

# Data Mining Tutorial

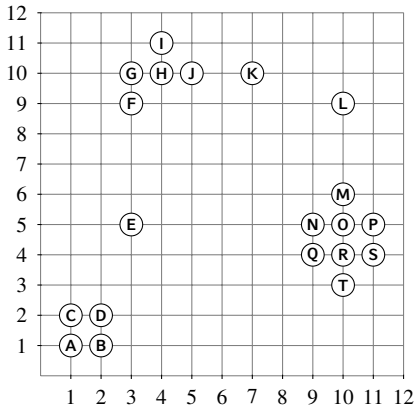
## Clusteranalyse – Teil III

Erich Schubert, Arthur Zimek

Ludwig-Maximilians-Universität München

2013-05-17 — KDD Übung

# Single-Link Clustering



A B C D E F G H J I K L M O N P Q S R T

## Single-Link Clustering

Data Mining  
Tutorial

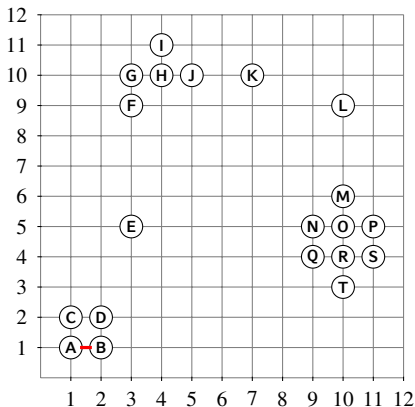
E. Schubert,  
A. Zimek

### Aufgabe 4-1

single-link

complete-link

average-link



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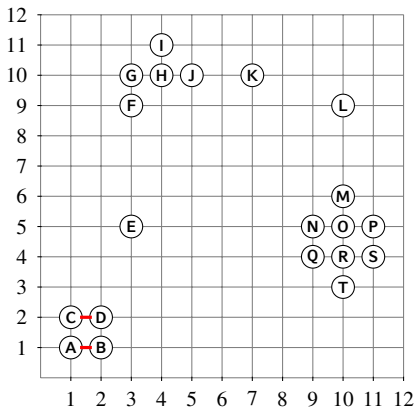
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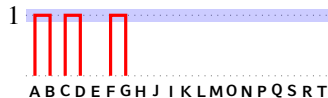
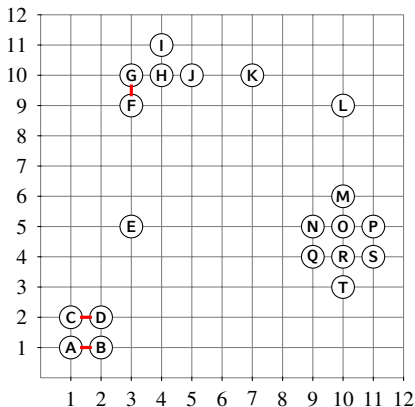
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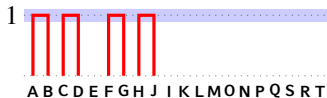
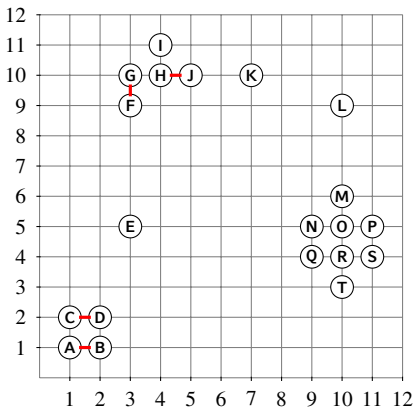
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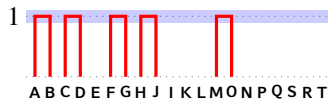
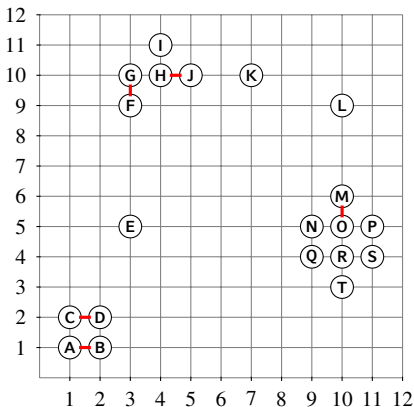
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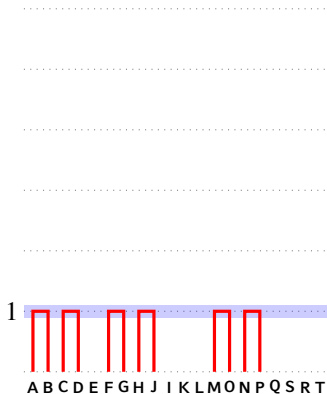
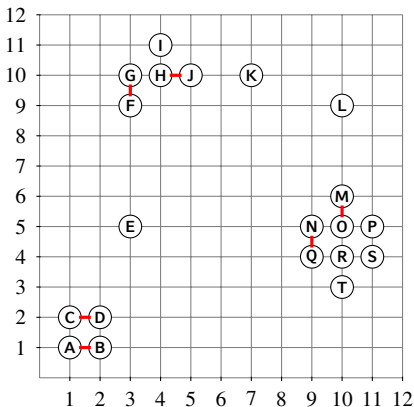
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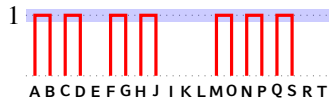
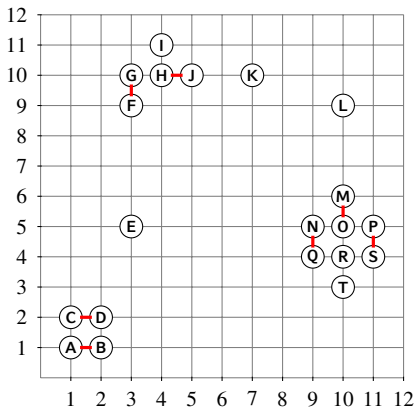
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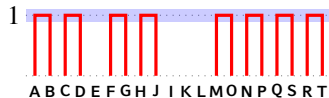
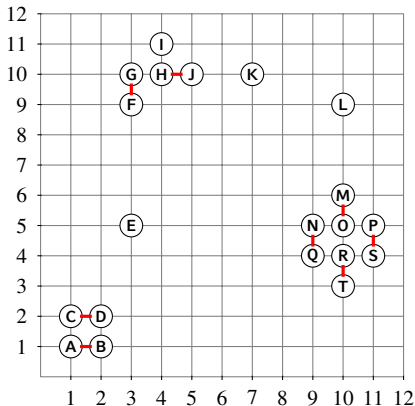
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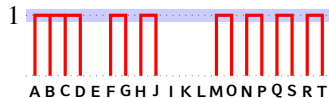
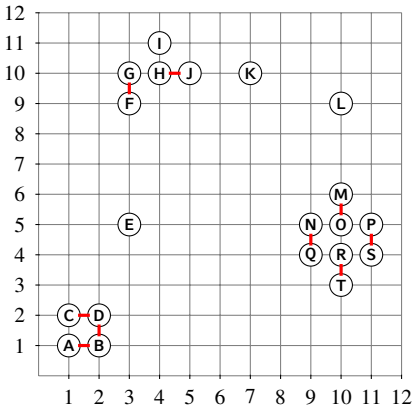
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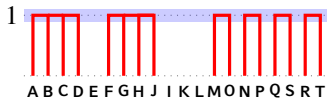
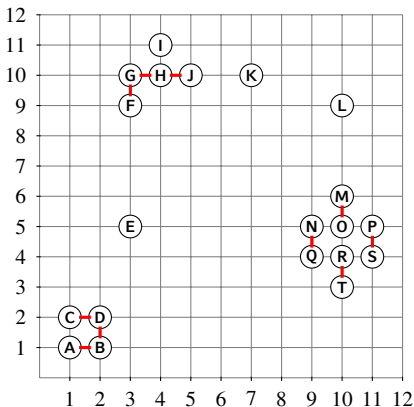
