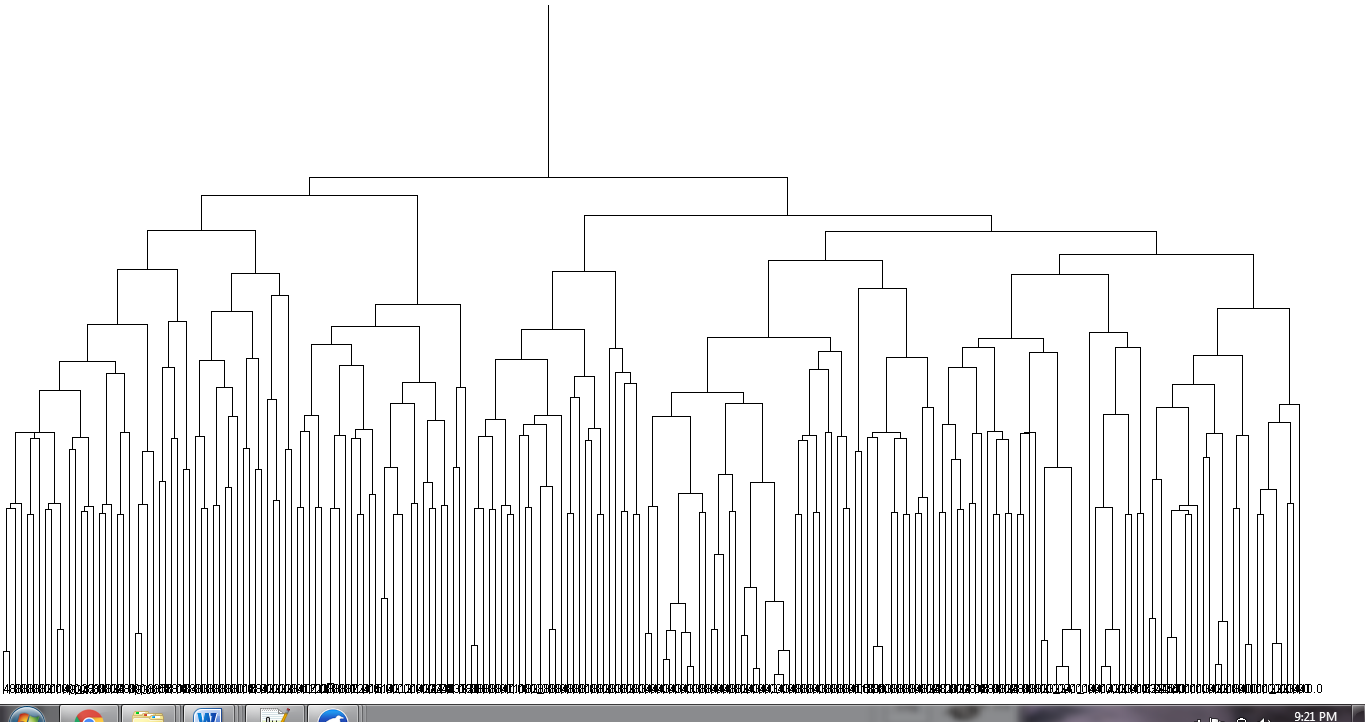
**Project Definition:**

The reason of absent in the work place is vary from person to person .In data set we saw there are 28 Reasons for absence attested by the International Code of Diseases (ICD) stratified into 21 categories and 7 are without (ICD). The dataset was created with records of absenteeism at work of 4 years (July 2007 to July 2010 )at a courier company in Brazil. It can be assumed that when a person’s work place distance is high then a possibility of increasing Absenteeism time is high than the person whose work place is near from residence. At the time of research they consider reason of absence, education, weight , workload, number of pets and others effects. Transportation cost, weather and number of sons can play a vital role as a reason of increasing Absenteeism time in workplace.

**Literature Survey:**

I think at the time of collecting data for the research it was noticed on some resons like they are social drinker or not, social smoker or not, ,distance from work ,different health issues,no of children,no of pets also has it’s effect But the reasons vary from person to person.The the transportation cost and distanceof work place have some connection.We can easily say that if any person age is high then the reson of Absenteeism also high and work load became low . Also if the person in question has many no of children then it can cause him to be late for work.Season also paly’s a great which cause people to be late work. There are some resons of absence like “digestive issue, Injury, poisoning” and certain other consequences of external causes people to miss work for a lot of days.

