

Output of the program.

The following displays the output for each train and test files.

1) train.dat ; test.dat

Decision Tree Display:

```
Attribute 5 = Branch 0 :
| Attribute 6 = Branch 0 :
| | Attribute 2 = Branch 1 :
| | | Attribute 4 = Branch 0 :
| | | | Attribute 3 = Branch 0 :
| | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 0 : Leaf Node -> Class = 0
| | | | Attribute 3 = Branch 1 :
| | | | | Attribute 1 = Branch 0 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 4 = Branch 1 :
| | | | Attribute 1 = Branch 0 :
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | Attribute 2 = Branch 0 :
| | | Attribute 1 = Branch 0 :
| | | | Attribute 4 = Branch 0 :
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 4 = Branch 1 :
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 1 :
| | | | Attribute 4 = Branch 1 :
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | | Attribute 4 = Branch 0 :
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| Attribute 6 = Branch 1 :
| | Attribute 4 = Branch 1 :
| | | Attribute 2 = Branch 0 :
| | | | Attribute 1 = Branch 0 :
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 1 :
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 0 :
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 1
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 1
```

```

| | Attribute 4 = Branch 0 :
| | | Attribute 2 = Branch 0 :
| | | | Attribute 3 = Branch 1 :
| | | | | Attribute 1 = Branch 0 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 3 = Branch 0 :
| | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 0 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 1 :
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 0 :
| | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 0
Attribute 5 = Branch 1 :
| | Attribute 6 = Branch 0 :
| | | Attribute 3 = Branch 0 :
| | | | Attribute 4 = Branch 1 :
| | | | | Attribute 1 = Branch 0 :
| | | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 1
| | | | | | Attribute 2 = Branch 0 : Leaf Node -> Class = 1
| | | | | Attribute 1 = Branch 1 :
| | | | | | Attribute 2 = Branch 0 : Leaf Node -> Class = 0
| | | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 4 = Branch 0 :
| | | | | Attribute 1 = Branch 1 :
| | | | | | Attribute 2 = Branch 0 : Leaf Node -> Class = 0
| | | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 0 :
| | | | | | Attribute 2 = Branch 0 : Leaf Node -> Class = 0
| | | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 3 = Branch 1 :
| | | | | Attribute 2 = Branch 0 :
| | | | | | Attribute 4 = Branch 1 :
| | | | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | | | | | Attribute 1 = Branch 0 : Leaf Node -> Class = 1
| | | | | | Attribute 4 = Branch 0 :
| | | | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | | | | | Attribute 1 = Branch 0 : Leaf Node -> Class = 1
| | | | | Attribute 2 = Branch 1 :
| | | | | | Attribute 1 = Branch 0 :
| | | | | | | Attribute 4 = Branch 0 : Leaf Node -> Class = 1
| | | | | | | Attribute 4 = Branch 1 : Leaf Node -> Class = 1
| | | | | | Attribute 1 = Branch 1 :
| | | | | | | Attribute 4 = Branch 1 : Leaf Node -> Class = 0
| | | | | | | Attribute 4 = Branch 0 : Leaf Node -> Class = 1
Attribute 6 = Branch 1 :
| | | Attribute 4 = Branch 1 :
| | | | Attribute 1 = Branch 0 :
| | | | | Attribute 2 = Branch 1 :
| | | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 0
| | | | | | Attribute 3 = Branch 0 : Leaf Node -> Class = 1
| | | | | Attribute 2 = Branch 0 :
| | | | | | Attribute 3 = Branch 1 : Leaf Node -> Class = 1