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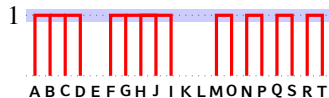
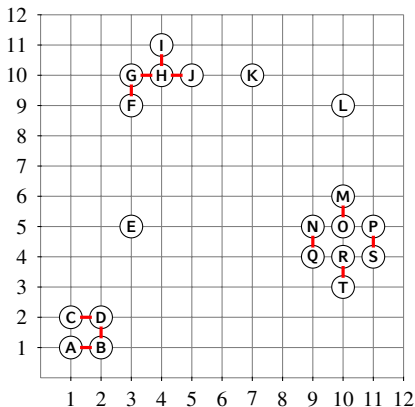
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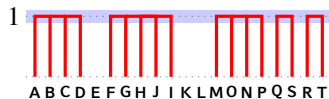
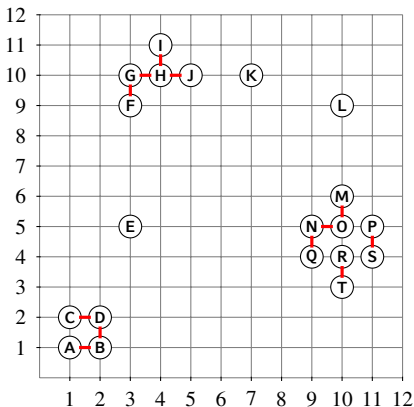
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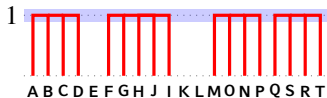
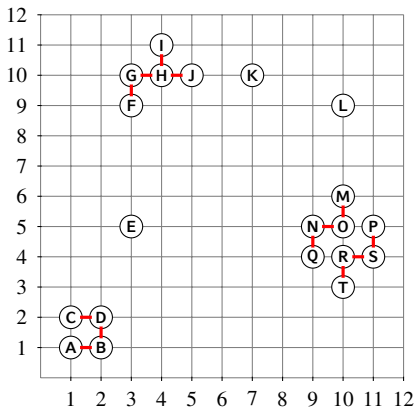
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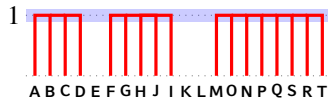
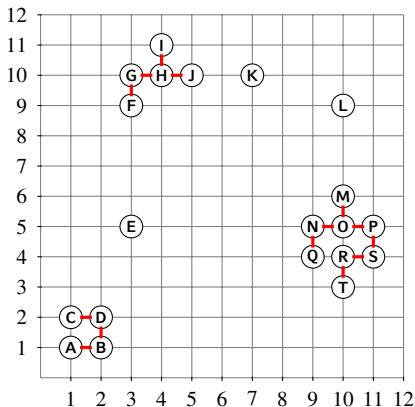
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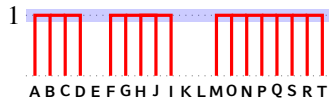
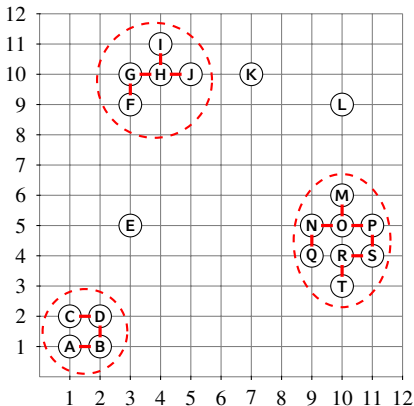
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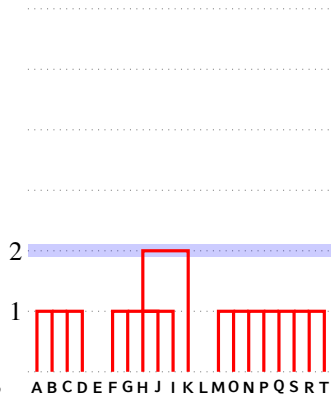
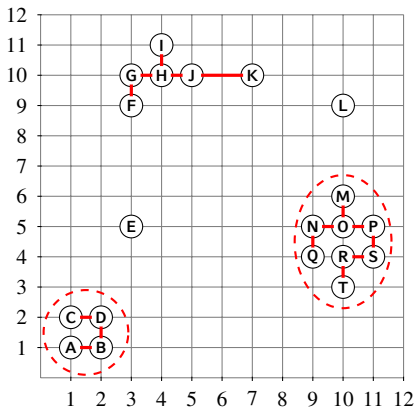
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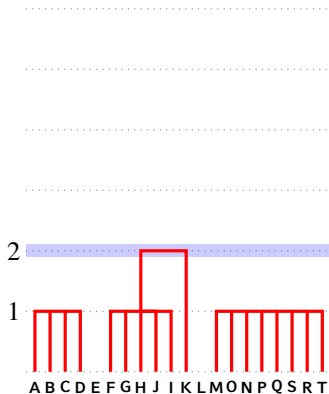
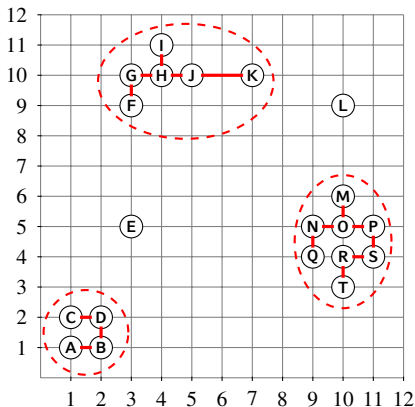
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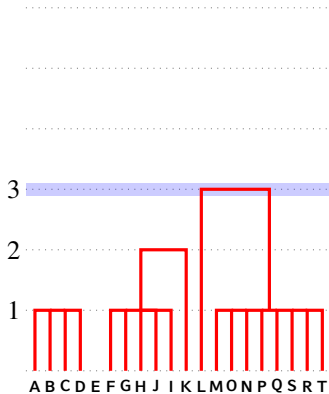
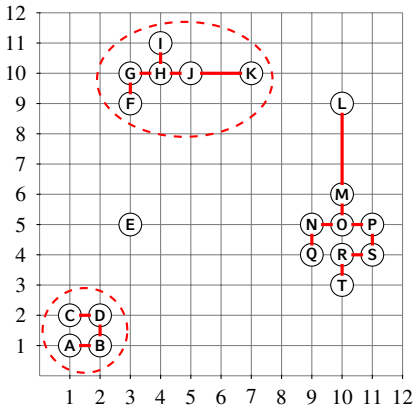
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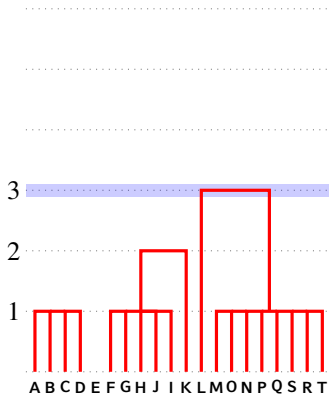
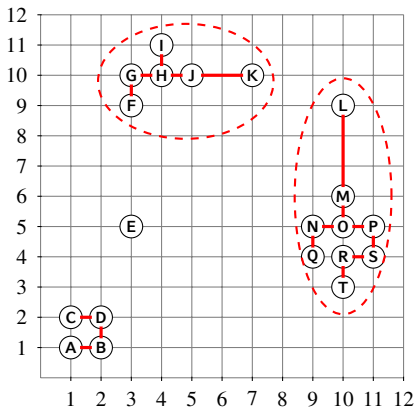
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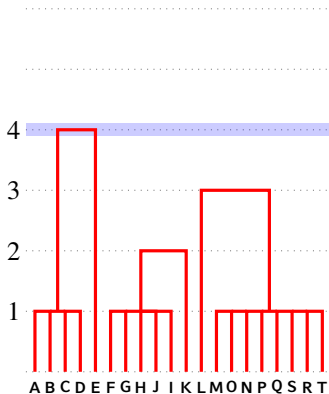
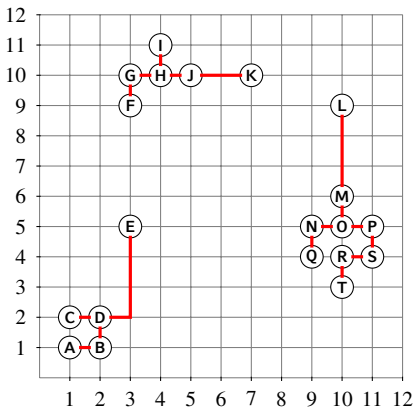
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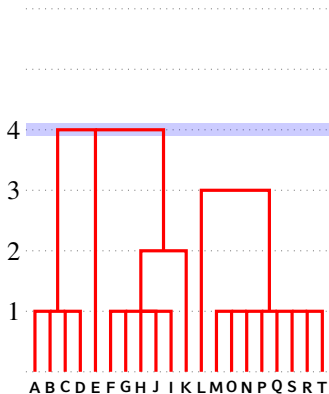
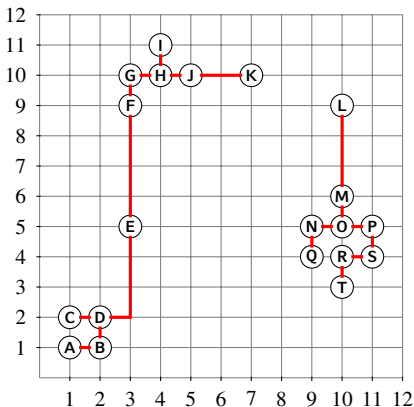
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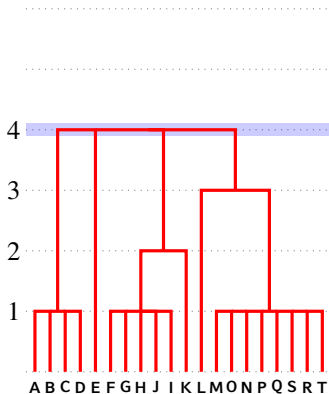
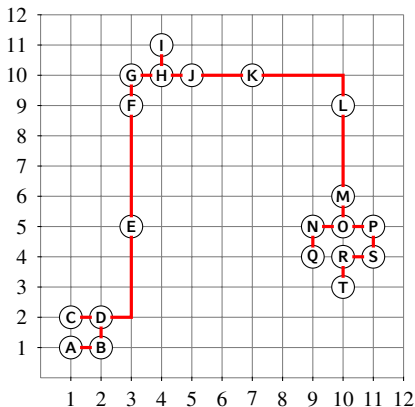
Data Mining  
Tutorial