****

**Cutting at 5 Cluster (complete)**

**Cluster 0 Table:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Age | Disciplinary failure | Education | Son | Social drinker | Social smoker |
| **26** | 50 | 0 | **1** | 1 | **1** | **0** |
| **1** | 34 | 0 | **1** | 2 | **1** | **0** |
| **6** | 34 | 0 | **1** | 2 | **1** | **0** |
| **10** | 34 | 0 | **1** | 2 | **1** | **0** |
| **10** | 34 | 0 | **1** | 2 | **1** | **0** |
| **10** | 34 | 0 | **1** | 2 | **1** | **0** |
| **11** | 34 | 0 | **1** | 2 | **1** | **0** |
| **12** | 34 | 0 | **1** | 2 | **1** | **0** |
| **13** | 34 | 0 | **1** | 2 | **1** | **0** |
| **13** | 34 | 0 | **1** | 2 | **1** | **0** |
| **18** | 34 | 0 | **1** | 2 | **1** | **0** |
| **18** | 34 | 0 | **1** | 2 | **1** | **0** |
| **18** | 34 | 0 | **1** | 2 | **1** | **0** |
| **19** | 34 | 0 | **1** | 2 | **1** | **0** |
| **19** | 34 | 0 | **1** | 2 | **1** | **0** |
| **23** | 34 | 0 | **1** | 2 | **1** | **0** |
| **23** | 34 | 0 | **1** | 2 | **1** | **0** |
| **23** | 34 | 0 | **1** | 2 | **1** | **0** |
| **23** | 34 | 0 | **1** | 2 | **1** | **0** |
| **23** | 34 | 0 | **1** | 2 | **1** | **0** |
| **23** | 34 | 0 | **1** | 2 | **1** | **0** |
| **23** | 34 | 0 | **1** | 2 | **1** | **0** |
| **25** | 34 | 0 | **1** | 2 | **1** | **0** |
| **25** | 34 | 0 | **1** | 2 | **1** | **0** |
| **28** | 34 | 0 | **1** | 2 | **1** | **0** |
| **28** | 34 | 0 | **1** | 2 | **1** | **0** |
| **28** | 34 | 0 | **1** | 2 | **1** | **0** |
| **28** | 34 | 0 | **1** | 2 | **1** | **0** |
| **28** | 34 | 0 | **1** | 2 | **1** | **0** |
| **28** | 34 | 0 | **1** | 2 | **1** | **0** |
| **0** | 39 | 0 | **1** | 2 | **1** | **0** |
| **12** | 31 | 0 | **2** | 1 | **1** | **0** |
| **18** | 31 | 0 | **2** | 1 | **1** | **0** |
| **19** | 31 | 0 | **2** | 1 | **1** | **0** |
| **19** | 31 | 0 | **2** | 1 | **1** | **0** |
| **19** | 31 | 0 | **2** | 1 | **1** | **0** |
| **22** | 31 | 0 | **2** | 1 | **1** | **0** |
| **22** | 31 | 0 | **2** | 1 | **1** | **0** |
| **26** | 43 | 0 | **1** | 1 | **1** | **0** |
| **1** | 41 | 0 | **1** | 0 | **1** | **0** |
| **4** | 41 | 0 | **1** | 0 | **1** | **0** |
| **9** | 41 | 0 | **1** | 0 | **1** | **0** |
| **9** | 41 | 0 | **1** | 0 | **1** | **0** |
| **10** | 41 | 0 | **1** | 0 | **1** | **0** |
| **10** | 41 | 0 | **1** | 0 | **1** | **0** |
| **10** | 41 | 0 | **1** | 0 | **1** | **0** |
| **10** | 41 | 0 | **1** | 0 | **1** | **0** |
| **13** | 41 | 0 | **1** | 0 | **1** | **0** |
| **13** | 41 | 0 | **1** | 0 | **1** | **0** |
| **14** | 41 | 0 | **1** | 0 | **1** | **0** |

**Findings from this cluster 0 (not full cluster is here only 50 instance displayed)::**

1. Most of the instances with High school education.
2. All of them are Social Drinker.
3. Most of Their reason of absence dental consultation.
4. None of them are Social Smoker.
5. No Disciplinary failure.
6. Age average 35.

**Cluster 1 Table:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Age | Disciplinary failure | Education | Son | **Social drinker** | **Social smoker** | Pet |
| **0** | 50 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 50 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 50 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 50 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 50 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 50 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 29 | **1** | 1 | 0 | **1** | **1** | 0 |
| **0** | 38 | **1** | 1 | 0 | **1** | **0** | 0 |
| **0** | 53 | **0** | 1 | 1 | **0** | **0** | 1 |
| **0** | 28 | **1** | 1 | 1 | **0** | **0** | 2 |
| **0** | 28 | **1** | 1 | 1 | **0** | **0** | 2 |
| **0** | 39 | **1** | 1 | 2 | **1** | **0** | 2 |
| **0** | 43 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 43 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 43 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 43 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 37 | **1** | 3 | 1 | **0** | **0** | 1 |
| **0** | 43 | **1** | 1 | 1 | **1** | **0** | 0 |
| **0** | 41 | **1** | 1 | 0 | **1** | **0** | 0 |
| **0** | 47 | **1** | 1 | 2 | **0** | **0** | 1 |
| **0** | 36 | **1** | 1 | 4 | **1** | **0** | 0 |
| **0** | 36 | **1** | 1 | 4 | **1** | **0** | 0 |
| **0** | 36 | **1** | 1 | 4 | **1** | **0** | 0 |
| **0** | 33 | **1** | 2 | 0 | **0** | **0** | 0 |
| **0** | 39 | **1** | 1 | 2 | **1** | **1** | 0 |
| **0** | 39 | **1** | 1 | 2 | **1** | **1** | 0 |
| **0** | 33 | **1** | 1 | 2 | **1** | **0** | 1 |
| **0** | 33 | **1** | 1 | 2 | **1** | **0** | 1 |
| **0** | 32 | **1** | 1 | 0 | **1** | **0** | 0 |
| **0** | 28 | **1** | 2 | 0 | **0** | **0** | 0 |
| **0** | 31 | **1** | 1 | 3 | **1** | **0** | 0 |
| **0** | 31 | **1** | 1 | 3 | **1** | **0** | 0 |
| **0** | 50 | **1** | 1 | 0 | **0** | **0** | 0 |

