



DATA MINING CLASSIFICATION APPLIED FOR TYPES OF PYREXIA ANALYSIS USING SPSS

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ABSTRACT

This case study entitled as “TYPES OF PYREXIA” was done by using Statistical Package for the Social Sciences (SPSS). The main objective of this case study is to find out which predict the various classes for the people who were affected by very dangerous pyrexia. In this case study has collected the data from several peoples in Theni district. This case study helps to classify, which category of peoples are affected which type of pyrexia. In this case study had the information about all type of pyrexia like SCARLET, TYPHOID, DENGUE, EBOLA, VIRAL, PNEMONIA, RHEUMATIC, CHIKUNGUNIYA, PARASITIC, MALARIA. This process was done by using the data mining process and graph representation in SPSS.

KEYWORDS: Data mining, Pyrexia, Classification Technique, Graph representation, SPSS

INTRODUCTION

Theni is one of the city in Tamilnadu. Many people were alive in that place. Each one has affected by some diseases. Here we have taken Patient ID, Sex, Age, Nausea, vomiting, sore throat, headache, loss of appetite, high pyrexia, diarrhea, chest pain, shortness of breath, muscle aches, cough, pain of joints, disease, for classification. Here we collected the data from individual person about their disease around the Theni district.

In this case study predicted various classes of pyrexia such as SCARLET, TYPHOID, DENGUE, EBOLA, VIRAL, PNEMONIA, RHEUMATIC, CHIKUNGUNIYA, PARASITIC, MALARIA. In our case study is to classify the disease belongs to the people’s symptoms. For example, SCARLET pyrexia has the symptoms of Nausea, vomiting, sore throat, headache, loss of appetite. TYPHOID pyrexia has the symptoms of Loss of appetite, headache, high pyrexia and diarrhea. PNEMONIA pyrexia has the symptoms of High pyrexia, shortness of breath, chest pain.

DENGUE pyrexia has the symptoms of High pyrexia, headache, nausea, vomiting, muscle aches. EBOLA pyrexia has the symptoms of High pyrexia, headache, muscle aches, loss of appetite, vomiting, diarrhea, sore throat. VIRAL pyrexia has the symptoms of High pyrexia, muscle aches, sore throat, head ache, cough, and diarrhea. CHIKUNGUNIYA has the symptoms of Head ache, nausea, vomiting, high pyrexia, pain of joints, muscle pain. PARASITIC pyrexia has the symptoms of Diarrhea, loss of appetite, cough, high pyrexia, vomiting. RHEUMATIC pyrexia had the symptoms of High pyrexia, pain of joints, chest



pain. MALARIA has the symptoms of High pyrexia, headache, nausea, vomiting, cough, muscle pain. In our case study is to classify the disease belongs to the people’s symptoms.

METHODOLOGY

In this case study, we have classified the disease according to the people’s symptoms using data mining techniques.

We need to use learning algorithms that can produce result in order to rank the testing examples. Algorithm which is used in classification called as graph representation. Graph methods build a collection of rules for use as a predictive model.

Step1

In this first step we created a variable view. Input variables are identified. They are declared as var1 as Patient ID, var2 as Sex, var3 as Age, var4 as Nausea, var5 as vomiting, var6 as sore throat, var7 as headache, var8 as loss of appetite, var9 as high pyrexia, var10 as diarrhea, var11 as chest pain, var12 as shortness of breath, var13 as muscle aches, var14 as cough, var15 as pain of joints, and var16 as disease.

| | Name | Type | Width | Decimals | Label | Values | Missing | Columns | Align | Measure | Role |
|----|--------------|----------------|-------|----------|-------|--------|---------|---------|-------|---------|-------|
| 1 | PATIENTID | Restricted ... | 3 | 0 | | None | None | 8 | Right | Unknown | Input |
| 2 | SEX | String | 6 | 0 | | None | None | 8 | Left | Nominal | Input |
| 3 | AGE | String | 12 | 0 | | None | None | 8 | Left | Nominal | Input |
| 4 | NAUSEA | String | 8 | 0 | | None | None | 9 | Left | Nominal | Input |
| 5 | VOMITING | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 6 | SORETHR... | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 7 | HEADACHE | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 8 | LOSSOFAP... | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 9 | HIGHFEVER | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 10 | DIARRHEA | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 11 | CHESTPAIN | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 12 | SHORTNES... | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 13 | MUSCLEA... | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 14 | COUGH | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 15 | PAINOFJOI... | String | 8 | 0 | | None | None | 8 | Left | Nominal | Input |
| 16 | DISEASE | String | 20 | 0 | | None | None | 14 | Left | Nominal | Input |
| 17 | VAR00001 | String | 15 | 0 | | None | None | 15 | Left | Nominal | Input |

Step2

In this second step, we want to fill our collected data in data view.



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| | PATIENTID | SEX | AGE | HAIKHA | VOMITING | SORETHROAT | HEADACHE | LOSSOFAFFETITE | HIGHFEVER | DIARRHEA | CHESTPAIN | SHORTNESSOFBREATH | MUSCLEACHES | COUGH | PAINPOINTS | DISEASE |
|----|-----------|--------|-------------|--------|----------|------------|----------|----------------|-----------|----------|-----------|-------------------|-------------|-------|------------|-----------------|
| 1 | 001 | female | young | YES | YES | YES | YES | YES | NO | NO | NO | NO | NO | NO | NO | SCARLET FEVER |
| 2 | 002 | male | senior | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 3 | 003 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 4 | 004 | female | senior | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 5 | 005 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 6 | 006 | female | senior | NO | YES | NO | NO | YES | YES | YES | NO | NO | NO | YES | NO | PARASITIC FEVER |
| 7 | 007 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 8 | 008 | female | young | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 9 | 009 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNYA |
| 10 | 010 | female | senior | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | VIRAL FEVER |
| 11 | 011 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 12 | 012 | female | senior | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 13 | 013 | female | young | YES | YES | YES | YES | YES | NO | NO | NO | NO | NO | NO | NO | SCARLET FEVER |
| 14 | 014 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 15 | 015 | male | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 16 | 016 | female | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 17 | 017 | female | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 18 | 018 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 19 | 019 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 20 | 020 | male | middle aged | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 21 | 021 | female | middle aged | YES | YES | YES | YES | YES | NO | NO | NO | NO | NO | NO | NO | SCARLET FEVER |
| 22 | 022 | female | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 23 | 023 | female | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 24 | 024 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 25 | 025 | male | senior | NO | YES | NO | NO | YES | YES | YES | NO | NO | NO | YES | NO | PARASITIC FEVER |
| 26 | 026 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNYA |
| 27 | 027 | female | young | YES | YES | YES | YES | YES | NO | NO | NO | NO | NO | NO | NO | SCARLET FEVER |
| 28 | 028 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 29 | 029 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 30 | 030 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |