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Data Mining  
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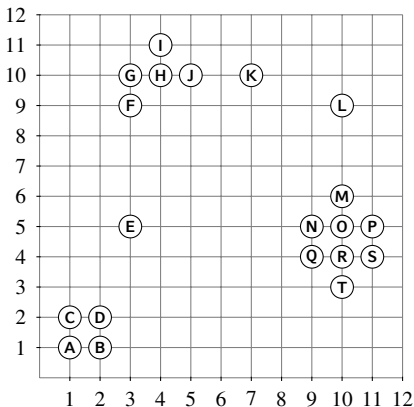
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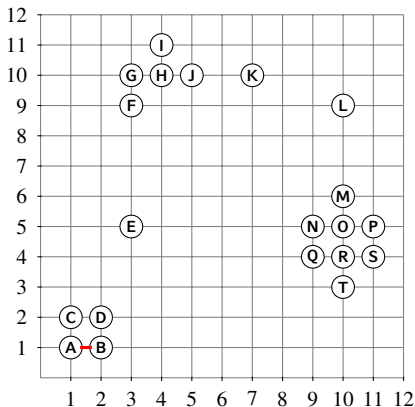
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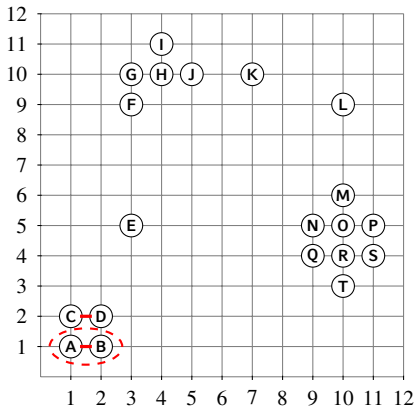
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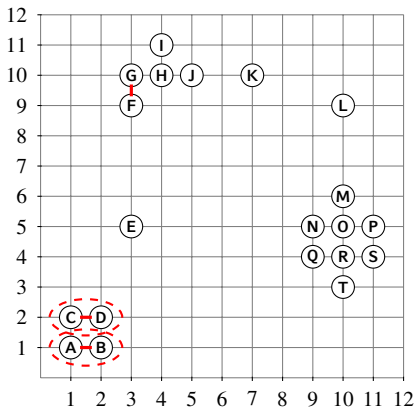
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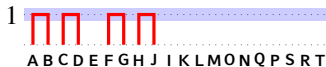
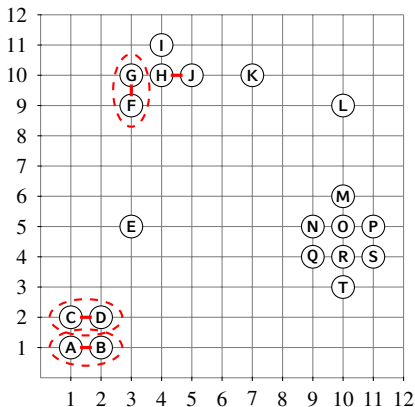
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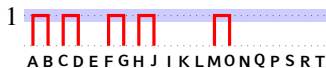
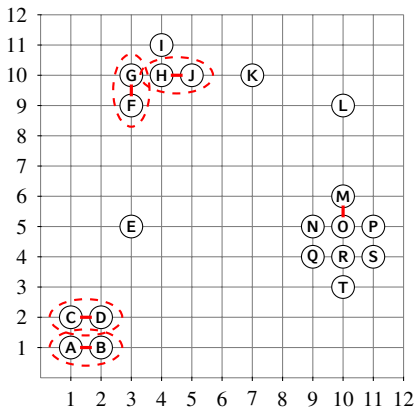
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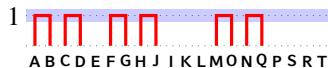
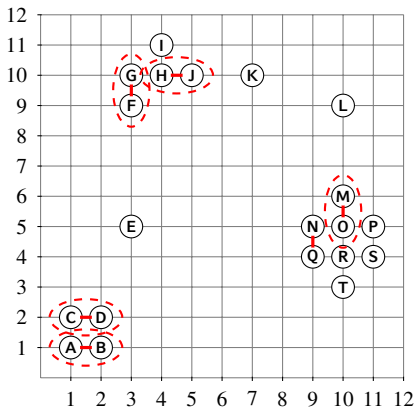
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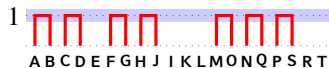
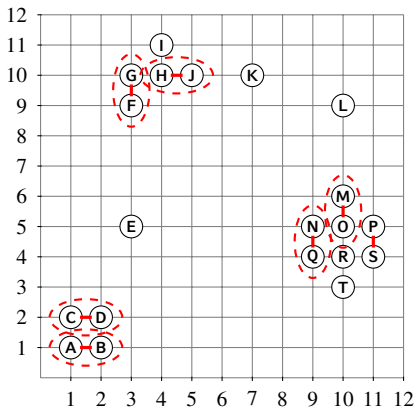
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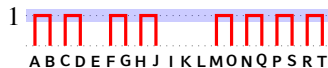
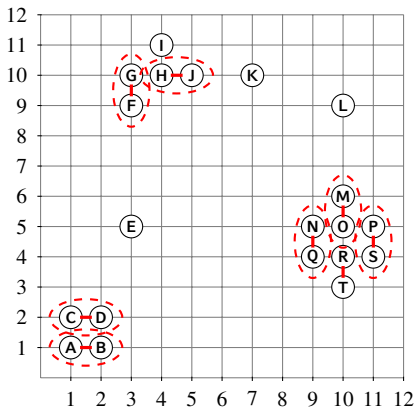