**Findings from this cluster 1:**

1. Nobody has any Reason of Absence.
2. Most Number of Disciplinary failure is found in this cluster.
3. Most of them are not Social smoker.
4. Most of them are Social drinker.

# **Cluster 2 Table:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Transportation expense | Age | **Disciplinary failure** | **Education** | **Son** | **Social drinker** | **Social smoker** | **Pet** |
| 0 | 118 | 40 | **0** | **1** | **1** | **1** | **0** | **8** |
| 1 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 5 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 13 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 13 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 13 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 13 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 13 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 13 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 14 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 14 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 19 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 19 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 23 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 28 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 28 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 28 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 28 | 118 | 50 | **0** | **1** | **1** | **1** | **0** | **0** |
| 5 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 6 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 10 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 10 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 11 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 11 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 11 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 11 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 11 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 11 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 11 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 12 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |
| 13 | 179 | 38 | **0** | **1** | **0** | **1** | **0** | **0** |

**Findings from this cluster 2(not full cluster is here only 50 instance displayed):**

1. Only cluster that has instances with (master and doctor).
2. Most of the instances who are 38 years old.
3. Almost all of them are social smoker.
4. Most of the instances has less number of Pet and Son.
5. There is No Disciplinary failure.
6. Majority of them are Social drinker.

**Cluster 3 Table:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Transportation expense | Age | **Disciplinary failure** | **Education** | Son | Social drinker | **Social smoker** | Pet |
| 7 | 118 | 46 | **0** | **1** | 2 | 1 | **1** | 0 |
| 23 | 118 | 46 | **0** | **1** | 2 | 1 | **1** | 0 |
| 11 | 157 | 29 | **0** | **1** | 0 | 1 | **1** | 0 |
| 19 | 157 | 29 | **0** | **1** | 0 | 1 | **1** | 0 |
| 19 | 157 | 29 | **0** | **1** | 0 | 1 | **1** | 0 |
| 25 | 157 | 29 | **0** | **1** | 0 | 1 | **1** | 0 |
| 28 | 157 | 29 | **0** | **1** | 0 | 1 | **1** | 0 |
| 28 | 157 | 29 | **0** | **1** | 0 | 1 | **1** | 0 |
| 8 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 8 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 10 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 11 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 11 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 16 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 16 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 17 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 18 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 18 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 21 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 21 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 22 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 23 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 25 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 25 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 25 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 25 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 25 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 25 | 179 | 40 | **0** | **2** | 2 | 0 | **1** | 0 |
| 0 | 235 | 48 | **1** | **1** | 1 | 0 | **1** | 5 |
| 0 | 235 | 48 | **1** | **1** | 1 | 0 | **1** | 5 |
| 18 | 235 | 48 | **0** | **1** | 1 | 0 | **1** | 5 |
| 18 | 235 | 48 | **0** | **1** | 1 | 0 | **1** | 5 |
| 23 | 235 | 48 | **0** | **1** | 1 | 0 | **1** | 5 |
| 28 | 235 | 48 | **0** | **1** | 1 | 0 | **1** | 5 |
| 7 | 279 | 39 | **0** | **1** | 2 | 1 | **1** | 0 |
| 14 | 279 | 39 | **0** | **1** | 2 | 1 | **1** | 0 |
| 14 | 279 | 39 | **0** | **1** | 2 | 1 | **1** | 0 |
| 23 | 279 | 39 | **0** | **1** | 2 | 1 | **1** | 0 |
| 13 | 300 | 43 | **0** | **1** | 2 | 1 | **1** | 1 |
| 14 | 300 | 43 | **0** | **1** | 2 | 1 | **1** | 1 |
| 15 | 300 | 43 | **0** | **1** | 2 | 1 | **1** | 1 |
| 19 | 300 | 43 | **0** | **1** | 2 | 1 | **1** | 1 |
| 28 | 300 | 43 | **0** | **1** | 2 | 1 | **1** | 1 |
| 0 | 378 | 36 | **1** | **1** | 2 | 0 | **1** | 4 |
| 0 | 378 | 36 | **1** | **1** | 2 | 0 | **1** | 4 |
| 0 | 378 | 36 | **1** | **1** | 2 | 0 | **1** | 4 |
| 1 | 378 | 36 | **0** | **1** | 2 | 0 | **1** | 4 |
| 19 | 378 | 36 | **0** | **1** | 2 | 0 | **1** | 4 |
| 22 | 378 | 36 | **0** | **1** | 2 | 0 | **1** | 4 |
| 22 | 378 | 36 | **0** | **1** | 2 | 0 | **1** | 4 |
| 22 | 378 | 36 | **0** | **1** | 2 | 0 | **1** | 4 |

