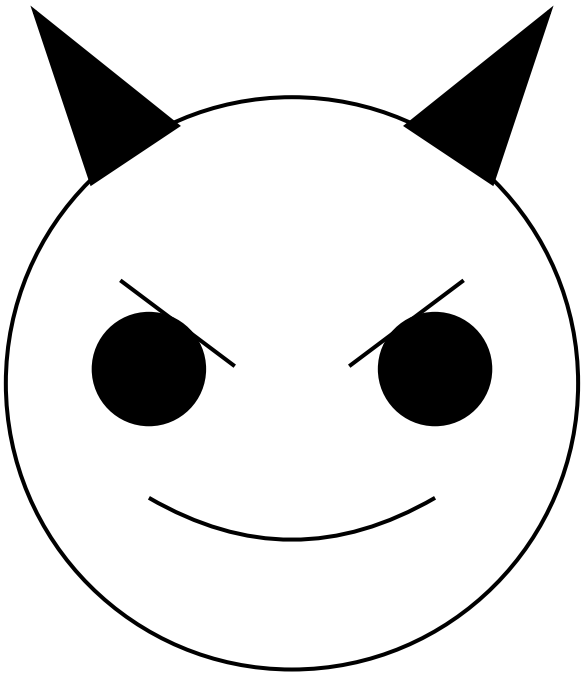
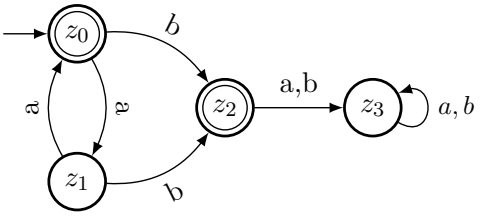
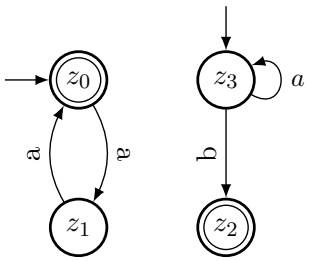
Inhaltsverzeichnis

```
%%Einbindung erfolgt über:
\getGraphics{⟨Pfad⟩}
```

Pfad	Ergebnis
`Allerlei/Teufel`	
`Automat/AutomatDFA`	Deterministic Finite Automaton  $D = \left(\underset{Menge}{Z}, \underset{Alphabet}{\Sigma}, \underset{Z\times\Sigma\to Z}{\delta}, \underset{\in Z}{S}, \underset{\subseteq Z}{E} \right)$ (Zustände, Eingabe, Übergangsfkt., Start(s), Endzust.) $T(D) = \left\{ x \in \Sigma^* \mid \hat{\delta}(S,x) \cap E \neq \varnothing \right\}$

`Automat/AutomatNFA`

Nondeterministic Finite Automaton



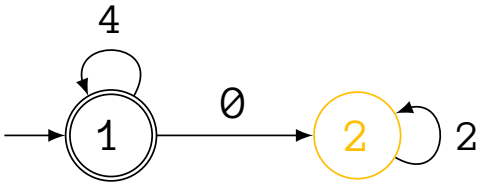
$$N = \left(\underset{Menge}{Z}, \underset{Alphabet}{\Sigma}, \underset{Z\times\Sigma\to Z^*}{\delta}, \underset{\subseteq Z}{S}, \underset{\subseteq Z}{E} \right) \quad \text{Zustände, Eingabe, Übergangsfkt., Start(s), Endzust.}$$

$$T(N) = \left\{ x \in \Sigma^* \mid \hat{\delta}(S, x) \cap E \neq \varnothing \right\}$$

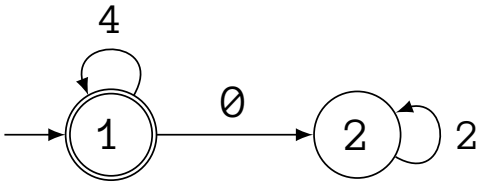
`Automat/CYKAlgorithmus`

		1 **a**	2 **b**	3 **c**	4 **c**
T[1,j]	1	A	B	CE	CE
T[2,j]	2	D	–	E	
T[3,j]	3	S	–		
T[4,j]	4	S			