Data View Variable View



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41: SEX female Visible: 17 of 17 Variable

| | PATIENTID | SEX | AGE | NAUSEA | VOMITING | SOBETHROAT | HEADACHE | LOSSOFAPETITE | HIGHFEVER | DIARRHEA | CHESTPAIN | SHORTNESSOFBREATH | MUSCLEACHES | COUGH | PAINPOINTS | DISEASE |
|----|-----------|--------|-------------|--------|----------|------------|----------|---------------|-----------|----------|-----------|-------------------|-------------|-------|------------|-----------------|
| 31 | 031 | male | senior | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 32 | 032 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 33 | 033 | female | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNIYA |
| 34 | 034 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNIYA |
| 35 | 035 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 36 | 036 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNIYA |
| 37 | 037 | female | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 38 | 038 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 39 | 039 | male | senior | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 40 | 040 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 41 | 041 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 42 | 042 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNIYA |
| 43 | 043 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 44 | 044 | male | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 45 | 045 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 46 | 046 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNIYA |
| 47 | 047 | male | young | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 48 | 048 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 49 | 049 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 50 | 050 | female | middle aged | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 51 | 051 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 52 | 052 | female | middle aged | NO | YES | NO | NO | YES | YES | YES | NO | NO | NO | YES | NO | PARASTIC FEVER |
| 53 | 053 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNIYA |
| 54 | 054 | male | senior | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | VIRAL FEVER |
| 55 | 055 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 56 | 056 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 57 | 057 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNIYA |
| 58 | 058 | female | young | NO | YES | NO | NO | YES | YES | YES | NO | NO | NO | YES | NO | PARASTIC FEVER |
| 59 | 059 | female | young | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 60 | 060 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |

Data View Variable View



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CHIKUNGUNYA Visible: 17 of 17 Variables

| | PATIENTID | SEX | AGE | NAUSEA | VOMITING | SURGETHROAT | HEADACHE | LOSSOFAPPETITE | HIGHFEVER | DIARRHEA | CHESTPAIN | SHORTNESSOFBREATH | MUSCLEACHES | COUGH | PAINJOINTS | DISEASE |
|----|-----------|--------|-------------|--------|----------|-------------|----------|----------------|-----------|----------|-----------|-------------------|-------------|-------|------------|-----------------|
| 61 | 061 | female | young | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | VIRAL FEVER |
| 62 | 062 | male | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 63 | 063 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKUNGUNYA |
| 64 | 064 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 65 | 065 | female | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 66 | 066 | male | middle aged | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | VIRAL FEVER |
| 67 | 067 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 68 | 068 | male | young | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | VIRAL FEVER |
| 69 | 069 | female | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 70 | 070 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 71 | 071 | female | young | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | VIRAL FEVER |
| 72 | 072 | male | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 73 | 073 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKUNGUNYA |
| 74 | 074 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 75 | 075 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 76 | 076 | female | senior | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 77 | 077 | male | young | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 78 | 078 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 79 | 079 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 80 | 080 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 81 | 081 | male | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 82 | 082 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 83 | 083 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 84 | 084 | male | young | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 85 | 085 | male | young | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 86 | 086 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 87 | 087 | female | young | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | VIRAL FEVER |
| 88 | 088 | male | young | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 89 | 089 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 90 | 090 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |

Data View Variable View



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CHIKUNGUNYA Visible: 17 of 17 Variables

| | PATIENTID | SEX | AGE | NAUSEA | VOMITING | SORETHROAT | HEADACHE | LOSSOFAPPETITE | HIGHFEVER | DIARRHEA | CHESTPAIN | SHORTNESSOFBREATH | MUSCLEACHES | COUGH | PAINPOINTS | DISEASE |
|-----|-----------|--------|-------------|--------|----------|------------|----------|----------------|-----------|----------|-----------|-------------------|-------------|-------|------------|-----------------|
| 91 | 091 | female | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 92 | 092 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 93 | 093 | male | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 94 | 094 | female | young | NO | YES | NO | NO | YES | YES | YES | NO | NO | NO | YES | NO | PARASITIC FEVER |
| 95 | 095 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 96 | 096 | male | young | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 97 | 097 | male | young | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 98 | 098 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 99 | 099 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 100 | 100 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 101 | 101 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 102 | 102 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 103 | 103 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 104 | 104 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 105 | 105 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 106 | 106 | female | young | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 107 | 107 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 108 | 108 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 109 | 109 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 110 | 110 | female | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 111 | 111 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 112 | 112 | female | young | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | VIRAL FEVER |
| 113 | 113 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 114 | 114 | female | young | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 115 | 115 | female | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 116 | 116 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 117 | 117 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 118 | 118 | male | young | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 119 | 119 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 120 | 120 | female | middle aged | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |

Data View Variable View



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| | PATIENTID | SEX | AGE | NAUSEA | VOMITING | SORETHROAT | HEADACHE | LOSSOFAPETITE | HIGHFEVER | DIARRHEA | CHESTPAIN | SHORTNESSOFBREATH | MUSCLEACHES | COUGH | PAININJOINTS | DISEASE |
|-----|-----------|--------|-------------|--------|----------|------------|----------|---------------|-----------|----------|-----------|-------------------|-------------|-------|--------------|-----------------|
| 121 | 121 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 122 | 122 | male | young | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 123 | 123 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 124 | 124 | female | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 125 | 125 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 126 | 126 | female | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 127 | 127 | male | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 128 | 128 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 129 | 129 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 130 | 130 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 131 | 131 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 132 | 132 | female | middle aged | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 133 | 133 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 134 | 134 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 135 | 135 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 136 | 136 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 137 | 137 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 138 | 138 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 139 | 139 | female | young | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 140 | 140 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 141 | 141 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 142 | 142 | male | young | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 143 | 143 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 144 | 144 | male | middle aged | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 145 | 145 | female | young | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 146 | 146 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 147 | 147 | female | middle aged | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | VIRAL FEVER |
| 148 | 148 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 149 | 149 | male | young | NO | YES | NO | NO | YES | YES | YES | NO | NO | NO | YES | NO | PARASTIC FEVER |
| 150 | 150 | female | young | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |

Data View Variable View



SUDHA.sav [DataSet1] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

Visible: 17 of 17 Variables

| | PATIENTID | SEX | AGE | NAUSEA | VOMITING | SORETHROAT | HEADACHE | LOSSOFAPETITE | HIGHFEVER | DIARRHEA | CHESTPAIN | SHORTNESSOFBREATH | MUSCLEACHES | COUGH | PAINOFJOINTS | DISEASE |
|-----|-----------|--------|-------------|--------|----------|------------|----------|---------------|-----------|----------|-----------|-------------------|-------------|-------|--------------|-----------------|
| 151 | 151 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 152 | 152 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 153 | 153 | female | young | NO | YES | YES | YES | YES | YES | NO | NO | NO | YES | NO | NO | EBOLA FEVER |
| 154 | 154 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 155 | 155 | female | young | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 156 | 156 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 157 | 157 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 158 | 158 | male | middle aged | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 159 | 159 | female | young | NO | NO | NO | NO | NO | YES | NO | YES | YES | NO | NO | NO | PNEUMONIA FEVER |
| 160 | 160 | male | young | NO | NO | NO | NO | NO | YES | NO | YES | NO | NO | NO | YES | RHEUMATIC FEVER |
| 161 | 161 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 162 | 162 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 163 | 163 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 164 | 164 | male | young | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | NIRAL FEVER |
| 165 | 165 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKUNGUNYA |
| 166 | 166 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 167 | 167 | female | young | NO | NO | YES | YES | NO | YES | YES | NO | NO | YES | YES | NO | NIRAL FEVER |
| 168 | 168 | male | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 169 | 169 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKUNGUNYA |
| 170 | 170 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 171 | 171 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 172 | 172 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 173 | 173 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 174 | 174 | female | young | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 175 | 175 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 176 | 176 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKUNGUNYA |
| 177 | 177 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | YES | NO | MALARIA |
| 178 | 178 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |
| 179 | 179 | male | young | NO | YES | NO | NO | YES | YES | YES | NO | NO | NO | YES | NO | PARASITIC FEVER |
| 180 | 180 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGUE FEVER |

Data View Variable View



SUDHA.sav [DataSet1] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze DirectMarketing Graphs Utilities Add-ons Window Help

81: SEX male Visible: 17 of 17 Variables

| | PATIENTID | SEX | AGE | NAUSEA | VOMITING | SORETHROAT | HEADACHE | LOSSOFAPETITE | HIGHFEVER | DIARRHEA | CHESTPAIN | SHORTNESSOFBREATH | MUSCLEACHES | COUGH | PAINPOINTS | DISEASE |
|-----|-----------|--------|-------------|--------|----------|------------|----------|---------------|-----------|----------|-----------|-------------------|-------------|-------|------------|-----------------|
| 181 | 181 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |
| 182 | 182 | male | young | NO | YES | NO | NO | YES | YES | NO | NO | NO | NO | YES | NO | PARASITIC FEVER |
| 183 | 183 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |
| 184 | 184 | male | young | NO | YES | NO | NO | YES | YES | NO | NO | NO | NO | YES | NO | PARASITIC FEVER |
| 185 | 185 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |
| 186 | 186 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNYA |
| 187 | 187 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |
| 188 | 188 | female | middle aged | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 189 | 189 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNYA |
| 190 | 190 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNYA |
| 191 | 191 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |
| 192 | 192 | male | young | NO | YES | NO | NO | YES | YES | NO | NO | NO | NO | YES | NO | PARASITIC FEVER |
| 193 | 193 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |
| 194 | 194 | female | senior | NO | NO | NO | YES | YES | YES | YES | NO | NO | NO | NO | NO | TYPHOID FEVER |
| 195 | 195 | male | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |
| 196 | 196 | male | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | YES | CHIKINGUNYA |
| 197 | 197 | female | middle aged | NO | YES | YES | YES | YES | YES | YES | NO | NO | YES | NO | NO | EBOLA FEVER |
| 198 | 198 | female | young | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |
| 199 | 199 | female | middle aged | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |
| 200 | 200 | male | senior | YES | YES | NO | YES | NO | YES | NO | NO | NO | YES | NO | NO | DENGE FEVER |