**Findings from this cluster 3(not full cluster is here only 50 instance displayed):**

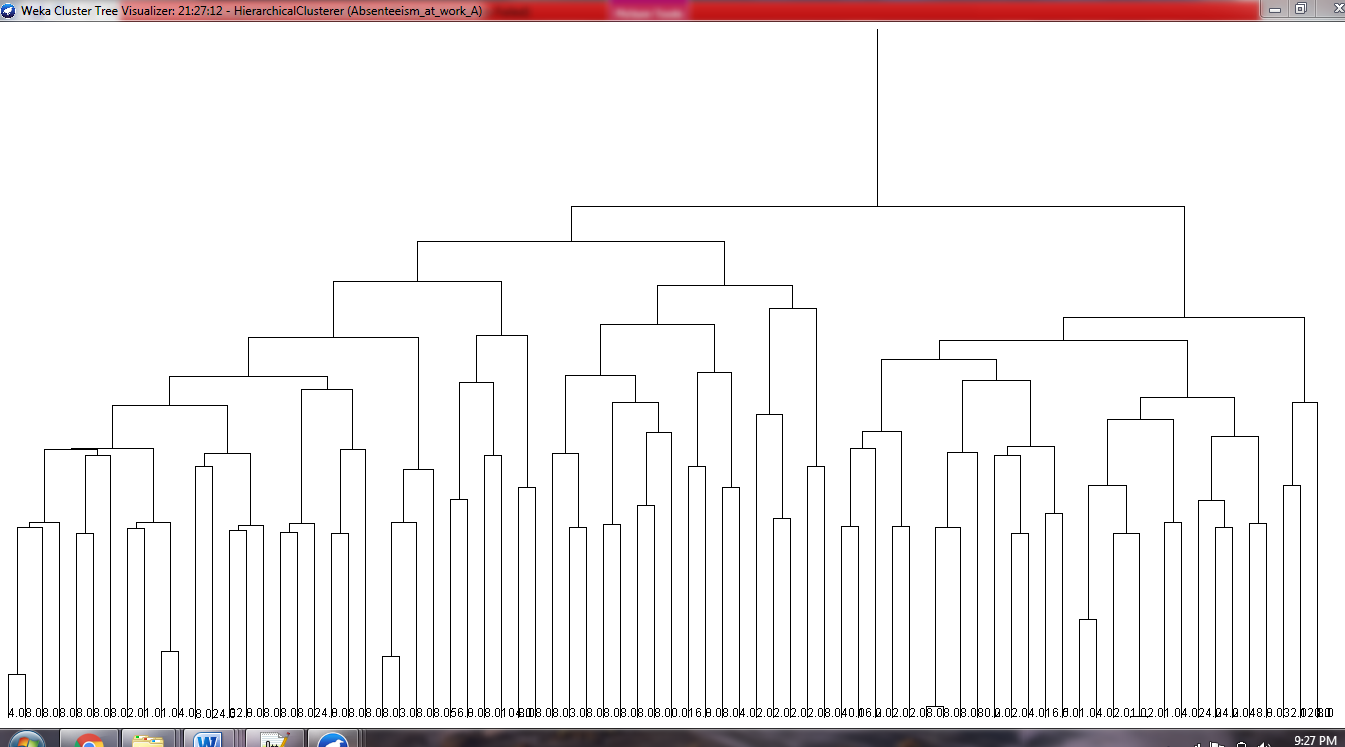
1. most of Disciplinary Not failed.
2. most no of instances with graduate education.
3. Only cluster that has instances that have 5 pets.
4. All of them are social smoker.

**Cluster 4 Table:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Transportation expense | Age | Disciplinary failure | Education | Son | Social drinker | Social smoker | Pet |
| 5 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 7 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 9 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 10 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 10 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 10 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 10 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 11 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 11 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 11 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 13 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 18 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 19 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 19 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 19 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 19 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 23 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 23 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 23 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 23 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 23 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 23 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 23 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 23 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 23 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 25 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 25 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 26 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 26 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 26 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 27 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 28 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 28 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 28 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 28 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |
| 28 | 118 | 37 | 0 | 1 | 0 | 0 | 0 | 0 |

**Findings from this cluster 4(not full cluster is here only 50 instance displayed)::**

1. Only cluster that has instances that have 5 pets.
2. None of them are Social Drinker
3. Only cluster that has instances that are above 53 years old.
4. Most reason of absence Medical consultation.(23)
5. None of them are Social smoker



Cutting at 8 Cluster(complete)