```

```

| | | | Attribute 3 = Branch 0 :   Leaf Node  ->   Class = 0
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 2 = Branch 0 :
| | | | | | Attribute 3 = Branch 1 :   Leaf Node  ->   Class = 0
| | | | | | Attribute 3 = Branch 0 :   Leaf Node  ->   Class = 0
| | | | | Attribute 2 = Branch 1 :
| | | | | | Attribute 3 = Branch 1 :   Leaf Node  ->   Class = 0
| | | | | | Attribute 3 = Branch 0 :   Leaf Node  ->   Class = 0
| | | | Attribute 4 = Branch 0 :
| | | | | Attribute 2 = Branch 0 :
| | | | | | Attribute 3 = Branch 0 :
| | | | | | | Attribute 1 = Branch 1 :   Leaf Node  ->   Class = 0
| | | | | | | Attribute 1 = Branch 0 :   Leaf Node  ->   Class = 0
| | | | | | Attribute 3 = Branch 1 :
| | | | | | | Attribute 1 = Branch 0 :   Leaf Node  ->   Class = 0
| | | | | | | Attribute 1 = Branch 1 :   Leaf Node  ->   Class = 0
| | | | Attribute 2 = Branch 1 :
| | | | | Attribute 1 = Branch 0 :
| | | | | | Attribute 3 = Branch 1 :   Leaf Node  ->   Class = 0
| | | | | | Attribute 3 = Branch 0 :   Leaf Node  ->   Class = 0
| | | | | Attribute 1 = Branch 1 :
| | | | | | Attribute 3 = Branch 0 :   Leaf Node  ->   Class = 0
| | | | | | Attribute 3 = Branch 1 :   Leaf Node  ->   Class = 0

```

Accuracy of training data:

correct : 711

wrong : 89

Accuracy in % : 88.0

Accuracy of test data:

correct : 173

wrong : 30

Accuracy in % : 85.0

2) train-1.dat ; test-1.dat

Decision Tree Display:

```

Attribute 5 = Branch 3 :
| Attribute 6 = Branch 1 :
| | Attribute 4 = Branch 1 :
| | | Attribute 3 = Branch 1 :
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 2 = Branch 1 :   Leaf Node  ->   Class = 1
| | | | | Attribute 2 = Branch 2 :   Leaf Node  ->   Class = 0
| | | | Attribute 1 = Branch 2 :
| | | | | Attribute 2 = Branch 1 :   Leaf Node  ->   Class = 0
| | | | | Attribute 2 = Branch 2 :   Leaf Node  ->   Class = 1
| | | Attribute 3 = Branch 2 :
| | | | Attribute 1 = Branch 2 :   Leaf Node  ->   Class = 0
| | Attribute 4 = Branch 2 :
| | | Attribute 1 = Branch 1 :

```

```

| | | Attribute 2 = Branch 1 : Leaf Node -> Class = 1
| | | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 2 :
| | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | Attribute 4 = Branch 3 :
| | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| Attribute 6 = Branch 2 :
| | Attribute 3 = Branch 1 :
| | | Attribute 4 = Branch 1 :
| | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| | | Attribute 4 = Branch 3 :
| | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | Attribute 4 = Branch 2 :
| | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| | Attribute 3 = Branch 2 :
| | | Attribute 1 = Branch 1 :
| | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 2 :
| | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
| | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 3 :
| | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 1
| Attribute 5 = Branch 2 :
| | Attribute 4 = Branch 3 :
| | | Attribute 3 = Branch 1 :
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 1
| | | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 2 :
| | | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 3 :
| | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 1
| | | Attribute 3 = Branch 2 :
| | | | Attribute 2 = Branch 2 :
| | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 0
| | | | Attribute 2 = Branch 3 :
| | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| | | | Attribute 2 = Branch 1 :
| | | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 0
| | Attribute 4 = Branch 1 :
| | | Attribute 1 = Branch 1 :

```

```

| | | Attribute 2 = Branch 1 : Leaf Node -> Class = 1
| | | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | Attribute 1 = Branch 2 :
| | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
| | Attribute 1 = Branch 3 :
| | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 3 : Leaf Node -> Class = 1
| Attribute 4 = Branch 2 :
| | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
Attribute 5 = Branch 4 :
| Attribute 1 = Branch 1 :
| | Attribute 2 = Branch 1 : Leaf Node -> Class = 1
| | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| Attribute 1 = Branch 2 :
| | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
| | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| Attribute 1 = Branch 3 :
| | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | Attribute 2 = Branch 3 : Leaf Node -> Class = 1
Attribute 5 = Branch 1 :
| Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| Attribute 1 = Branch 3 : Leaf Node -> Class = 1