Step3

Training log is used to find out the miss classify of the given class

→ Frequencies

[DataSet1] D:\New Folder (5)\SUDHA.sav

Statistics

Indicator of each last matching case as Primary

| | | |
|---|---------|-----|
| N | Valid | 200 |
| | Missing | 0 |

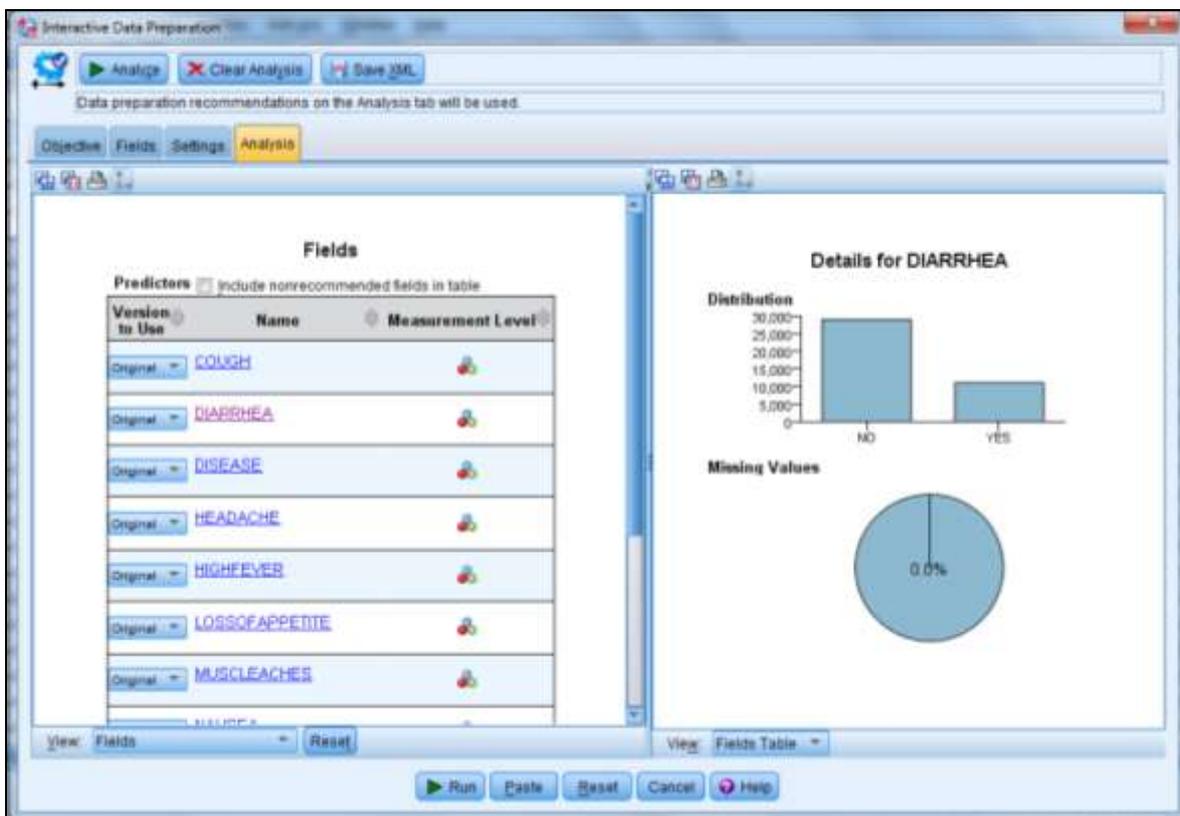
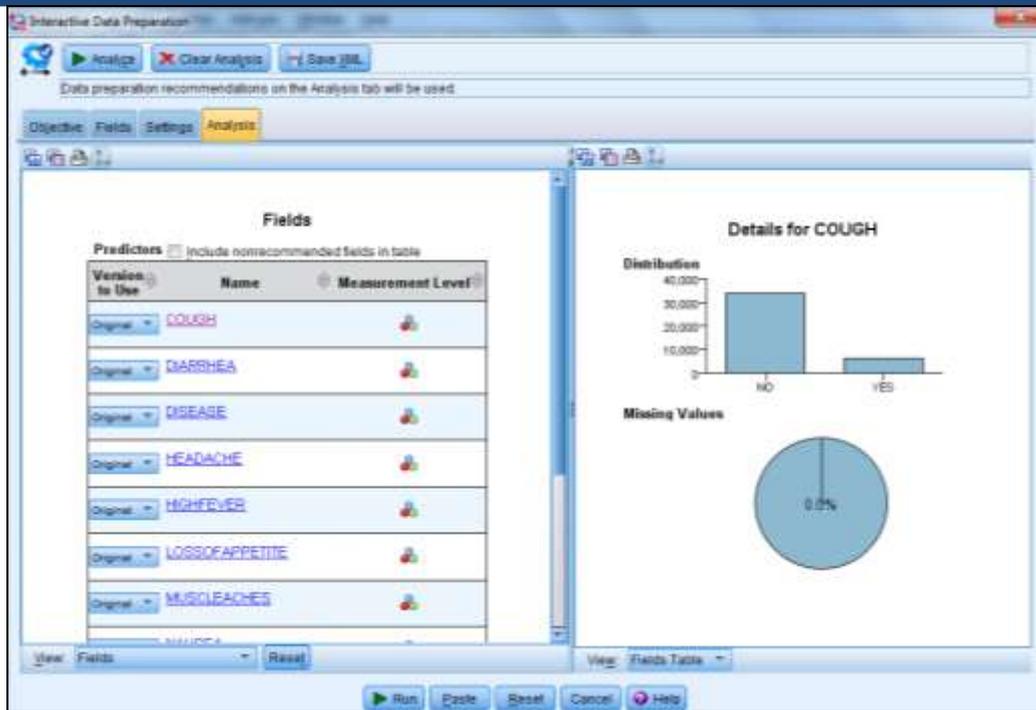
Indicator of each last matching case as Primary

