

ALP III: Datenstrukturen und Datenabstraktion

6. Aufgabenblatt

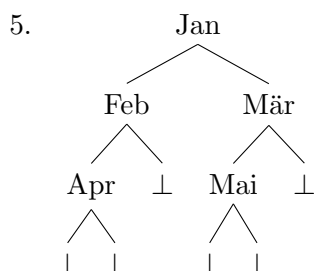
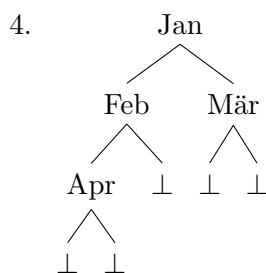
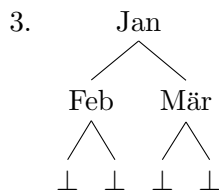
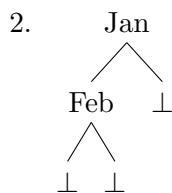
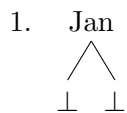
Übungsgruppe 1.8: Marcel Erhardt

Tobias Lohse/ Marvin Kleinert/ Anton Drewing

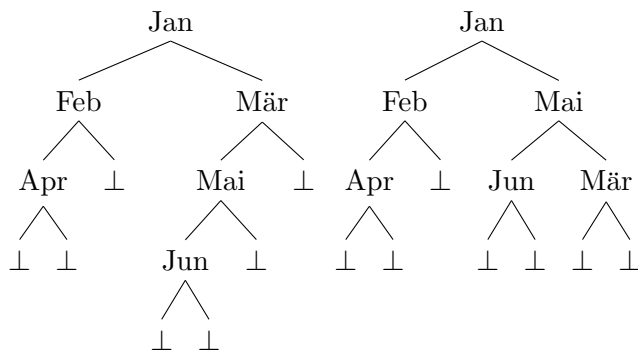
28.11.2014

Aufgabe 2

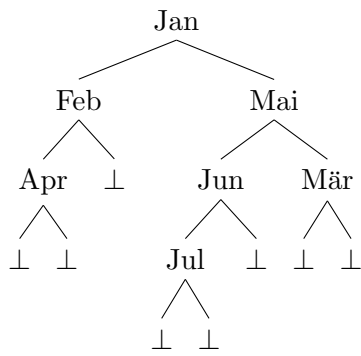
AVL-Baum



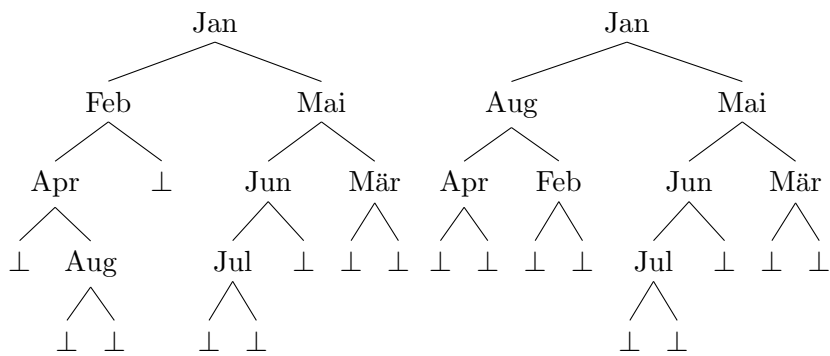
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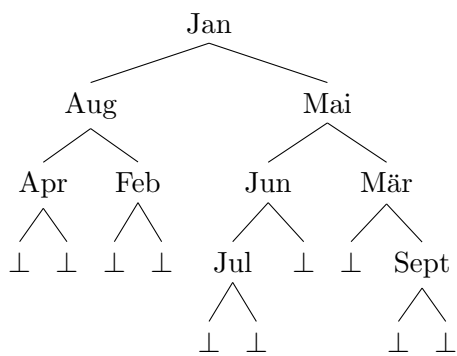
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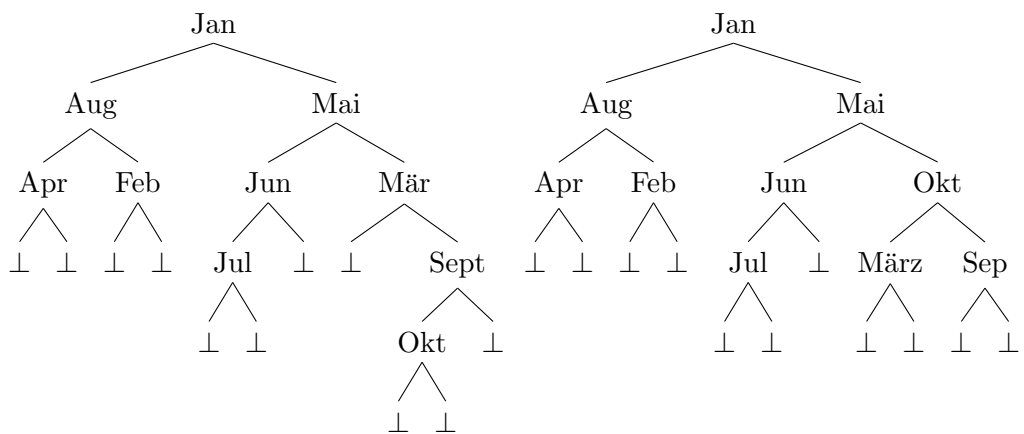
8.



9.



10.



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graph TD
    Jan1[Jan] --> Aug1[Aug]
    Jan1 --> Mai1[Mai]
    Aug1 --> Apr1[Apr]
    Aug1 --> Feb1[Feb]
    Apr1 --> L1[⊥]
    Apr1 --> L2[⊥]
    Feb1 --> L3[⊥]
    Feb1 --> L4[⊥]
    Mai1 --> Jun1[Jun]
    Mai1 --> Okt1[Okt]
    Jun1 --> Jul1[Jul]
    Jun1 --> L5[⊥]
    Jul1 --> L6[⊥]
    Jul1 --> L7[⊥]
    Okt1 --> Mär1[Mär]