**Cluster 0:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Transportation expense | Age | **Workload** | Education | Son | Social drinker | Social smoker | Pet |
| 26 | 289 | 33 | **239554** | 1 | 2 | 1 | 0 | 1 |
| 23 | 289 | 33 | **239554** | 1 | 2 | 1 | 0 | 1 |
| 19 | 155 | 34 | **239554** | 1 | 2 | 1 | 0 | 0 |
| 18 | 289 | 33 | **205917** | 1 | 2 | 1 | 0 | 1 |
| 23 | 289 | 33 | **205917** | 1 | 2 | 1 | 0 | 1 |
| 18 | 289 | 33 | **205917** | 1 | 2 | 1 | 0 | 1 |
| 24 | 289 | 33 | **205917** | 1 | 2 | 1 | 0 | 1 |
| 23 | 155 | 34 | **241476** | 1 | 2 | 1 | 0 | 0 |
| 26 | 289 | 33 | **253465** | 1 | 2 | 1 | 0 | 1 |
| 10 | 155 | 34 | **306345** | 1 | 2 | 1 | 0 | 0 |
| 6 | 155 | 34 | **306345** | 1 | 2 | 1 | 0 | 0 |
| 7 | 289 | 33 | **306345** | 1 | 2 | 1 | 0 | 1 |
| 18 | 155 | 34 | **308593** | 1 | 2 | 1 | 0 | 0 |
| 18 | 289 | 33 | **308593** | 1 | 2 | 1 | 0 | 1 |
| 22 | 289 | 33 | **308593** | 1 | 2 | 1 | 0 | 1 |
| 28 | 155 | 34 | **302585** | 1 | 2 | 1 | 0 | 0 |
| 22 | 289 | 33 | **302585** | 1 | 2 | 1 | 0 | 1 |
| 28 | 291 | 32 | **343253** | 1 | 0 | 1 | 0 | 0 |
| 22 | 291 | 40 | **343253** | 1 | 1 | 1 | 0 | 1 |
| 1 | 155 | 34 | **343253** | 1 | 2 | 1 | 0 | 0 |
| 26 | 260 | 36 | **343253** | 1 | 4 | 1 | 0 | 0 |
| 13 | 155 | 34 | **343253** | 1 | 2 | 1 | 0 | 0 |
| 6 | 289 | 33 | **343253** | 1 | 2 | 1 | 0 | 1 |
| 28 | 155 | 34 | **326452** | 1 | 2 | 1 | 0 | 0 |
| 23 | 155 | 34 | **326452** | 1 | 2 | 1 | 0 | 0 |
| 19 | 260 | 36 | **326452** | 1 | 4 | 1 | 0 | 0 |
| 19 | 289 | 33 | **326452** | 1 | 2 | 1 | 0 | 1 |
| 12 | 155 | 34 | **326452** | 1 | 2 | 1 | 0 | 0 |
| 28 | 155 | 34 | **378884** | 1 | 2 | 1 | 0 | 0 |
| 28 | 155 | 34 | **378884** | 1 | 2 | 1 | 0 | 0 |
| 28 | 155 | 34 | **378884** | 1 | 2 | 1 | 0 | 0 |
| 23 | 155 | 34 | **377550** | 1 | 2 | 1 | 0 | 0 |
| 19 | 155 | 34 | **275312** | 1 | 2 | 1 | 0 | 0 |
| 25 | 155 | 34 | **275312** | 1 | 2 | 1 | 0 | 0 |
| 26 | 289 | 33 | **275312** | 1 | 2 | 1 | 0 | 1 |
| 19 | 289 | 33 | **275312** | 1 | 2 | 1 | 0 | 1 |
| 19 | 289 | 33 | **275312** | 1 | 2 | 1 | 0 | 1 |
| 19 | 289 | 33 | **265615** | 1 | 2 | 1 | 0 | 1 |
| 23 | 289 | 33 | **265615** | 1 | 2 | 1 | 0 | 1 |
| 23 | 289 | 33 | **265615** | 1 | 2 | 1 | 0 | 1 |
| 19 | 289 | 33 | **294217** | 1 | 2 | 1 | 0 | 1 |
| 24 | 289 | 33 | **265017** | 1 | 2 | 1 | 0 | 1 |
| 26 | 289 | 33 | **265017** | 1 | 2 | 1 | 0 | 1 |
| 22 | 289 | 33 | **265017** | 1 | 2 | 1 | 0 | 1 |
| 11 | 155 | 34 | **284031** | 1 | 2 | 1 | 0 | 0 |
| 19 | 289 | 33 | **236629** | 1 | 2 | 1 | 0 | 1 |
| 23 | 155 | 34 | **330061** | 1 | 2 | 1 | 0 | 0 |
| 23 | 155 | 34 | **330061** | 1 | 2 | 1 | 0 | 0 |
| 26 | 289 | 33 | **330061** | 1 | 2 | 1 | 0 | 1 |

**Findings from cluster 0(not full cluster is here only 50 instance displayed)::**

1. This cluster has highest workload average.
2. Age average is 34.
3. None of them are Social smoker
4. Almost of them are Social drinker