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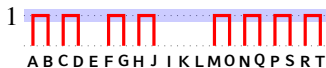
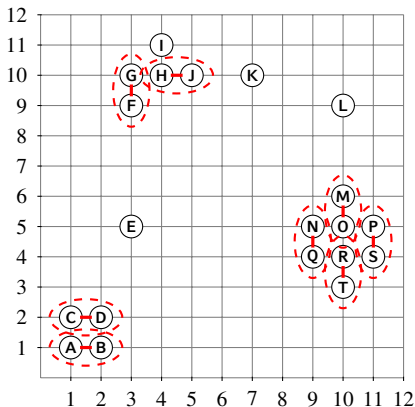
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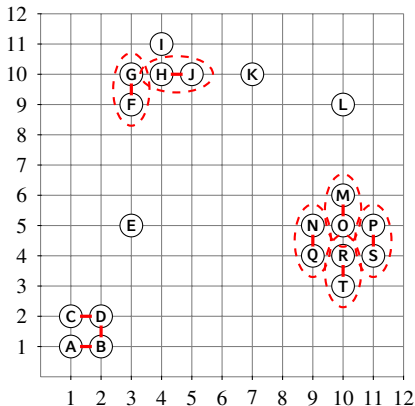
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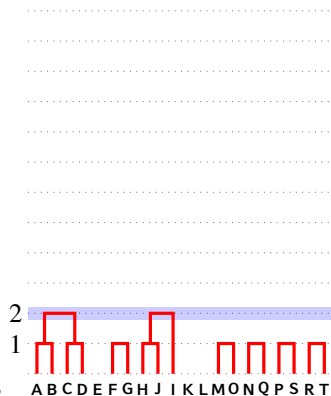
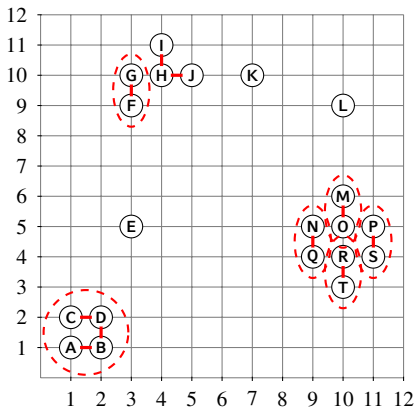
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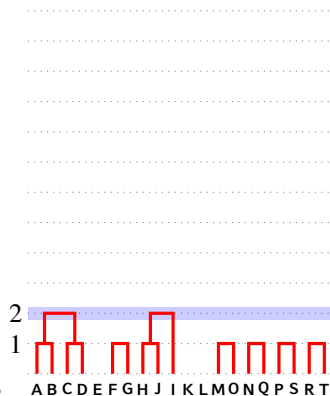
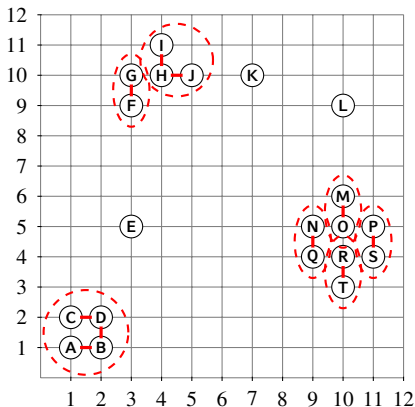
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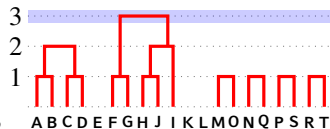
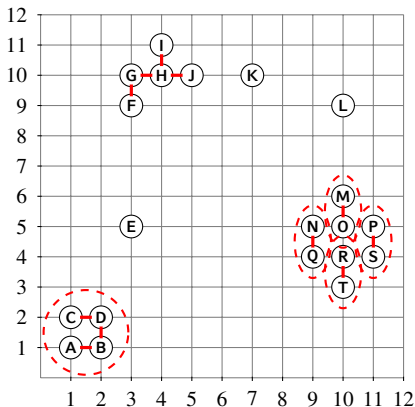
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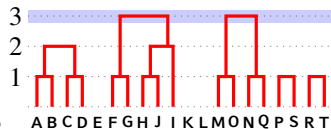
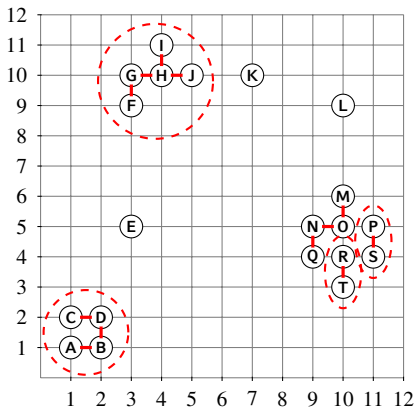
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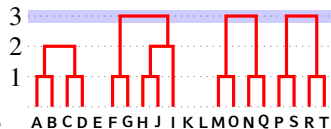
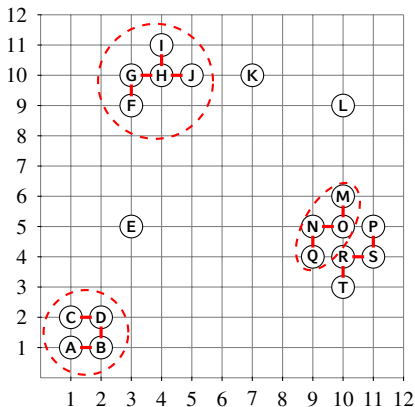
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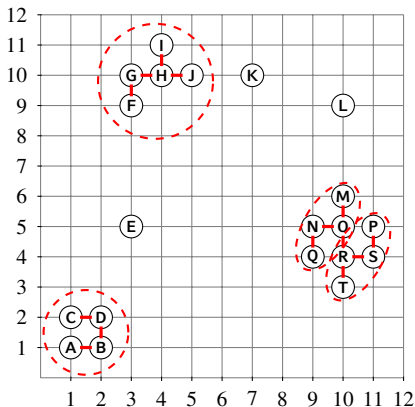
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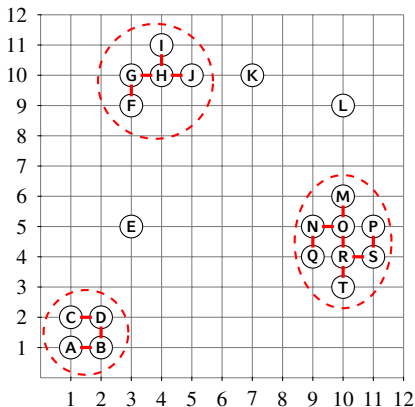
E. Schubert,  
A. Zimek