    Okt1 --> Sep1[Sep]
    Mär1 --> L8[⊥]
    Mär1 --> Nov1[Nov]
    Nov1 --> L9[⊥]
    Nov1 --> L10[⊥]
    Sep1 --> L11[⊥]
    Sep1 --> L12[⊥]

    Mai2[Mai] --> Jan2[Jan]
    Mai2 --> Okt2[Okt]
    Jan2 --> Aug2[Aug]
    Jan2 --> Jun2[Jun]
    Aug2 --> Apr2[Apr]
    Aug2 --> Feb2[Feb]
    Apr2 --> L13[⊥]
    Apr2 --> L14[⊥]
    Feb2 --> L15[⊥]
    Feb2 --> L16[⊥]
    Jun2 --> Jul2[Jul]
    Jun2 --> L17[⊥]
    Jul2 --> L18[⊥]
    Jul2 --> L19[⊥]
    Okt2 --> Mär2[Mär]
    Okt2 --> Sep2[Sep]
    Mär2 --> L20[⊥]
    Mär2 --> Nov2[Nov]
    Nov2 --> L21[⊥]
    Nov2 --> L22[⊥]
    Sep2 --> L23[⊥]
    Sep2 --> L24[⊥]
  
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graph TD
    Mai --> Jan
    Mai --> Okt
    Jan --> Aug
    Jan --> Jun
    Okt --> Mär
    Okt --> Sep
    Aug --> Apr
    Aug --> Feb
    Jun --> Jul
    Jun --> L1[ ]
    Mär --> L2[ ]
    Mär --> Nov
    Sep --> L3[ ]
    Sep --> L4[ ]
    Apr --> L5[ ]
    Apr --> Dez
    Feb --> L6[ ]
    Feb --> L7[ ]
    Jul --> L8[ ]
    Jul --> L9[ ]
    Nov --> L10[ ]
    Nov --> L11[ ]
    Dez --> L12[ ]
    Dez --> L13[ ]