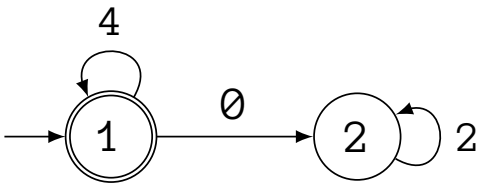
`Automat/Demo-1`



`Automat/Demo-2`



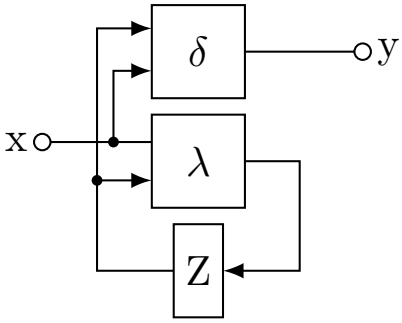
`Automat/Demo`



`Automat/Header`

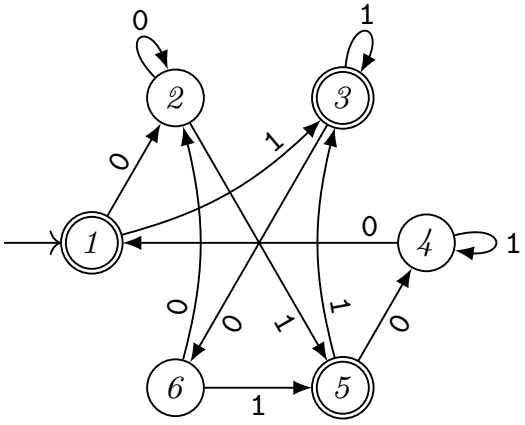
Isch bin a Hädder!

`Automat/MealyAutomat`

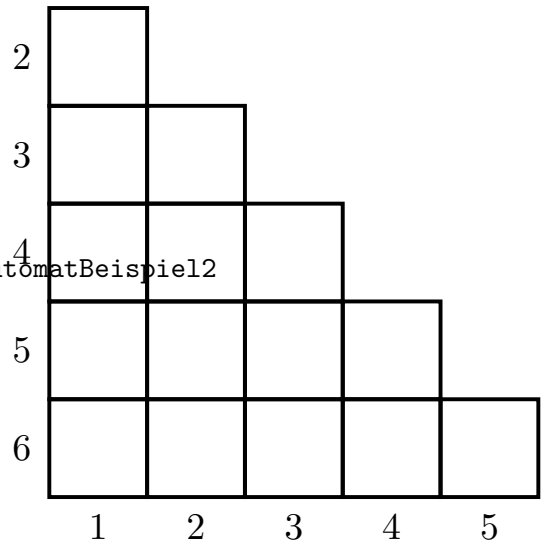


Ausgabe von Zustand & Eingabe abhängig

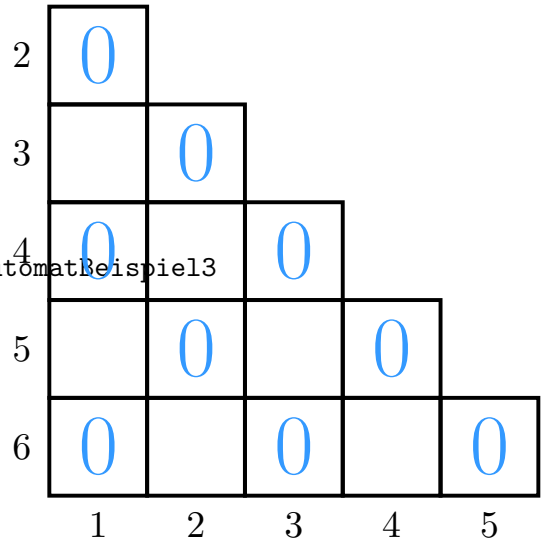
`Automat/MinimalautomatBeispiel/MinimalautomatBeispiel1`



