 20 | 50.000/49.997 | 49.5 ± 5.5 |
| Rule 8 | 36.5 | 9 | 50 | 50.000/49.997 | 49.5 ± 5.5 |
| Rule 9 | 36.5 | 9 | 80 | 91.416/91.533 | 88 ± 5.5 |
| Rule 10 | 39 | 1 | 20 | 27.778/27.781 | 27.5 ± 5.5 |
| Rule 11 | 39 | 1 | 50 | 27.778/27.781 | 27.5 ± 5.5 |
| Rule 12 | 39 | 1 | 80 | 50.001/50.002 | 49.5 ± 5.5 |
| Rule 13 | 39 | 5 | 20 | 50.000/50.000 | 49.5 ± 5.5 |
| Rule 14 | 39 | 5 | 50 | 50.000/50.000 | 49.5 ± 5.5 |
| Rule 15 | 39 | 5 | 80 | 72.222/72.222 | 71.5 ± 5.5 |
| Rule 16 | 39 | 9 | 20 | 72.222/72.219 | 71.5 ± 5.5 |
| Rule 17 | 39 | 9 | 50 | 91.416/91.533 | 88 ± 5.5 |
| Rule 18 | 39 | 9 | 80 | 91.416/91.473 | 88 ± 5.5 |
| Rule 19 | 34 | 1 | 20 | 50.001/50.003 | 49.5 ± 5.5 |
| Rule 20 | 34 | 1 | 50 | 50.001/50.003 | 49.5 ± 5.5 |
| Rule 21 | 34 | 1 | 80 | 72.223/72.224 | 71.5 ± 5.5 |
| Rule 22 | 34 | 5 | 20 | 72.222/72.222 | 71.5 ± 5.5 |
| Rule 23 | 34 | 5 | 50 | 72.222/72.222 | 71.5 ± 5.5 |
| Rule 24 | 34 | 5 | 80 | 91.417/91.417 | 88 ± 5.5 |
| Rule 25 | 34 | 9 | 20 | 91.416/91.406 | 88 ± 5.5 |
| Rule 26 | 34 | 9 | 50 | 91.416/91.472 | 88 ± 5.5 |
| Rule 27 | 34 | 9 | 80 | 91.417/91.417 | 88 ± 5.5 |

Non-Peak Data Sample Case 1

Temperature: Cold (35.5, 35.2, 36.2) Normal (36, 35.5, 37.5) Hot (37.2, 37.5, 36.7)

Headache: Slightly (2.5, 3.5, 4.5) Mild (7.5, 3.5) Severe()

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Temperature | Headache | Age | Urgency | Predict |
| Rule 1 | 36 | 2.5 |  |  | 11 ± 5.5 |
| Rule 2 | 35.5 | 3.5 |  |  | 11 ± 5.5 |
| Rule 3 | 37.5 | 4.5 |  |  | 11 ± 5.5 |
| Rule 4 | 36 |  |  |  | 27.5 ± 5.5 |
| Rule 5 | 35.5 | 7.5 |  |  | 27.5 ± 5.5 |
| Rule 6 | 37.5 | 3.5 |  |  | 49.5 ± 5.5 |
| Rule 7 | 36 |  |  |  | 49.5 ± 5.5 |
| Rule 8 | 35.5 |  |  |  | 49.5 ± 5.5 |
| Rule 9 | 37.5 |  |  |  | 88 ± 5.5 |
| Rule 10 | 37.2 | 2.5 |  |  | 27.5 ± 5.5 |
| Rule 11 | 37.5 | 3.5 |  |  | 27.5 ± 5.5 |
| Rule 12 | 36.7 | 4.5 |  |  | 49.5 ± 5.5 |
| Rule 13 | 37.2 |  |  |  | 49.5 ± 5.5 |
| Rule 14 | 37.5 |  |  |  | 49.5 ± 5.5 |
| Rule 15 | 36.7 |  |  |  | 71.5 ± 5.5 |
| Rule 16 | 37.2 |  |  |  | 71.5 ± 5.5 |
| Rule 17 | 37.5 |  |  |  | 88 ± 5.5 |
| Rule 18 | 36.7 |  |  |  | 88 ± 5.5 |
| Rule 19 | 35.5 | 2.5 |  |  | 49.5 ± 5.5 |
| Rule 20 | 35.2 | 3.5 |  |  | 49.5 ± 5.5 |
| Rule 21 | 36.2 | 4.5 |  |  | 71.5 ± 5.5 |
| Rule 22 | 35.5 |  |  |  | 71.5 ± 5.5 |
| Rule 23 | 35.2 |  |  |  | 71.5 ± 5.5 |
| Rule 24 | 36.2 |  |  |  | 88 ± 5.5 |
| Rule 25 | 35.5 |  |  |  | 88 ± 5.5 |
| Rule 26 | 35.2 |  |  |  | 88 ± 5.5 |
| Rule 27 | 36.2 |  |  |  | 88 ± 5.5 |