## Aufgabe 4-1

single-link

complete-link

average-link



# Complete-Link Clustering

Data Mining  
Tutorial

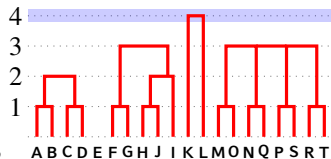
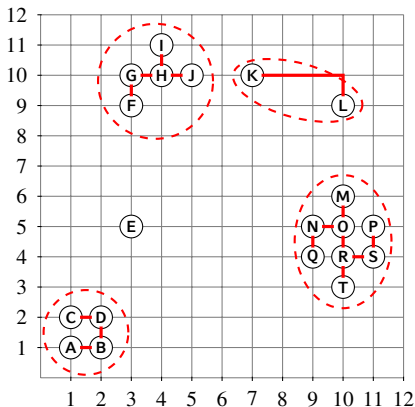
E. Schubert,  
A. Zimek

## Aufgabe 4-1

single-link

complete-link

average-link



## Complete-Link Clustering

Data Mining  
Tutorial

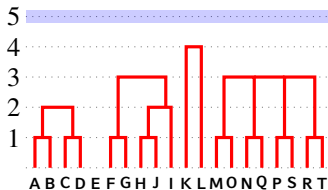
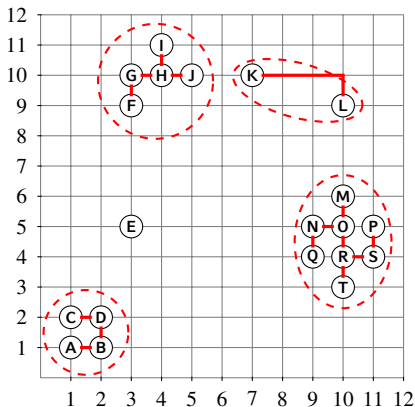
E. Schubert,  
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### Aufgabe 4-1

single-link

complete-link

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# Complete-Link Clustering

Data Mining  
Tutorial

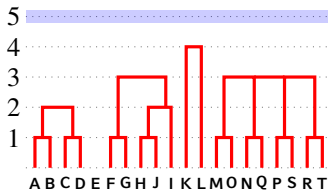
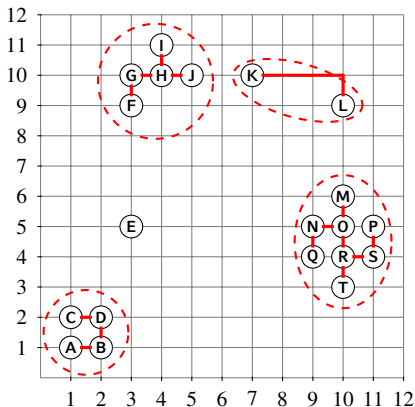
E. Schubert,  
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## Aufgabe 4-1

single-link

complete-link

average-link



# Complete-Link Clustering

Data Mining  
Tutorial

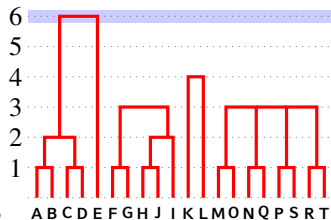
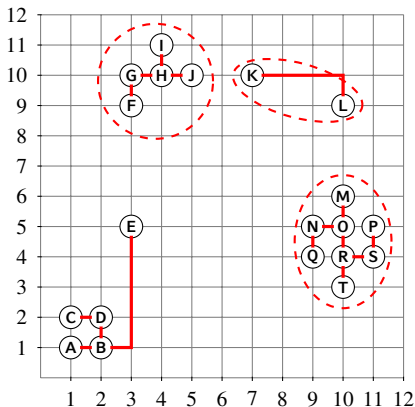
E. Schubert,  
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single-link

complete-link

average-link



# Complete-Link Clustering

Data Mining  
Tutorial

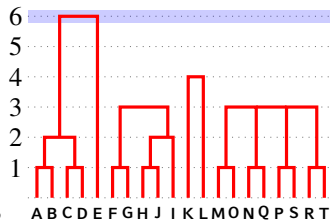
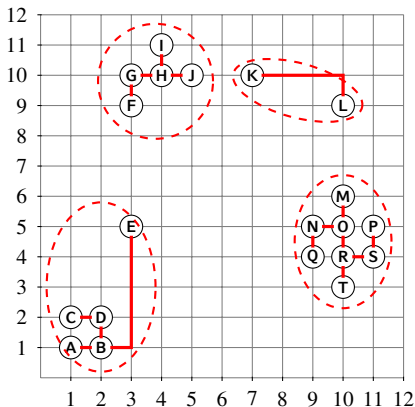
E. Schubert,  
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single-link

complete-link

average-link



# Complete-Link Clustering

Data Mining  
Tutorial

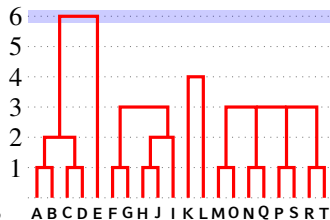
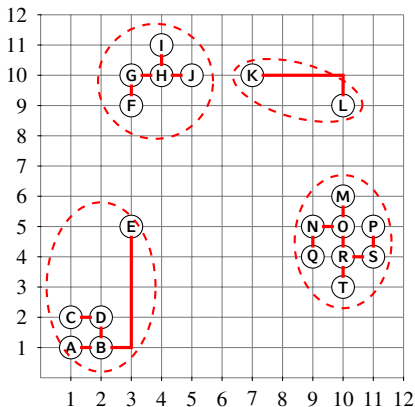
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# Complete-Link Clustering

Data Mining  
Tutorial

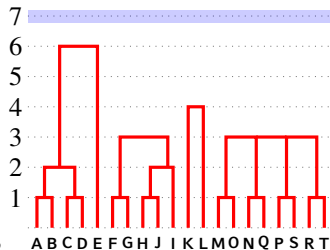
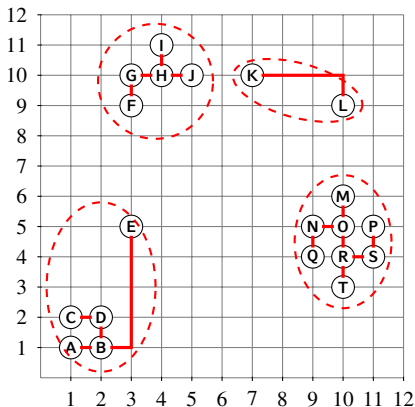
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## Complete-Link Clustering

Data Mining  
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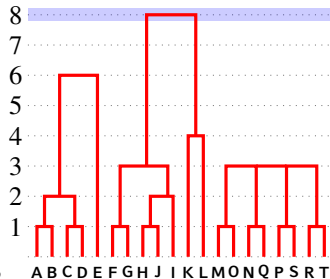
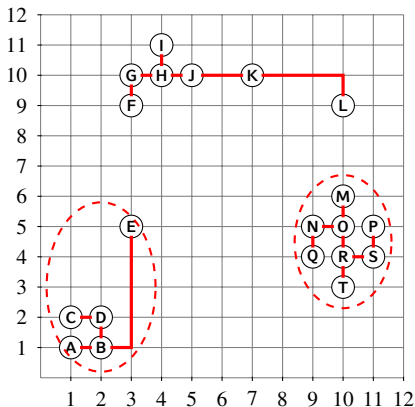
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# Complete-Link Clustering