```

Accuracy of training data:
correct : 124
wrong : 0
Accuracy in % : 100.0

Accuracy of test data:
correct : 172
wrong : 44
Accuracy in % : 79.0

3) train-2.dat ; test-2.dat

Decision Tree Display:

```

Attribute 5 = Branch 2 :
| Attribute 3 = Branch 1 :
| | Attribute 4 = Branch 1 :
| | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
| | Attribute 4 = Branch 2 :
| | | Attribute 6 = Branch 1 :

```

```

| | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| | | Attribute 6 = Branch 2 :
| | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| | | Attribute 4 = Branch 3 :
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
| | | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 2 :
| | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 1
| | | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 3 :
| | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 1
| | | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
| | | Attribute 3 = Branch 2 :
| | | | Attribute 2 = Branch 1 :
| | | | | Attribute 4 = Branch 3 :
| | | | | | Attribute 1 = Branch 1 :
| | | | | | | Attribute 6 = Branch 2 : Leaf Node -> Class = 1
| | | | | | Attribute 1 = Branch 2 :
| | | | | | | Attribute 6 = Branch 2 : Leaf Node -> Class = 0
| | | | | | Attribute 1 = Branch 3 :
| | | | | | | Attribute 6 = Branch 1 : Leaf Node -> Class = 1
| | | | | | | Attribute 6 = Branch 2 : Leaf Node -> Class = 0
| | | | | Attribute 4 = Branch 1 :
| | | | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| | | | | Attribute 4 = Branch 2 :
| | | | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| | | | Attribute 2 = Branch 2 :
| | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 0
| | | | Attribute 2 = Branch 3 :
| | | | | Attribute 1 = Branch 1 :
| | | | | | Attribute 4 = Branch 3 : Leaf Node -> Class = 1
| | | | | Attribute 1 = Branch 2 :
| | | | | | Attribute 4 = Branch 1 : Leaf Node -> Class = 1
| | | | | | Attribute 4 = Branch 2 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 3 :
| | | | | | Attribute 4 = Branch 2 : Leaf Node -> Class = 0
| | | | | | Attribute 4 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 5 = Branch 4 :
| | | | Attribute 2 = Branch 1 :
| | | | | Attribute 6 = Branch 1 :
| | | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| | | | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 0
| | | | | Attribute 6 = Branch 2 :
| | | | | | Attribute 1 = Branch 1 :
| | | | | | | Attribute 3 = Branch 2 : Leaf Node -> Class = 1