**Cluster 1:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Transportation expense | Age | Workload | Education | Son | Social drinker | Social smoker | Disciplinary failure | Absenteeism time in hours |
| 0 | 118 | 50 | 239554 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 260 | 36 | 241476 | 1 | 4 | 1 | 0 | 1 | 0 |
| 0 | 225 | 28 | 241476 | 1 | 1 | 0 | 0 | 1 | 0 |
| 0 | 289 | 33 | 241476 | 1 | 2 | 1 | 0 | 1 | 0 |
| 0 | 118 | 50 | 241476 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 369 | 31 | 241476 | 1 | 3 | 1 | 0 | 1 | 0 |
| 0 | 118 | 50 | 253465 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 279 | 39 | 378884 | 1 | 2 | 1 | 1 | 1 | 0 |
| 0 | 330 | 28 | 378884 | 2 | 0 | 0 | 0 | 1 | 0 |
| 0 | 388 | 50 | 378884 | 1 | 0 | 0 | 0 | 1 | 0 |
| 0 | 260 | 36 | 275312 | 1 | 4 | 1 | 0 | 1 | 0 |
| 0 | 235 | 43 | 294217 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 231 | 39 | 294217 | 1 | 2 | 1 | 0 | 1 | 0 |
| 0 | 291 | 32 | 294217 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 235 | 43 | 294217 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 118 | 50 | 265017 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 248 | 47 | 265017 | 1 | 2 | 0 | 0 | 1 | 0 |
| 0 | 235 | 43 | 265017 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 235 | 43 | 265017 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 260 | 36 | 265017 | 1 | 4 | 1 | 0 | 1 | 0 |
| 0 | 157 | 29 | 265017 | 1 | 0 | 1 | 1 | 1 | 0 |
| 0 | 279 | 39 | 284031 | 1 | 2 | 1 | 1 | 1 | 0 |
| 0 | 369 | 31 | 244387 | 1 | 3 | 1 | 0 | 1 | 0 |
| 0 | 235 | 37 | 244387 | 3 | 1 | 0 | 0 | 1 | 0 |
| 0 | 246 | 41 | 244387 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 118 | 50 | 244387 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 179 | 38 | 253957 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 225 | 28 | 284853 | 1 | 1 | 0 | 0 | 1 | 0 |
| 0 | 289 | 33 | 268519 | 1 | 2 | 1 | 0 | 1 | 0 |
| 0 | 235 | 43 | 268519 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 118 | 50 | 237656 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 268 | 33 | 275089 | 2 | 0 | 0 | 0 | 1 | 0 |
| 0 | 179 | 53 | 271219 | 1 | 1 | 0 | 0 | 0 | 0 |

**Findings from cluster 1(not full cluster is here only 50 instance displayed)::**

1. Only cluster in having all Disciplinary failed except 1.
2. Only cluster in which Absenteeism time in hours is always (0).
3. Only cluster in which Reason of absence is always (0 ) means no absence.

**Cluster 2:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Transportation expense | Age | **Service time** | **Education** | Son | Social drinker | Social smoker | Pet |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 11 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 21 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 11 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 18 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 13 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 11 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 13 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 18 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 12 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 11 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 11 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 11 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 289 | 49 | **29** | **1** | 0 | 0 | 0 | 2 |
| 26 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 11 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 13 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 13 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 6 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 27 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 23 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 27 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 27 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 10 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 27 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 27 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 27 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 27 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 27 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 27 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |
| 28 | 179 | 38 | **18** | **1** | 0 | 1 | 0 | 0 |

**Findings from cluster 2(not full cluster is displayed)::**

1. This cluster has highest average service time.
2. All of them are education 1 means (high school) educated

**Cluster 3:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Transportation expense | Age | weight | Education | Son | Social drinker | Social smoker | Pet |
| 7 | 279 | 39 | 68 | 1 | 2 | 1 | 1 | 0 |
| 28 | 157 | 29 | 75 | 1 | 0 | 1 | 1 | 0 |
| 21 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 21 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 19 | 157 | 29 | 75 | 1 | 0 | 1 | 1 | 0 |
| 17 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 11 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 8 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 14 | 279 | 39 | 68 | 1 | 2 | 1 | 1 | 0 |
| 14 | 279 | 39 | 68 | 1 | 2 | 1 | 1 | 0 |
| 25 | 157 | 29 | 75 | 1 | 0 | 1 | 1 | 0 |
| 19 | 157 | 29 | 75 | 1 | 0 | 1 | 1 | 0 |
| 13 | 300 | 43 | 77 | 1 | 2 | 1 | 1 | 1 |
| 14 | 300 | 43 | 77 | 1 | 2 | 1 | 1 | 1 |
| 28 | 157 | 29 | 75 | 1 | 0 | 1 | 1 | 0 |
| 11 | 157 | 29 | 75 | 1 | 0 | 1 | 1 | 0 |
| 22 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 28 | 300 | 43 | 77 | 1 | 2 | 1 | 1 | 1 |
| 11 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 8 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 15 | 300 | 43 | 77 | 1 | 2 | 1 | 1 | 1 |
| 23 | 279 | 39 | 68 | 1 | 2 | 1 | 1 | 0 |
| 25 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 25 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 18 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 25 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 25 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 25 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 18 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 23 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 23 | 118 | 46 | 75 | 1 | 2 | 1 | 1 | 0 |
| 16 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 19 | 300 | 43 | 77 | 1 | 2 | 1 | 1 | 1 |
| 16 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 10 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 25 | 179 | 40 | 63 | 2 | 2 | 0 | 1 | 0 |
| 7 | 118 | 46 | 75 | 1 | 2 | 1 | 1 | 0 |