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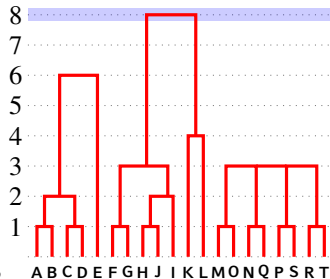
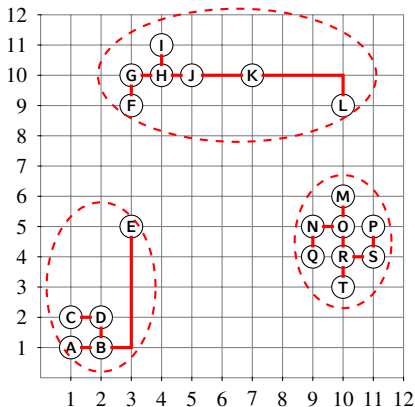
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# Complete-Link Clustering

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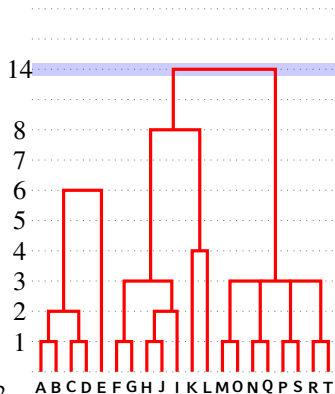
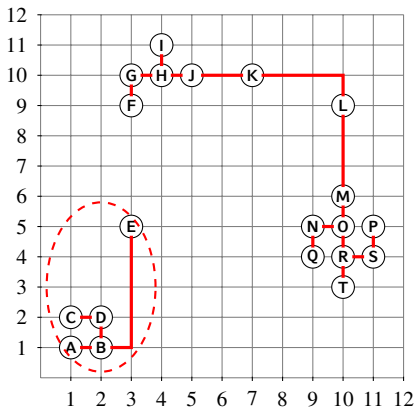
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# Complete-Link Clustering

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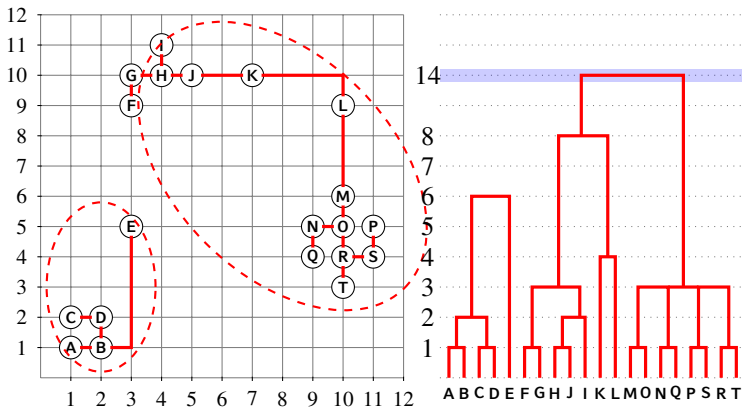
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# Complete-Link Clustering

Data Mining  
Tutorial

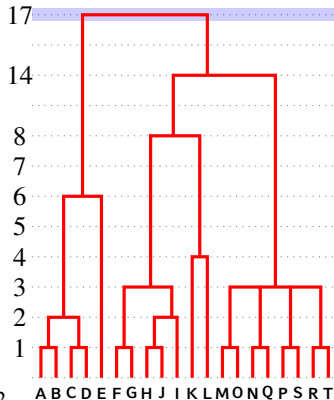
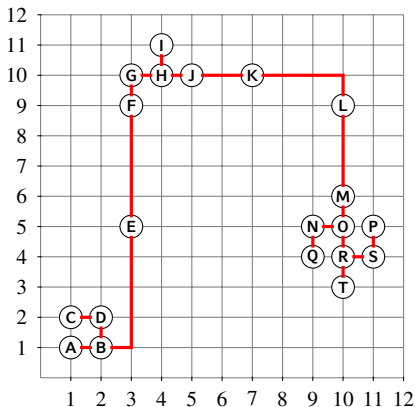
E. Schubert,  
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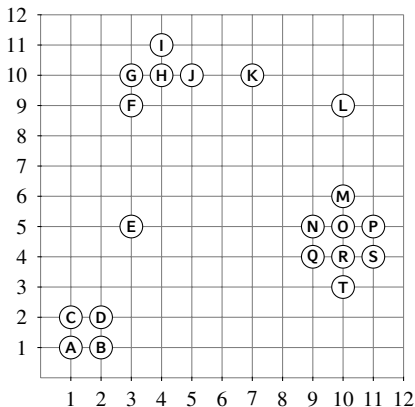
# Group-Average-Link Clustering

Data Mining  
Tutorial

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single-link  
complete-link  
average-link



A B C D E F G H J I K L M N O P Q R S T

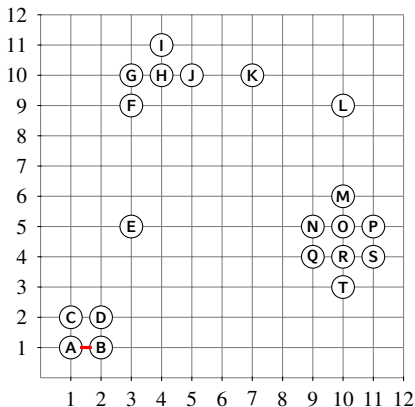
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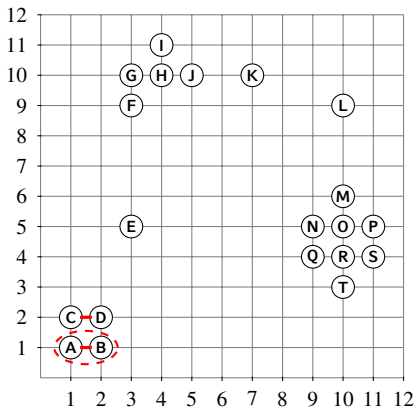
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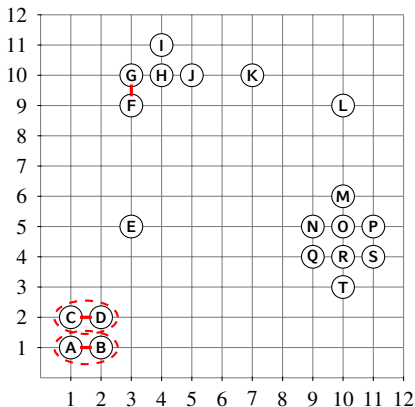
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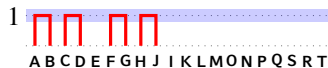
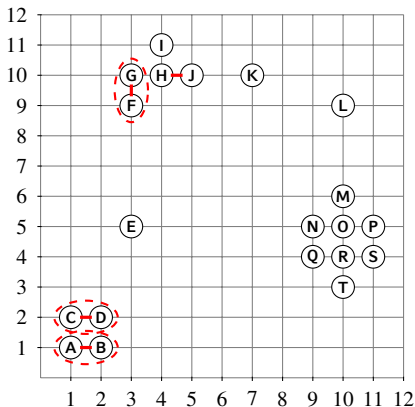
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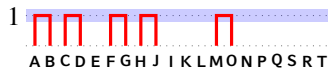
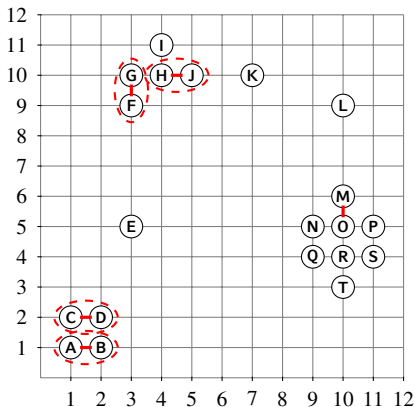
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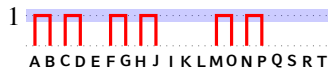
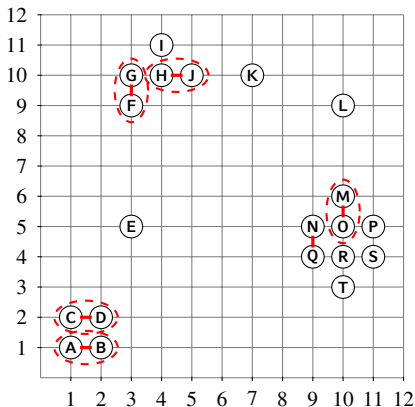
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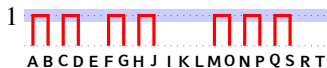
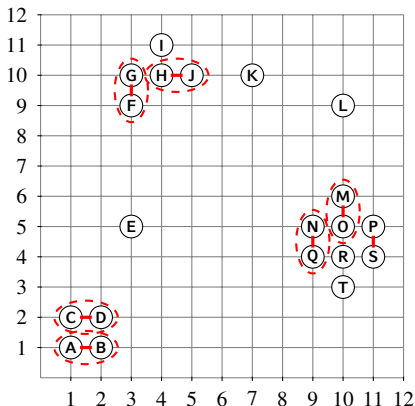
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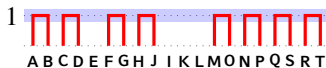
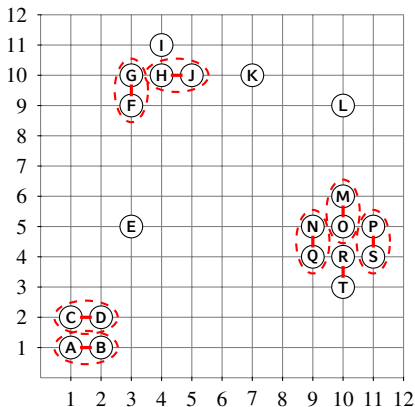
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Tutorial