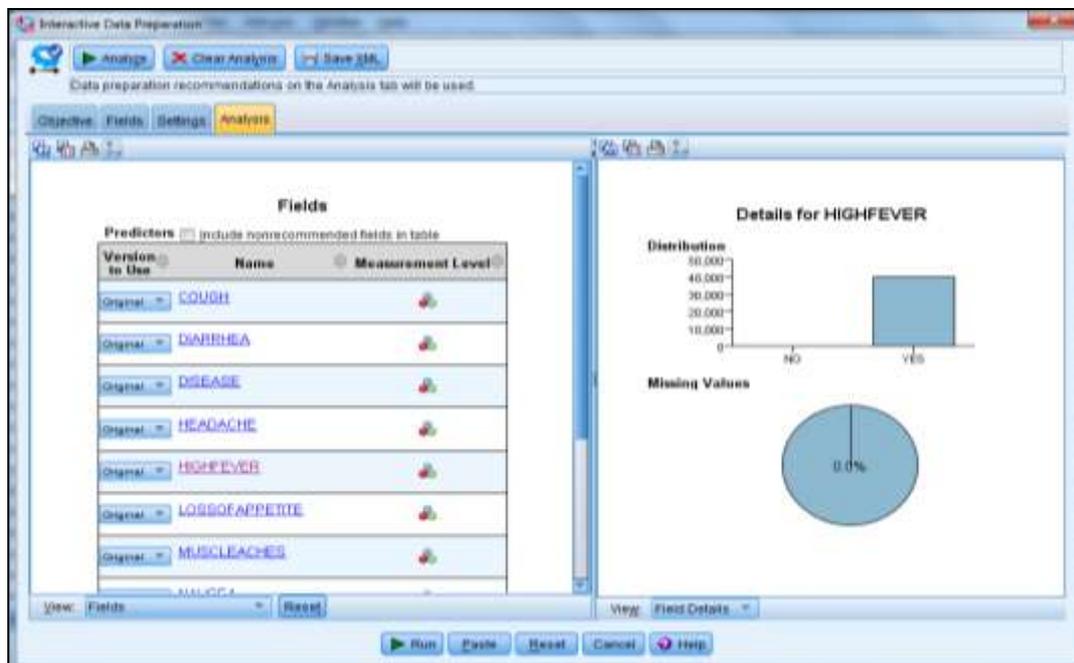
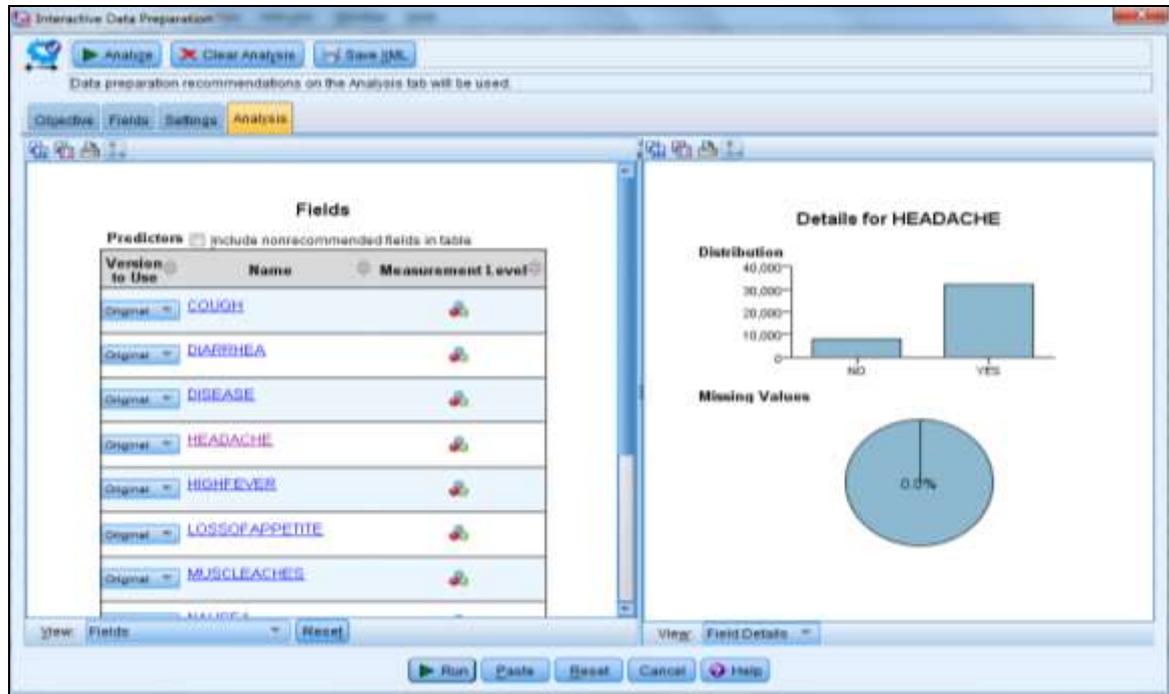
| | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------------|-----------|---------|---------------|--------------------|