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(2,4)-Baum

1. Jan

2. $\begin{array}{c} \text{Feb} \\ \diagdown \quad \diagup \\ \text{Feb} \quad \text{Jan} \end{array}$

3. $\begin{array}{c} \text{Feb Jan} \\ \diagdown \quad | \quad \diagup \\ \text{Feb Jan Mär} \end{array}$

4. Apr Feb Jan



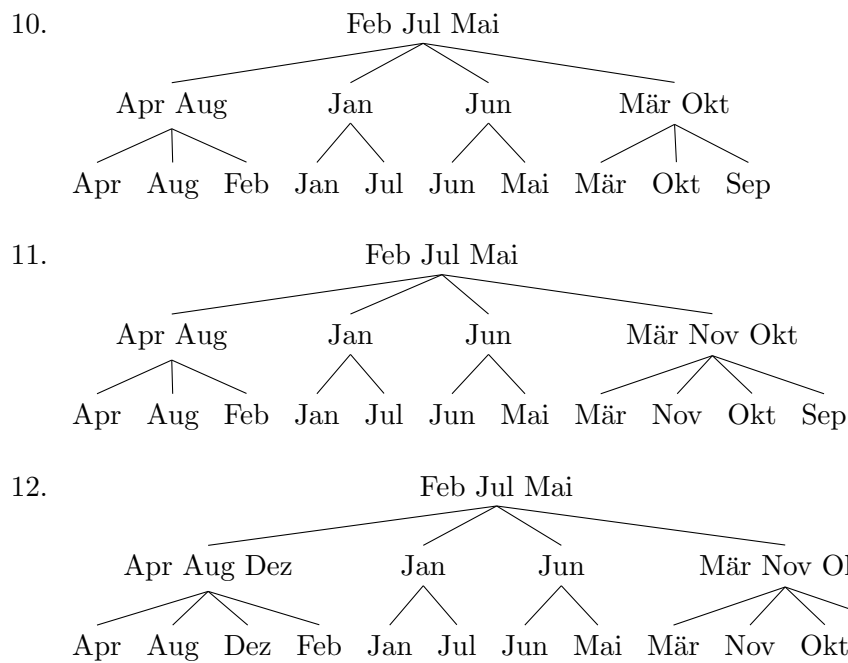
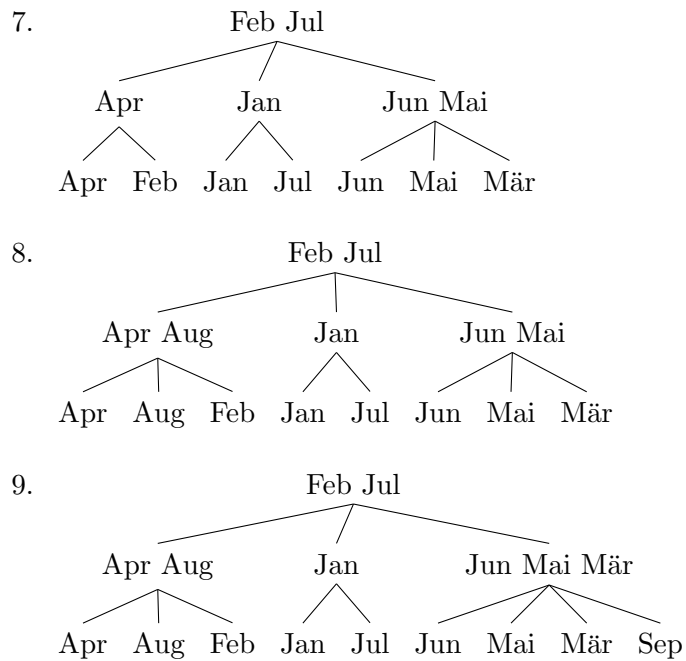
Apr Feb Jan Mär

5.