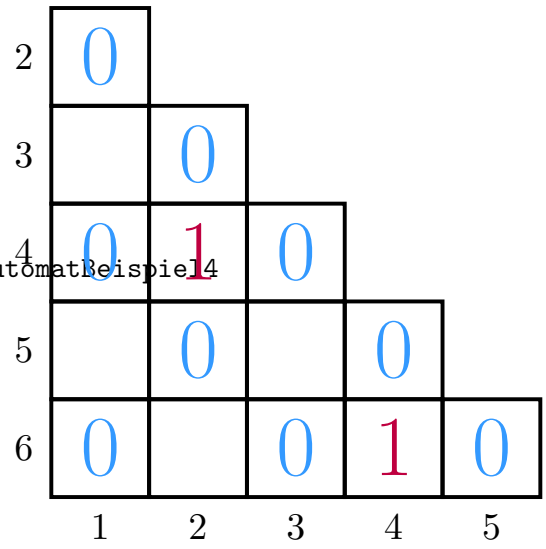
Automat/MinimalautomatBeispiel/MinimalautomatBeispiel2



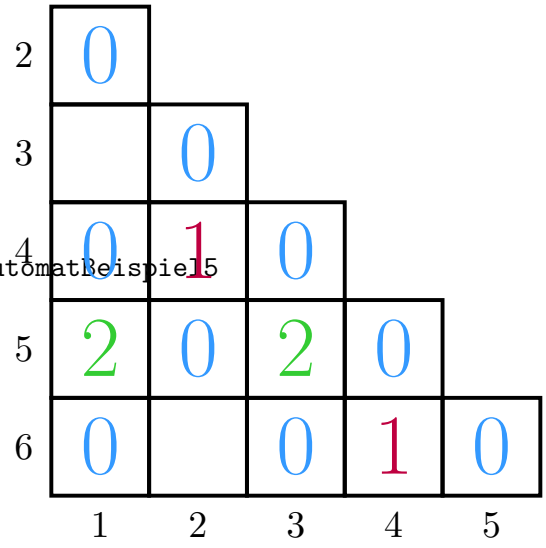
Automat/MinimalautomatBeispiel/MinimalautomatBeispiel3



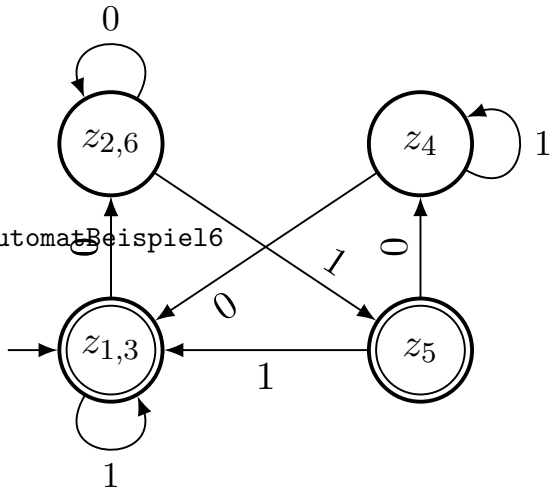
Automat/MinimalautomatBeispiel/MinimalautomatBeispiel4



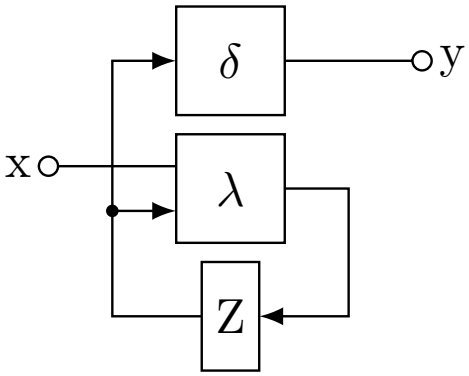
Automat/MinimalautomatBeispiel/MinimalautomatBeispiel5