| Valid Duplicate Case | 150 | 75.0 | 75.0 | 75.0 |
| Primary Case | 50 | 25.0 | 25.0 | 100.0 |
| Total | 200 | 100.0 | 100.0 | |

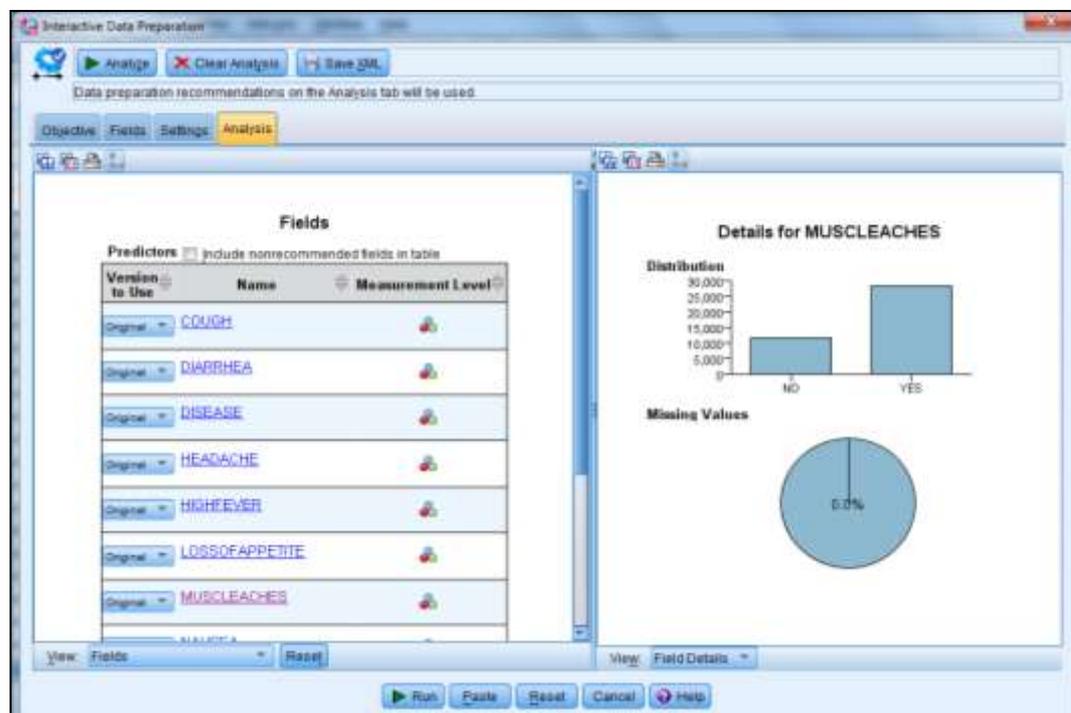
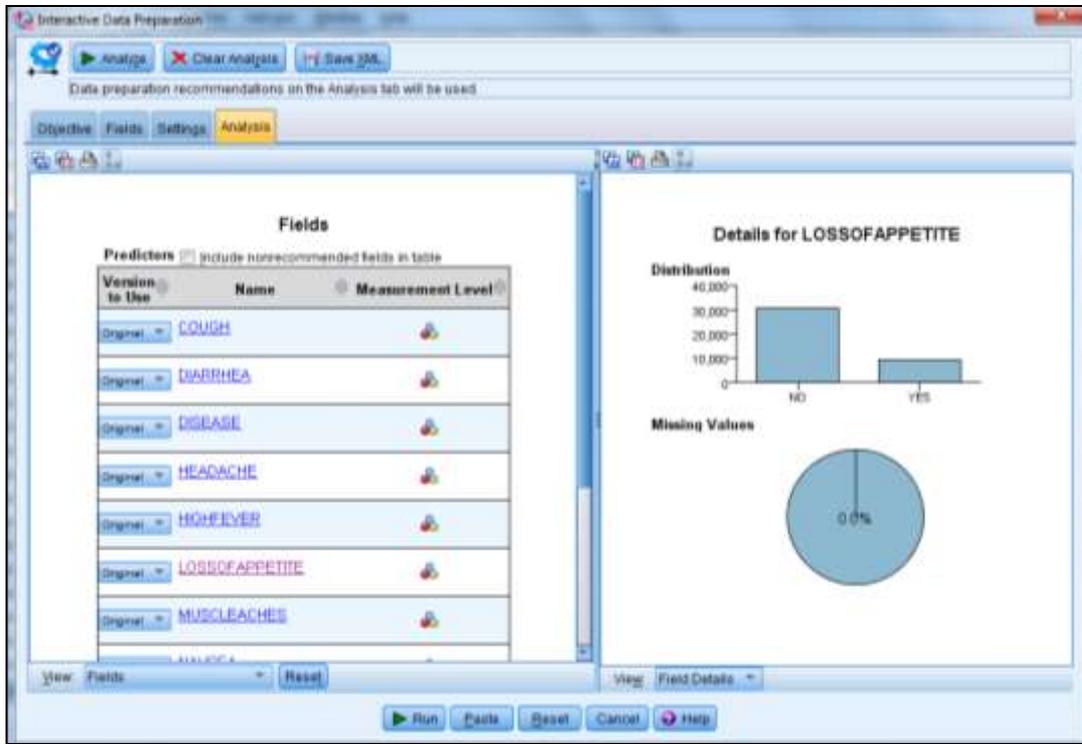
EXECUTE.