**Findings from this cluster 3(not full cluster is here only 50 instance displayed)::**

1. Only cluster which has lowest weight (68).
2. Most of them have no pet.
3. Most of them are social driker.

**Cluster 5:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Age | weight | Education | Son | Social drinker | Social smoker | Pet | Absenteeism time in hours |
| 22 | 37 | 88 | 3 | 1 | 0 | 0 | 1 | 8 |
| 11 | 33 | 69 | 1 | 2 | 0 | 0 | 2 | 8 |
| 23 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 2 |
| 10 | 28 | 84 | 2 | 0 | 0 | 0 | 0 | 8 |
| 23 | 37 | 88 | 3 | 1 | 0 | 0 | 1 | 4 |
| 23 | 27 | 58 | 1 | 0 | 0 | 0 | 0 | 2 |
| 23 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 4 |
| 23 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 3 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 23 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 18 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 3 |
| 23 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 1 |
| 23 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 3 |
| 23 | 30 | 56 | 3 | 0 | 0 | 0 | 0 | 1 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 3 |
| 23 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 3 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 23 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 2 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 3 |
| 28 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 1 |
| 22 | 33 | 69 | 1 | 2 | 0 | 0 | 2 | 8 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 1 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 3 |
| 13 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 3 |
| 28 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 1 |
| 28 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 3 |
| 23 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 1 |
| 19 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 64 |
| 26 | 37 | 88 | 3 | 1 | 0 | 0 | 1 | 8 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 19 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 56 |
| 28 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 3 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 1 |
| 19 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 1 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 1 |
| 27 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 23 | 27 | 58 | 1 | 0 | 0 | 0 | 0 | 2 |
| 28 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 27 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 1 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 27 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 18 | 30 | 56 | 3 | 0 | 0 | 0 | 0 | 8 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 23 | 27 | 58 | 1 | 0 | 0 | 0 | 0 | 2 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 2 |
| 27 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 0 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 1 |
| 23 | 27 | 58 | 1 | 0 | 0 | 0 | 0 | 1 |
| 23 | 33 | 69 | 1 | 2 | 0 | 0 | 2 | 8 |
| 11 | 50 | 76 | 1 | 0 | 0 | 0 | 0 | 8 |
| 1 | 50 | 76 | 1 | 0 | 0 | 0 | 0 | 8 |
| 28 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 23 | 30 | 56 | 3 | 0 | 0 | 0 | 0 | 1 |
| 23 | 27 | 58 | 1 | 0 | 0 | 0 | 0 | 8 |
| 25 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 3 |
| 18 | 28 | 84 | 2 | 0 | 0 | 0 | 0 | 8 |
| 23 | 28 | 84 | 2 | 0 | 0 | 0 | 0 | 1 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 1 |
| 19 | 33 | 69 | 1 | 2 | 0 | 0 | 2 | 8 |
| 13 | 30 | 56 | 3 | 0 | 0 | 0 | 0 | 8 |
| 14 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 3 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 1 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 11 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 8 |
| 13 | 30 | 56 | 3 | 0 | 0 | 0 | 0 | 1 |
| 11 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 8 |
| 11 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 16 |
| 28 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 14 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 3 |
| 28 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 1 |
| 23 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 1 |
| 28 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 28 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 8 |
| 7 | 37 | 88 | 3 | 1 | 0 | 0 | 1 | 3 |
| 19 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 8 |
| 7 | 27 | 58 | 1 | 0 | 0 | 0 | 0 | 4 |
| 13 | 37 | 88 | 3 | 1 | 0 | 0 | 1 | 16 |
| 28 | 28 | 69 | 1 | 1 | 0 | 0 | 2 | 2 |
| 5 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 8 |
| 26 | 37 | 83 | 1 | 0 | 0 | 0 | 0 | 4 |
| 26 | 28 | 84 | 2 | 0 | 0 | 0 | 0 | 8 |
| 18 | 30 | 56 | 3 | 0 | 0 | 0 | 0 | 8 |
| 1 | 28 | 84 | 2 | 0 | 0 | 0 | 0 | 8 |
| 1 | 28 | 84 | 2 | 0 | 0 | 0 | 0 | 8 |
| 18 | 58 | 65 | 1 | 2 | 0 | 0 | 1 | 8 |
| 23 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 1 |
| 11 | 33 | 79 | 2 | 0 | 0 | 0 | 0 | 8 |
| 23 | 30 | 56 | 3 | 0 | 0 | 0 | 0 | 1 |
| 25 | 47 | 86 | 1 | 2 | 0 | 0 | 1 | 2 |
| 23 | 37 | 88 | 3 | 1 | 0 | 0 | 1 | 1 |