```

```

| | | Attribute 1 = Branch 2 :
| | | | Attribute 3 = Branch 2 :   Leaf Node ->   Class = 0
| | | Attribute 1 = Branch 3 :
| | | | Attribute 4 = Branch 2 :   Leaf Node ->   Class = 1
| | | | Attribute 4 = Branch 1 :   Leaf Node ->   Class = 1
| | | | Attribute 4 = Branch 3 :   Leaf Node ->   Class = 0
Attribute 2 = Branch 2 :
| | | Attribute 1 = Branch 1 :
| | | | Attribute 4 = Branch 2 :
| | | | | Attribute 3 = Branch 1 :   Leaf Node ->   Class = 0
| | | | | Attribute 3 = Branch 2 :   Leaf Node ->   Class = 1
| | | | Attribute 4 = Branch 3 :
| | | | | Attribute 3 = Branch 1 :
| | | | | | Attribute 6 = Branch 1 :   Leaf Node ->   Class = 0
| | | | | | Attribute 6 = Branch 2 :   Leaf Node ->   Class = 1
| | | | | Attribute 3 = Branch 2 :
| | | | | | Attribute 6 = Branch 1 :   Leaf Node ->   Class = 1
| | | | | | Attribute 6 = Branch 2 :   Leaf Node ->   Class = 0
| | | | Attribute 4 = Branch 1 :
| | | | | Attribute 3 = Branch 2 :   Leaf Node ->   Class = 0
Attribute 1 = Branch 2 :
| | | | Attribute 3 = Branch 1 :
| | | | | Attribute 4 = Branch 1 :   Leaf Node ->   Class = 1
| | | | | Attribute 4 = Branch 3 :   Leaf Node ->   Class = 1
| | | | Attribute 3 = Branch 2 :
| | | | | Attribute 6 = Branch 1 :   Leaf Node ->   Class = 1
| | | | | Attribute 6 = Branch 2 :   Leaf Node ->   Class = 0
| | | Attribute 1 = Branch 3 :
| | | | Attribute 3 = Branch 2 :   Leaf Node ->   Class = 0
Attribute 2 = Branch 3 :
| | | | Attribute 3 = Branch 1 :
| | | | | Attribute 4 = Branch 2 :   Leaf Node ->   Class = 0
| | | | | Attribute 4 = Branch 3 :   Leaf Node ->   Class = 1
| | | | Attribute 3 = Branch 2 :
| | | | | Attribute 1 = Branch 1 :   Leaf Node ->   Class = 0
| | | | | Attribute 1 = Branch 2 :   Leaf Node ->   Class = 0
| | | | | Attribute 1 = Branch 3 :   Leaf Node ->   Class = 0
Attribute 5 = Branch 1 :
| | | | Attribute 3 = Branch 1 :
| | | | | Attribute 6 = Branch 1 :
| | | | | | Attribute 1 = Branch 1 :   Leaf Node ->   Class = 0
| | | | | | Attribute 1 = Branch 2 :   Leaf Node ->   Class = 0
| | | | | | Attribute 1 = Branch 3 :   Leaf Node ->   Class = 0
| | | | | Attribute 6 = Branch 2 :
| | | | | | Attribute 1 = Branch 1 :
| | | | | | | Attribute 2 = Branch 1 :   Leaf Node ->   Class = 0
| | | | | | | Attribute 2 = Branch 2 :   Leaf Node ->   Class = 0
| | | | | | | Attribute 2 = Branch 3 :   Leaf Node ->   Class = 0
| | | | | | Attribute 1 = Branch 2 :
| | | | | | | Attribute 2 = Branch 1 :
| | | | | | | | Attribute 4 = Branch 3 :   Leaf Node ->   Class = 0
| | | | | | | Attribute 2 = Branch 3 :
| | | | | | | | Attribute 4 = Branch 1 :   Leaf Node ->   Class = 0
| | | | | | | | Attribute 4 = Branch 3 :   Leaf Node ->   Class = 1
| | | | | Attribute 1 = Branch 3 :