Automat/MinimalautomatBeispiel/MinimalautomatBeispiel6

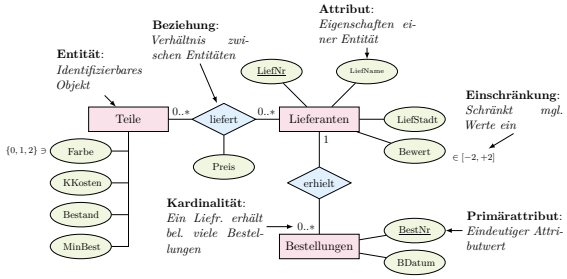


Automat/MooreAutomat



Ausgabe nur vom Zustand abhängig

Datenbanken/ERMExample



Eigene/Proseminar/Cluster/en-circles

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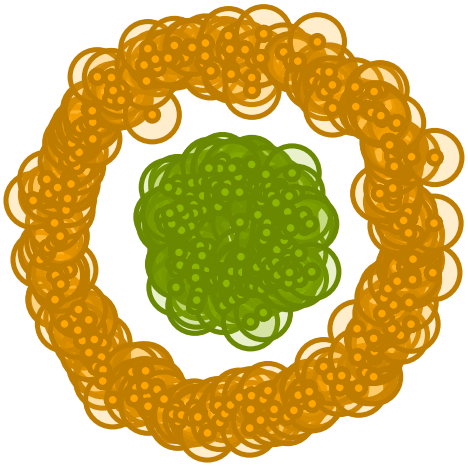

Eigene/Proseminar/Cluster/en-clusters

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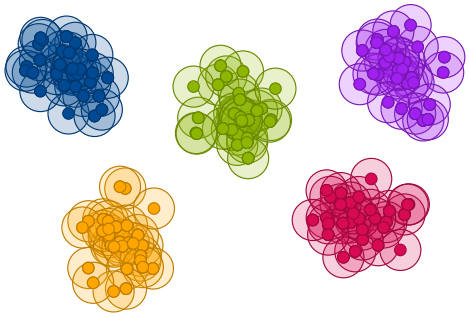

Eigene/Proseminar/Cluster/en-moons

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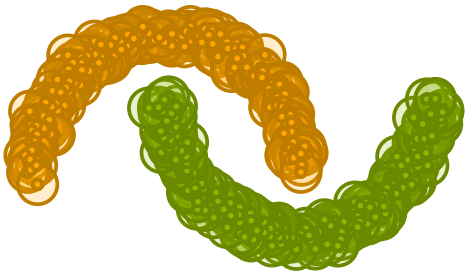

Eigene/Proseminar/Cluster/en-special

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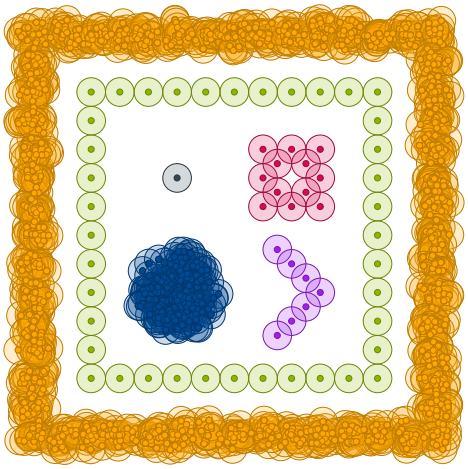

Eigene/Proseminar/Cluster/km-circles

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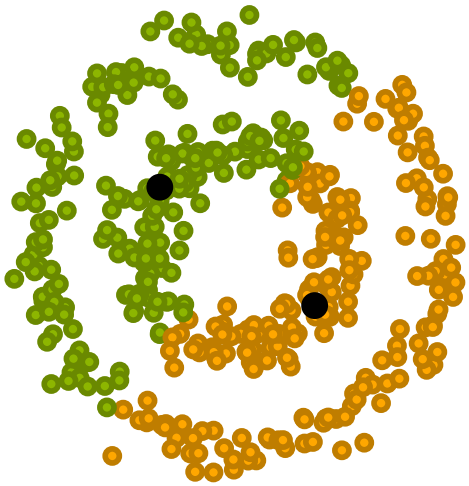