**Findings from this cluster 5(not full cluster is displayed)::**

1. There is no social drinker and no social smoker.
2. (No pet) and (no son) is seen in this cluster.

**Cluster 6:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Age | weight | Education | Son | Social drinker | Social smoker | Pet | Absenteeism time in hours |
| 18 | 48 | 88 | 1 | 1 | 0 | 1 | 5 | 8 |
| 18 | 48 | 88 | 1 | 1 | 0 | 1 | 5 | 8 |
| 28 | 48 | 88 | 1 | 1 | 0 | 1 | 5 | 8 |
| 19 | 36 | 65 | 1 | 2 | 0 | 1 | 4 | 8 |
| 0 | 48 | 88 | 1 | 1 | 0 | 1 | 5 | 0 |
| 0 | 36 | 65 | 1 | 2 | 0 | 1 | 4 | 0 |
| 22 | 36 | 65 | 1 | 2 | 0 | 1 | 4 | 8 |
| 1 | 36 | 65 | 1 | 2 | 0 | 1 | 4 | 8 |
| 0 | 36 | 65 | 1 | 2 | 0 | 1 | 4 | 0 |
| 22 | 36 | 65 | 1 | 2 | 0 | 1 | 4 | 8 |
| 23 | 48 | 88 | 1 | 1 | 0 | 1 | 5 | 1 |
| 0 | 36 | 65 | 1 | 2 | 0 | 1 | 4 | 0 |
| 22 | 36 | 65 | 1 | 2 | 0 | 1 | 4 | 8 |
| 0 | 48 | 88 | 1 | 1 | 0 | 1 | 5 | 0 |

**Findings from cluster 6(full cluster is displayed)::**

1. Only cluster which has grater then 4 pets.
2. All of them are not social drinker.
3. All of them are social smoker.
4. We can say those who have 1 son they have 5 pets from this cluster.

**Cluster 7:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reason for absence | Distance from Residence to Work | Absenteeism time in hours | Age | Social smoker | Education | Son | Social drinker | weight | Pet | Transportation expense |
| 19 | 20 | 8 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 23 | 13 | **2** | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 13 | 51 | 3 | 38 | 1 | 1 | 0 | 1 | 89 | 0 | 179 |
| 13 | 25 | 24 | 41 | 1 | 1 | 0 | 1 | 67 | 0 | 246 |
| 13 | 51 | 24 | 38 | 1 | 1 | 0 | 1 | 89 | 0 | 179 |
| 23 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 13 | 36 | 16 | 33 | 1 | 1 | 2 | 1 | 90 | 1 | 289 |
| 13 | 36 | 8 | 33 | 1 | 1 | 2 | 1 | 90 | 1 | 289 |
| 13 | 36 | 24 | 33 | 1 | 1 | 2 | 1 | 90 | 1 | 289 |
| 13 | 13 | 24 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 13 | 13 | 8 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 23 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 13 | 13 | 80 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 1 | 13 | 8 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 13 | 13 | 3 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 23 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 26 | 20 | 8 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 28 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 23 | 20 | 2 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 23 | 20 | 2 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 28 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 28 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 23 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 26 | 20 | 8 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 28 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 13 | 20 | 8 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 23 | 13 | 2 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 14 | 13 | 3 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 13 | 13 | 8 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 23 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 13 | 13 | 120 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 13 | 20 | 16 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 26 | 20 | 8 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 23 | 13 | 2 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 23 | 13 | 1 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 26 | 20 | 8 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 26 | 20 | 8 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 26 | 20 | 8 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 28 | 15 | 2 | 41 | 1 | 4 | 2 | 1 | 94 | 2 | 225 |
| 23 | 13 | 3 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 14 | 13 | 2 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 19 | 15 | 3 | 41 | 1 | 4 | 2 | 1 | 94 | 2 | 225 |
| 26 | 20 | 8 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 14 | 15 | 8 | 41 | 1 | 4 | 2 | 1 | 94 | 2 | 225 |
| 22 | 15 | 8 | 41 | 1 | 4 | 2 | 1 | 94 | 2 | 225 |
| 23 | 13 | 2 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 5 | 13 | 3 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 19 | 13 | 24 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 19 | 13 | 3 | 50 | 1 | 1 | 1 | 1 | 98 | 0 | 118 |
| 26 | 20 | 4 | 43 | 1 | 1 | 1 | 1 | 106 | 0 | 235 |
| 0 | 14 | 0 | 40 | 1 | 1 | 1 | 1 | 98 | 8 | 118 |

**Findings from cluster 7:**

1. Only cluster where persons have highest weight “98”.
2. Only this cluster has highest average age 45.
3. Only cluster have lowest average distance and transportation cost.

**Method Follows:** **Hierarchical clustering**

|  |
| --- |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |
| 1 |