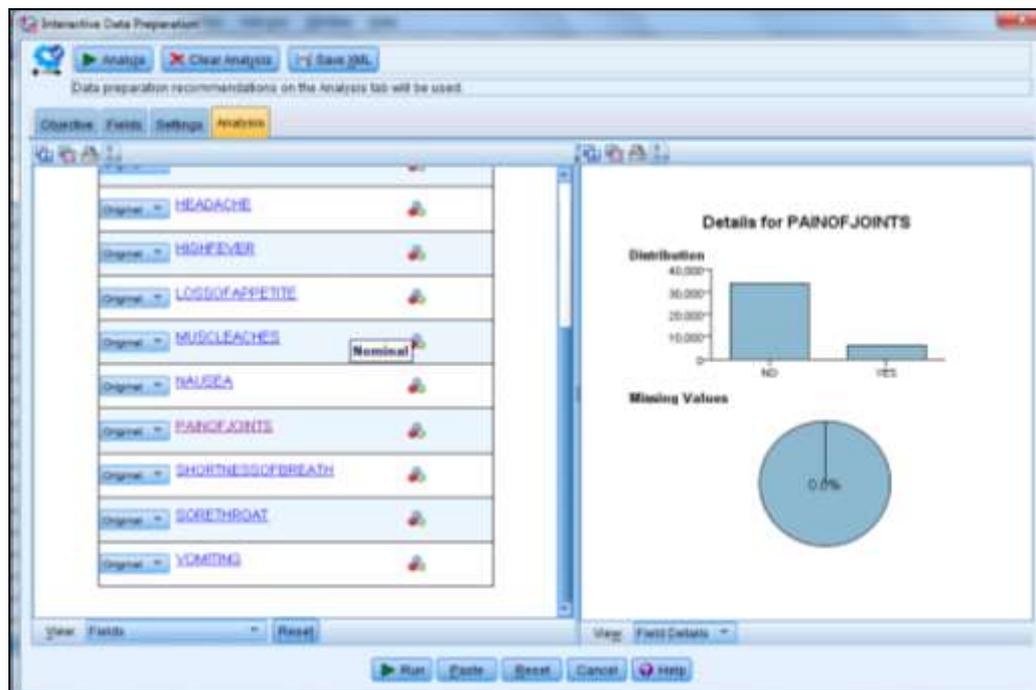
Step4

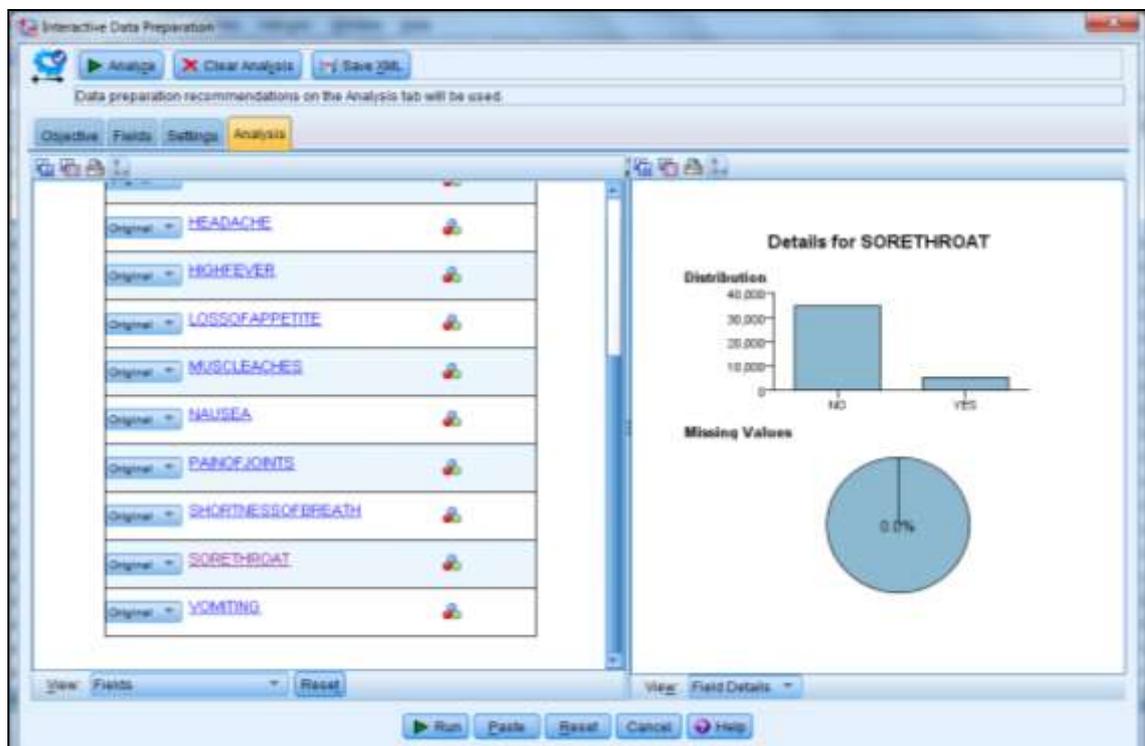
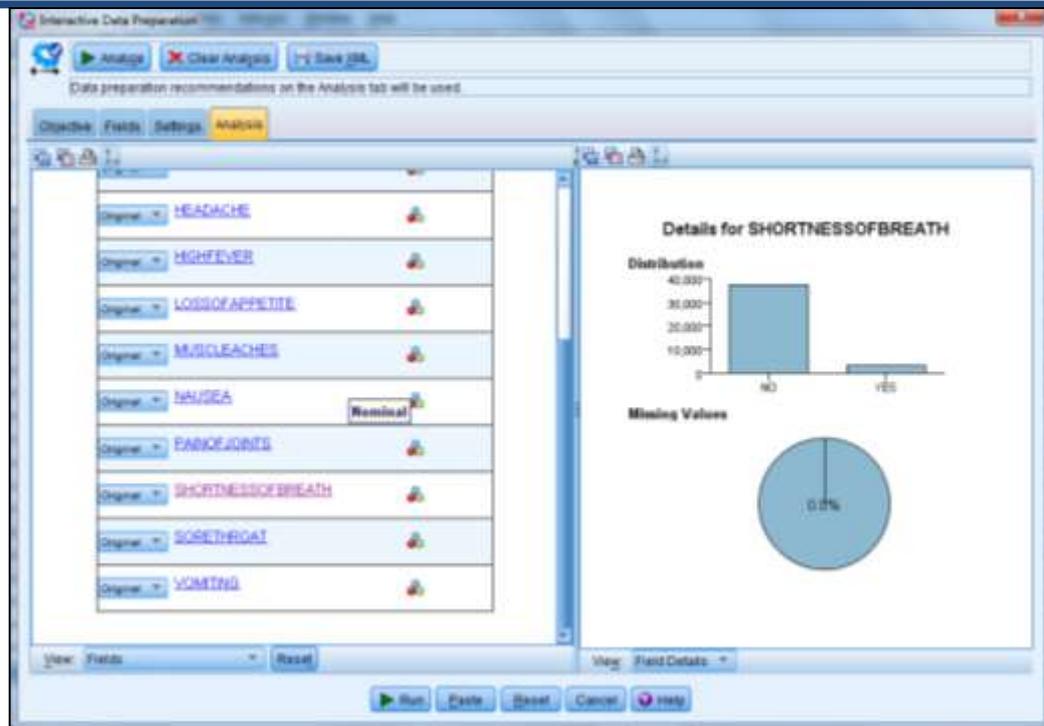
In this step, Training log is used to find out the miss classify of the each and every tuple.