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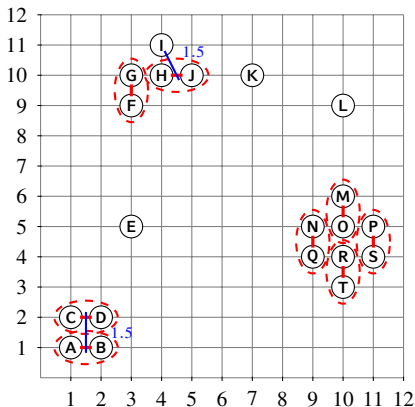
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Tutorial

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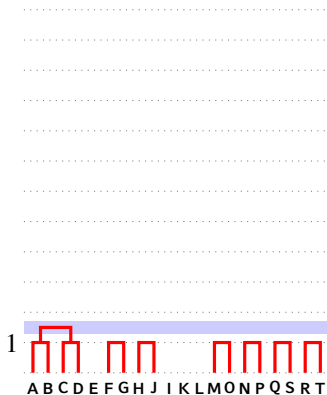
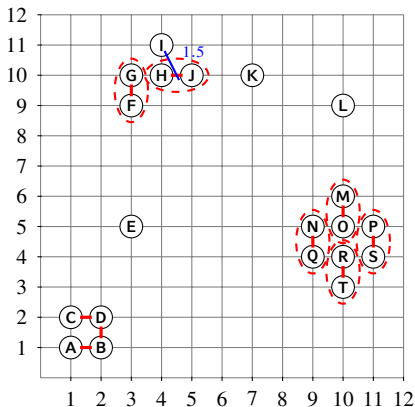
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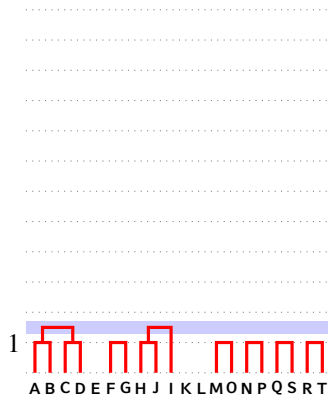
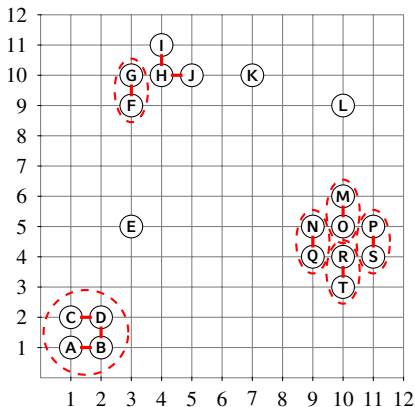
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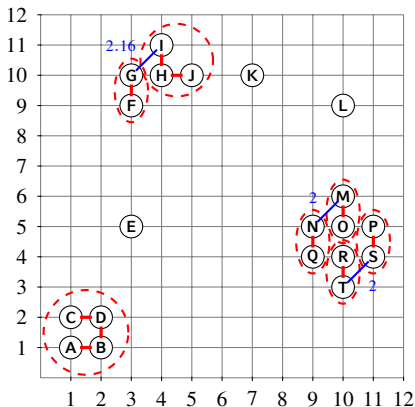
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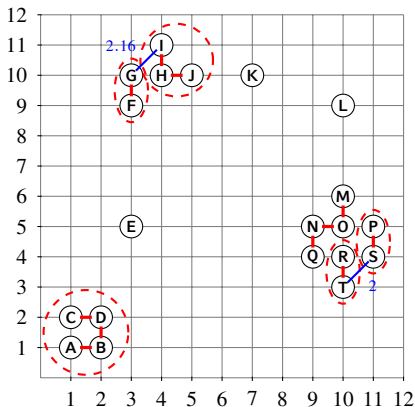
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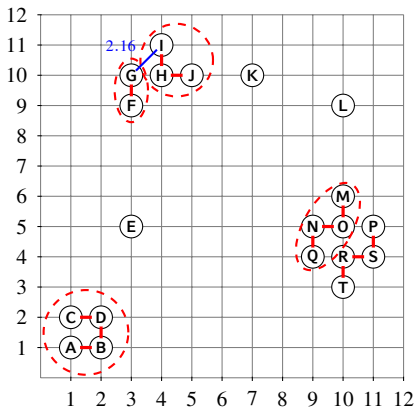
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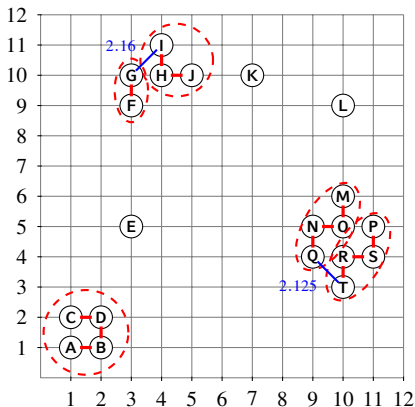
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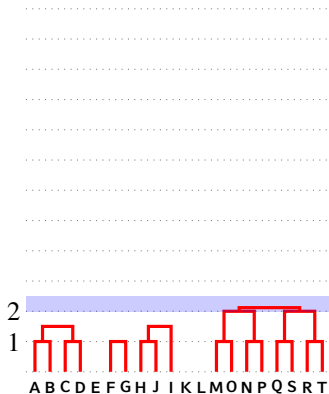
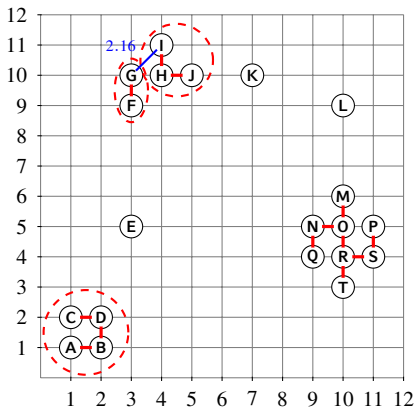
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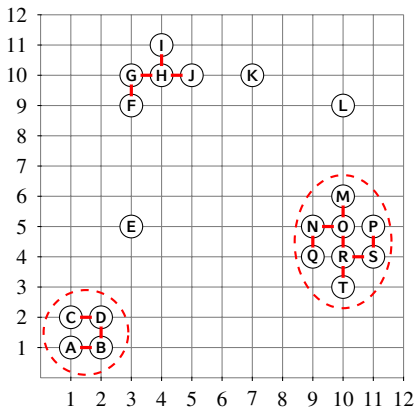
