

# Ling 572 HW2

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## 1 Q1 Mallet DT Learner

(a) The command lines:

```
mallet import-file --input train.vectors.txt --output train.vectors
mallet import-file --input test.vectors.txt --output test.vectors --use-pipe-from train.vectors
vectors2classify --training-file train.vectors --testing-file test.vectors --trainer DecisionTree --output-
classifier me-model --report train:accuracy --report test:accuracy >me.stdout
cat me.stdout
```

(b) What are the training accuracy and the test accuracy?

Train:0.17814814814814814

Test: 0.1

## 2 Q2 Mallet Different depth

Table 1: Mallet's DT learner with different depths

Depth	Training accuracy	Test accuracy
1	0.1393	0.1033
2	0.1419	0.12
4	0.1781	0.10
10		
20		
50		

## 3 Q3 build\_dt

## 4 Q4

## 5 Q5: Notes

Here is info

Table 2: build\_dt.sh min\_gain=0

Depth	Training accuracy	Test accuracy	CPU time (in minutes)
1			
2			
4			
10			
20			
50			

Table 3: build\_dt.sh min\_gain=0.1

Depth	Training accuracy	Test accuracy	CPU time (in minutes)
1			
2			
4			
10			
20			
50			