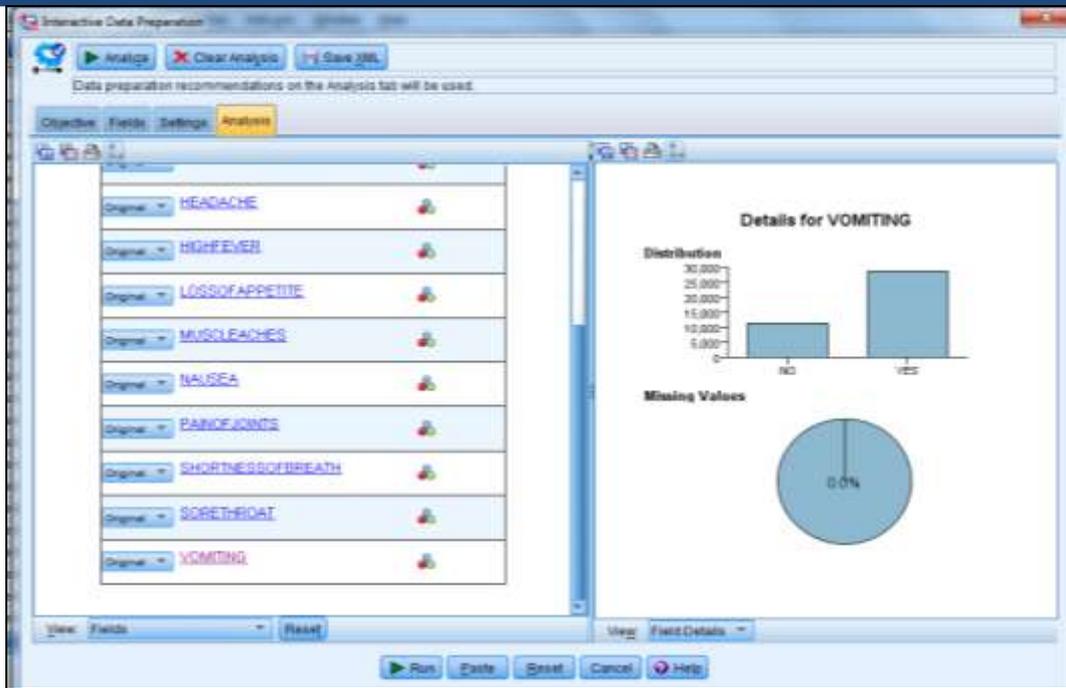






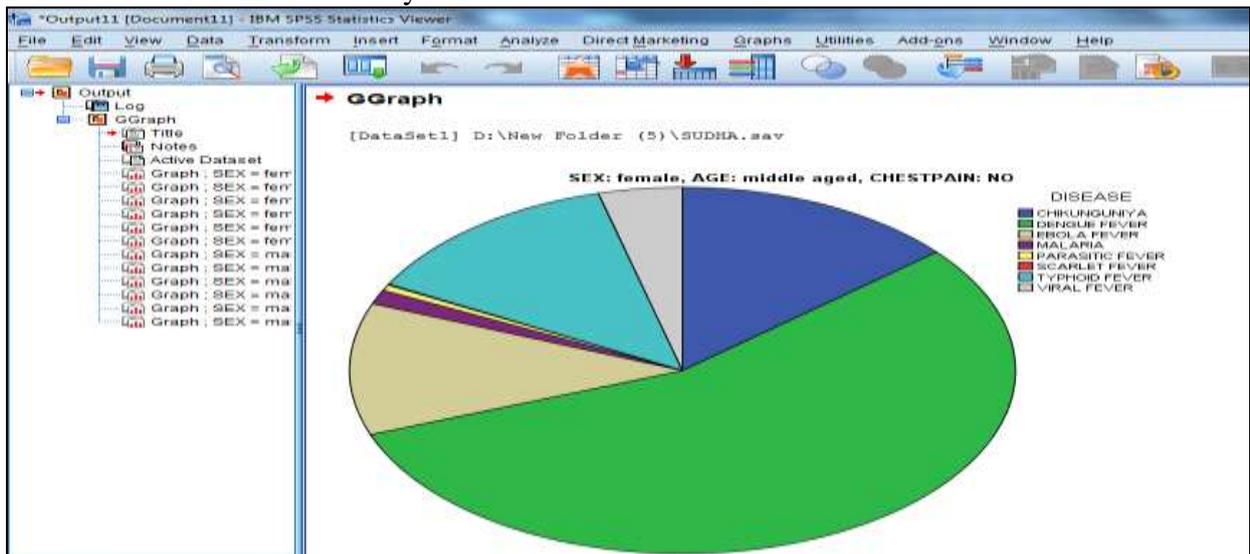


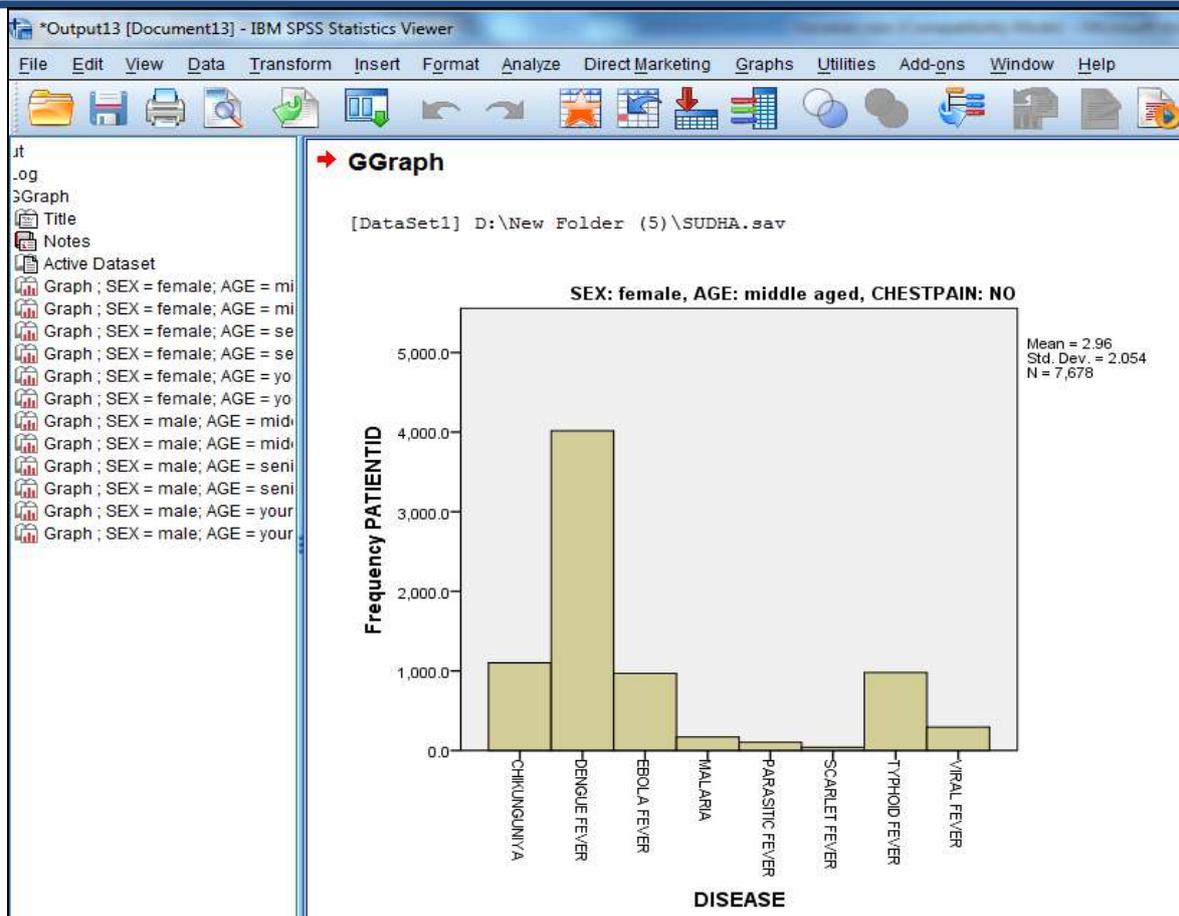




Step5

In this step, the graph was constructed with the corresponding attribute such as disease. The graph is selected by that high probability value. Finally, in this step to classify the actual class to predicted classes in given data such as SCARLET PYREXIA, TYPHOID PYREXIA, DENGUE PYREXIA, EBOLA PYREXIA, VIRAL PYREXIA, PNEMONIA PYREXIA, RHEUMATIC PYREXIA CHIKUNGUNIYA, PARASITIC pyrexia, MALARIA will be get from this step. The overall elapse time to run the SPSS for this case study is 1Sec.





DATA MINING FINDINGS

The initial studies unveiled a number of relationships between variables as well as threshold values that justify further analysis. The several values of several attributes are useful predictors of retention and/or attrition. These explanations increase our confidence that the values of these attributes will continue to be predictors in the future.

We have to classify how many persons are affected by SCARLET, TYPHOID, DENGUE, EBOLA, VIRAL, PNEMONIA, RHEUMATIC, CHIKUNGUNIYA, PARASITIC, and MALARIA by using SPSS.

CONCLUSION

The goal of classification was to build a set of models that can correctly predict the class of the different objects. The input to this method is set of objects (i.e., training data), the classes which these objects belongs to (i.e., dependent variables), and a set variables describing different characteristics of the objects (i.e., independent variables). Once such a predictive model is built, it can be used to predict the class of the objects for which class information is not known a priori.

Hereby, we collected all the data about which type of pyrexia were affected the people according to their symptoms. In before, the case study was done difficult to classify the pyrexia



disease according to their symptoms. After completed this case study, was useful for classify the diseases in easier way.

REFERENCES

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