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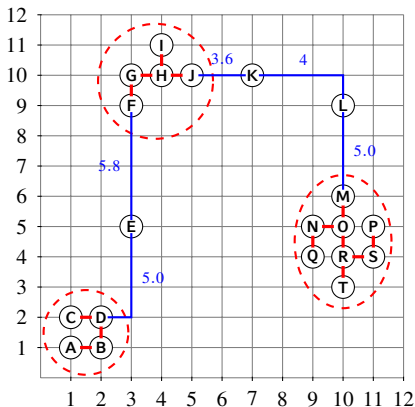
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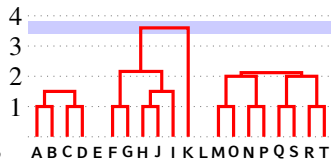
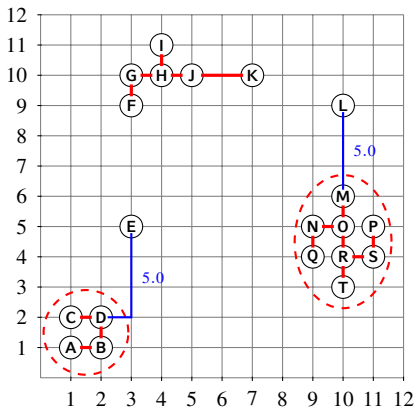
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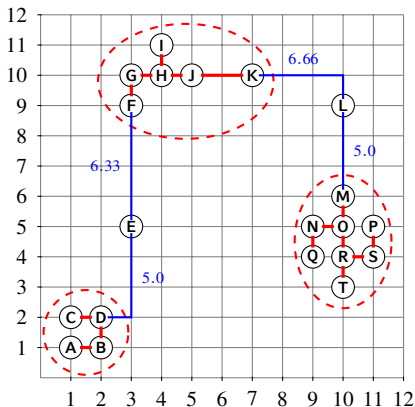
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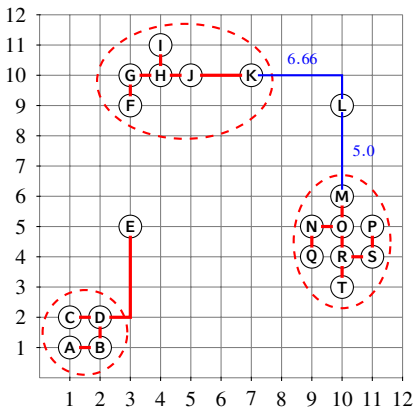
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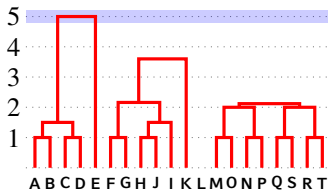
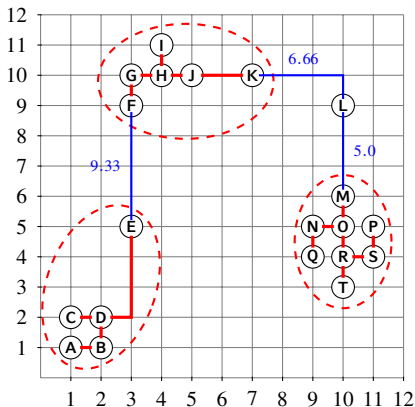
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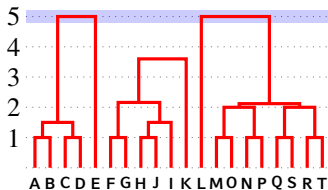
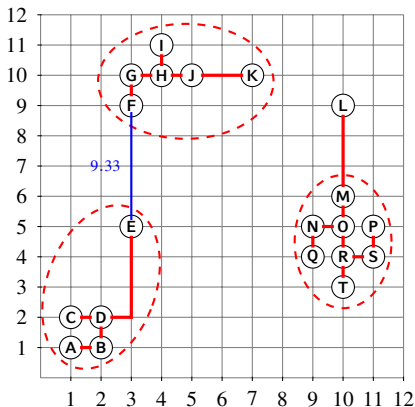
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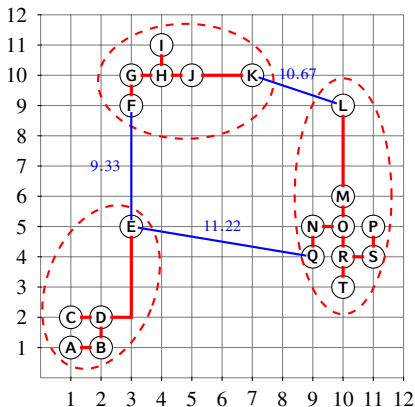
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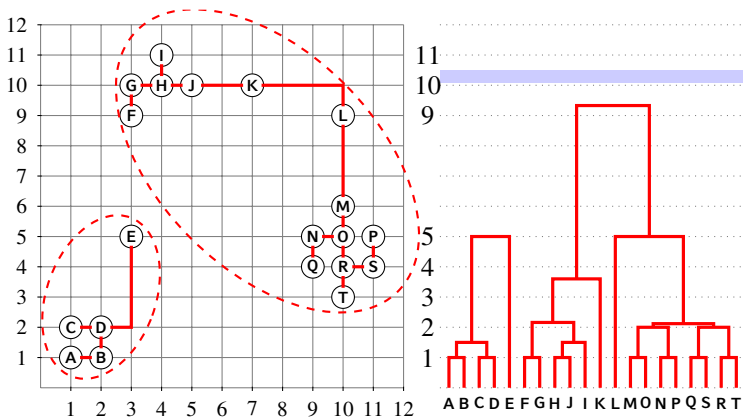
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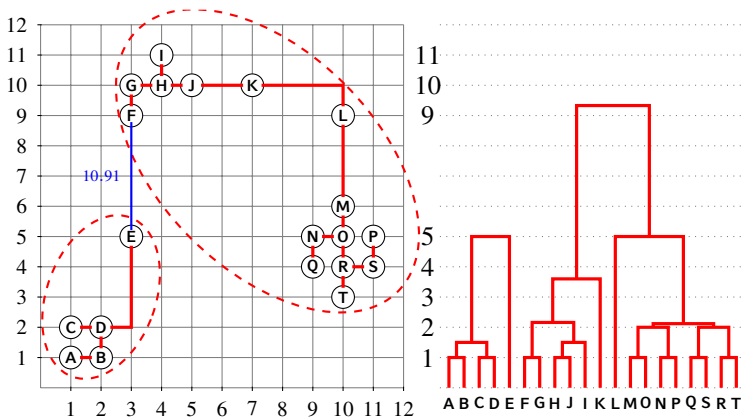
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