```

```

| | | Attribute 2 = Branch 1 :
| | | | Attribute 4 = Branch 2 : Leaf Node -> Class = 0
| | | | Attribute 4 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 2 :
| | | | Attribute 4 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 4 = Branch 2 : Leaf Node -> Class = 1
Attribute 3 = Branch 2 :
| Attribute 4 = Branch 1 :
| | Attribute 2 = Branch 1 :
| | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 3 : Leaf Node -> Class = 0
| | Attribute 2 = Branch 2 :
| | | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 3 : Leaf Node -> Class = 0
| | Attribute 2 = Branch 3 :
| | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | Attribute 1 = Branch 3 : Leaf Node -> Class = 0
Attribute 4 = Branch 3 :
| Attribute 1 = Branch 1 :
| | Attribute 2 = Branch 1 :
| | | Attribute 6 = Branch 2 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 2 :
| | | | Attribute 6 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 6 = Branch 2 : Leaf Node -> Class = 1
| | Attribute 1 = Branch 2 :
| | | Attribute 2 = Branch 1 :
| | | | Attribute 6 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 6 = Branch 2 : Leaf Node -> Class = 1
| | | Attribute 2 = Branch 2 :
| | | | Attribute 6 = Branch 1 : Leaf Node -> Class = 1
| | Attribute 1 = Branch 3 :
| | | Attribute 2 = Branch 1 : Leaf Node -> Class = 1
| | | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
| | | Attribute 2 = Branch 3 : Leaf Node -> Class = 1
Attribute 4 = Branch 2 :
| Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
Attribute 5 = Branch 3 :
| Attribute 3 = Branch 1 :
| | Attribute 6 = Branch 1 :
| | | Attribute 1 = Branch 1 :
| | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 2 :
| | | | Attribute 4 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 4 = Branch 2 : Leaf Node -> Class = 1
| | | | Attribute 4 = Branch 3 : Leaf Node -> Class = 1
| | | Attribute 1 = Branch 3 :
| | | | Attribute 4 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 4 = Branch 3 : Leaf Node -> Class = 1
| | Attribute 6 = Branch 2 :
| | | Attribute 2 = Branch 2 :

```



```

| | | Attribute 1 = Branch 1 :
| | | | Attribute 4 = Branch 2 : Leaf Node -> Class = 1
| | | | Attribute 4 = Branch 3 : Leaf Node -> Class = 1
| | | Attribute 1 = Branch 2 :
| | | | Attribute 4 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 3 :
| | | | Attribute 4 = Branch 1 : Leaf Node -> Class = 1
| | | | Attribute 4 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 3 :
| | | | Attribute 4 = Branch 1 :
| | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| | | | Attribute 4 = Branch 2 :
| | | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| | | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 2 = Branch 1 :
| | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
Attribute 3 = Branch 2 :
| | | Attribute 4 = Branch 2 :
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 1
| | | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 2 :
| | | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 3 :
| | | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | | Attribute 4 = Branch 3 :
| | | | Attribute 1 = Branch 1 :
| | | | | Attribute 6 = Branch 1 : Leaf Node -> Class = 1
| | | | | Attribute 6 = Branch 2 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 2 :
| | | | | Attribute 2 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 2 = Branch 3 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 3 :
| | | | | Attribute 2 = Branch 2 : Leaf Node -> Class = 0
| | | Attribute 4 = Branch 1 :
| | | | Attribute 2 = Branch 3 :
| | | | | Attribute 1 = Branch 1 :
| | | | | | Attribute 6 = Branch 1 : Leaf Node -> Class = 0
| | | | | | Attribute 6 = Branch 2 : Leaf Node -> Class = 1
| | | | | Attribute 1 = Branch 2 :
| | | | | | Attribute 6 = Branch 1 : Leaf Node -> Class = 1
| | | | Attribute 2 = Branch 2 :
| | | | | Attribute 6 = Branch 2 : Leaf Node -> Class = 0
| | | | | Attribute 6 = Branch 1 : Leaf Node -> Class = 1
| | | | Attribute 2 = Branch 1 :
| | | | | Attribute 6 = Branch 1 : Leaf Node -> Class = 0
| | | | | Attribute 6 = Branch 2 : Leaf Node -> Class = 1