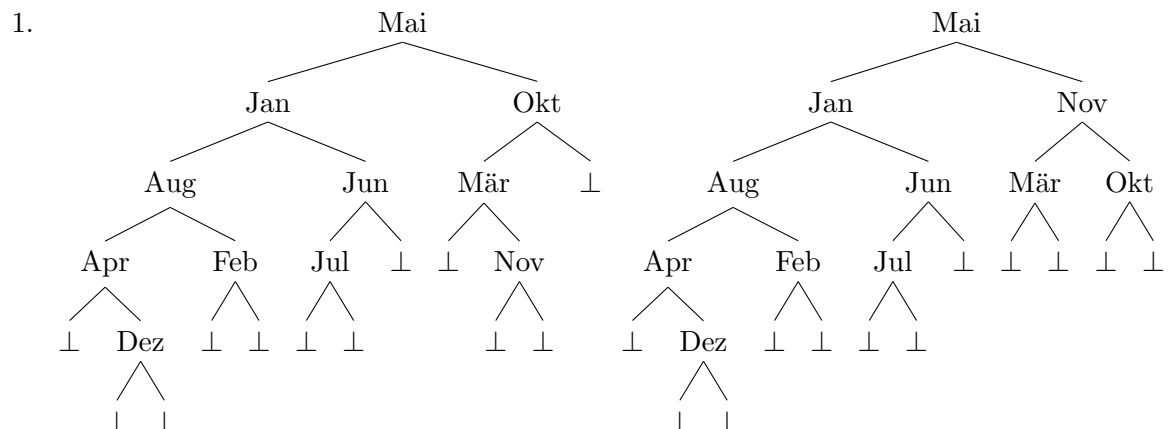
```
graph TD
    Feb --> Apr
    Feb --> JanMai[Jan Mai]
    Apr --> AprFeb[Apr Feb]
    JanMai --> JanMaiMär[Jan Mai Mär]
```

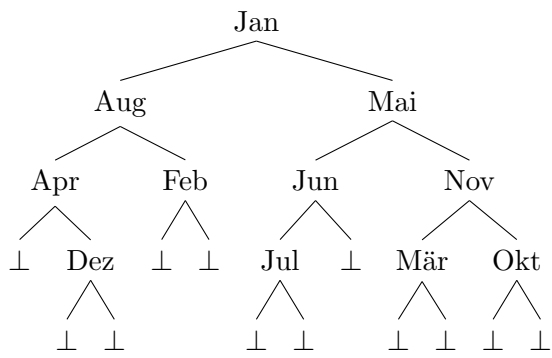
6.

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graph TD; Feb --> Apr1[Apr]; Feb --> JanJunMai[Jan Jun Mai]; Apr1 --> Apr2[Apr]; Apr1 --> Feb2[Feb]; JanJunMai --> Jan3[Jan]; JanJunMai --> Jun3[Jun]; JanJunMai --> Mai3[Mai]; JanJunMai --> Mar3[Mär];
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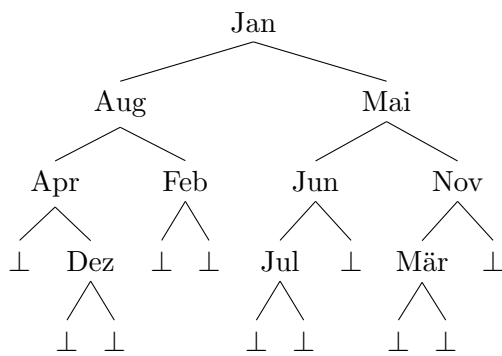


AVL-Baum: Streichungen





2.



3.

