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 |

Non-Peak Data Sample Case 1

Temperature: Cold (35.3, 35.7, 36.1) Normal (35.6, 37.5, 37.8) Hot (36.9, 37.3, 37.7)

Headache: Slightly (3.0, 3.9, 4.5) Mild (3.7, 5.5, 5.9) Severe (5.5, 6.1, 7.0)

Age: Young (24, 31, 38) Mid-age (43.7, 44.5, 62) Old (64, 66, 68.5)

\*error message

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Temperature | Headache | Age | Urgency | Predict |
| Rule 1 | 37.8 (0.2) | 4.5 (0.2) | 31 (0.5) | 34.933/39.329 |  |
| Rule 2 | 37.5 (0.5) | 3.9 (0.5) | 44.5 (0.8) | 27.446 /30.608 |  |
| Rule 3 | 35.6 (0.8) | 3.0 (0.8) | 64 (0.2) | 45.137 /47.992 |  |
| Rule 4 | 37.8 (0.2) | 5.9 (0.5) | 24 (0.8) | 53.406 /53.963 |  |
| Rule 5 | 37.5 (0.5) | 5.5 (0.8) | 62 (0.2) | 57.996/55.175 |  |
| Rule 6 | 35.6 (0.8) | 3.7 (0.2) | 66 (0.5) | 49.786/50.495 |  |
| Rule 7 | 37.8 (0.2) | 7.0 (0.8) | 38 (0.2) | 58.304 /58.844 |  |
| Rule 8 | 37.5 (0.5) | 5.5 (0.2) | 43.7 (0.5) | 53.377/50.952 |  |
| Rule 9 | 35.6 (0.8) | 6.1 (0.5) | 68.5 (0.8) | 82.327/69.638 |  |
| Rule 10 | 37.3 (0.5) | 4.5 (0.2) | 31 (0.5) | 32.750/35.656 |  |
| Rule 11 | 37.7 (0.8) | 3.9 (0.5) | 44.5 (0.8) | 29.535/32.750 |  |
| Rule 12 | 36.9 (0.2) | 3.0 (0.8) | 64 (0.2) | 34.348./37.590 |  |
| Rule 13 | 37.3 (0.5) | 5.9 (0.5) | 24 (0.8) | 48.565/48.369 |  |
| Rule 14 | 37.7 (0.8) | 5.5 (0.8) | 62 (0.2) | 57.996/55.175 |  |
| Rule 15 | 36.9 (0.2) | 3.7 (0.2) | 66 (0.5) | 35.980/37.441 |  |
| Rule 16 | 37.3 (0.5) | 7.0 (0.8) | 38 (0.2) | 58.103/58.443 |  |
| Rule 17 | 37.7 (0.8) | 5.5 (0.2) | 43.7 (0.5) | 55.037/52.719 |  |
| Rule 18 | 36.9 (0.2) | 6.1 (0.5) | 68.5 (0.8) | 76.765/69.944 |  |
| Rule 19 | 36.1 (0.8) | 4.5 (0.2) | 31 (0.5) | 36.859/39.385 |  |
| Rule 20 | 35.3 (0.2) | 3.9 (0.5) | 44.5 (0.8) | 39.814/43.299 |  |
| Rule 21 | 35.7 (0.5) | 3.0 (0.8) | 64 (0.2) | 45.138/47.992 |  |
| Rule 22 | 36.1 (0.8) | 5.9 (0.5) | 24 (0.8) | 52.689/49.558 |  |
| Rule 23 | 35.3 (0.2) | 5.5 (0.8) | 62 (0.2) | 59.848/56.120 |  |
| Rule 24 | 35.7 (0.5) | 3.7 (0.2) | 66 (0.5) | 49.681/50.376 |  |
| Rule 25 | 36.1 (0.8) | 7.0 (0.8) | 38 (0.2) | 67.207/63.229 |  |
| Rule 26 | 35.3 (0.2) | 5.5 (0.2) | 43.7 (0.5) | 58.983/55.812 |  |
| Rule 27 | 35.7 (0.5) | 6.1 (0.5) | 68.5 (0.8) | 82.321/69.638 |  |