```

Accuracy of training data:
correct : 169
wrong : 0
Accuracy in % : 100.0

Accuracy of test data:
correct : 153
wrong : 63
Accuracy in % : 70.0

4) train-3.dat ; test-3.dat

Decision Tree Display:

```
Attribute 2 = Branch 1 :
| Attribute 5 = Branch 1 :
| | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| Attribute 5 = Branch 2 :
| | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| Attribute 5 = Branch 3 :
| | Attribute 4 = Branch 1 :
| | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| | Attribute 4 = Branch 3 :
| | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | Attribute 4 = Branch 2 :
| | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| Attribute 5 = Branch 4 :
| | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| | Attribute 1 = Branch 3 : Leaf Node -> Class = 0
Attribute 2 = Branch 2 :
| Attribute 5 = Branch 3 :
| | Attribute 3 = Branch 1 :
| | | Attribute 4 = Branch 1 :
| | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | Attribute 4 = Branch 2 :
| | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 0
| | | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
| | | Attribute 4 = Branch 3 :
| | | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | | Attribute 1 = Branch 2 : Leaf Node -> Class = 0
| | Attribute 3 = Branch 2 :
| | | Attribute 1 = Branch 1 : Leaf Node -> Class = 1
| | | Attribute 1 = Branch 2 : Leaf Node -> Class = 1
| | | Attribute 1 = Branch 3 : Leaf Node -> Class = 1
```

```

| Attribute 5 = Branch 2 :
| | Attribute 1 = Branch 1 :
| | | Attribute 3 = Branch 1 :   Leaf Node -> Class = 1
| | | Attribute 3 = Branch 2 :   Leaf Node -> Class = 1
| | Attribute 1 = Branch 2 :
| | | Attribute 4 = Branch 2 :   Leaf Node -> Class = 0
| | | Attribute 4 = Branch 3 :   Leaf Node -> Class = 1
| | | Attribute 4 = Branch 1 :   Leaf Node -> Class = 1
| | Attribute 1 = Branch 3 :
| | | Attribute 3 = Branch 1 :   Leaf Node -> Class = 1
| | | Attribute 3 = Branch 2 :   Leaf Node -> Class = 1
| Attribute 5 = Branch 1 :
| | Attribute 1 = Branch 1 :   Leaf Node -> Class = 1
| | Attribute 1 = Branch 2 :   Leaf Node -> Class = 1
| | Attribute 1 = Branch 3 :   Leaf Node -> Class = 1
| Attribute 5 = Branch 4 :
| | Attribute 1 = Branch 1 :   Leaf Node -> Class = 0
| | Attribute 1 = Branch 2 :   Leaf Node -> Class = 0
| | Attribute 1 = Branch 3 :   Leaf Node -> Class = 0
Attribute 2 = Branch 3 :
| Attribute 4 = Branch 1 :
| | Attribute 5 = Branch 2 :
| | | Attribute 1 = Branch 1 :   Leaf Node -> Class = 0
| | | Attribute 1 = Branch 2 :   Leaf Node -> Class = 0
| | Attribute 5 = Branch 4 :
| | | Attribute 1 = Branch 1 :   Leaf Node -> Class = 0
| | | Attribute 1 = Branch 2 :   Leaf Node -> Class = 0
| | | Attribute 1 = Branch 3 :   Leaf Node -> Class = 1
| | Attribute 5 = Branch 1 :
| | | Attribute 1 = Branch 1 :   Leaf Node -> Class = 0
| | | Attribute 1 = Branch 2 :   Leaf Node -> Class = 0
| | | Attribute 1 = Branch 3 :   Leaf Node -> Class = 0
| | Attribute 5 = Branch 3 :
| | | Attribute 1 = Branch 2 :   Leaf Node -> Class = 1
| | | Attribute 1 = Branch 3 :   Leaf Node -> Class = 1
| Attribute 4 = Branch 2 :
| | Attribute 1 = Branch 1 :   Leaf Node -> Class = 0
| | Attribute 1 = Branch 2 :   Leaf Node -> Class = 0
| | Attribute 1 = Branch 3 :   Leaf Node -> Class = 0
| Attribute 4 = Branch 3 :
| | Attribute 1 = Branch 1 :   Leaf Node -> Class = 0
| | Attribute 1 = Branch 2 :   Leaf Node -> Class = 0
| | Attribute 1 = Branch 3 :   Leaf Node -> Class = 0

```

Accuracy of training data:

correct : 122

wrong : 0

Accuracy in % : 100.0

Accuracy of test data:

correct : 204

wrong : 12

Accuracy in % : 94.0