Eigene/Proseminar/Cluster/km-clusters

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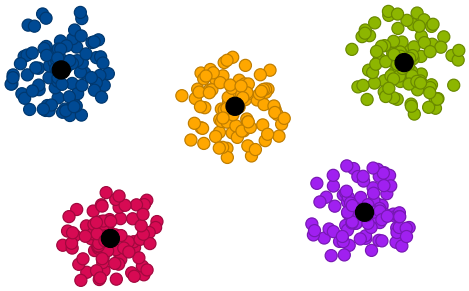

Eigene/Proseminar/Cluster/km-moons

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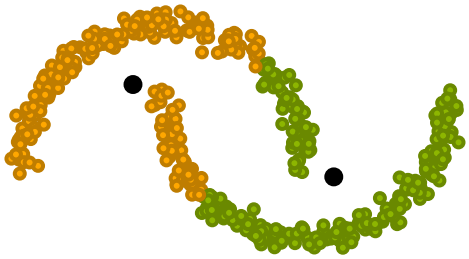

Eigene/Proseminar/Cluster/km-special

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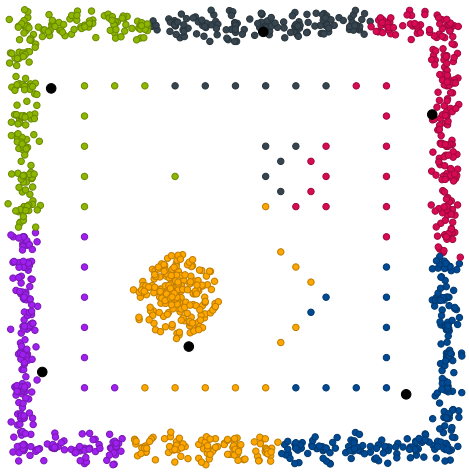

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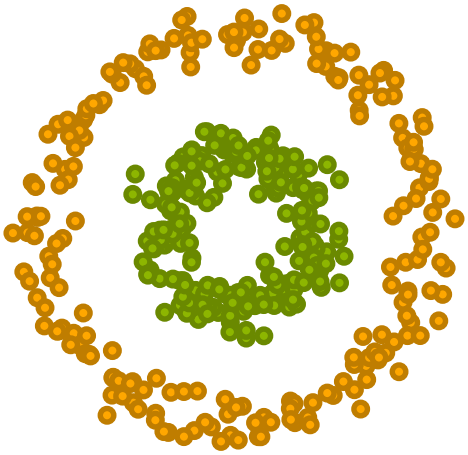

Eigene/Proseminar/Cluster/kn-clusters

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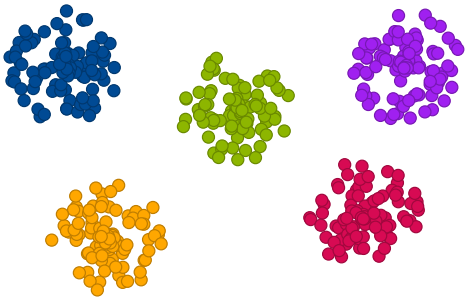

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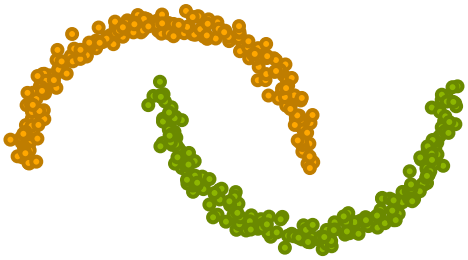

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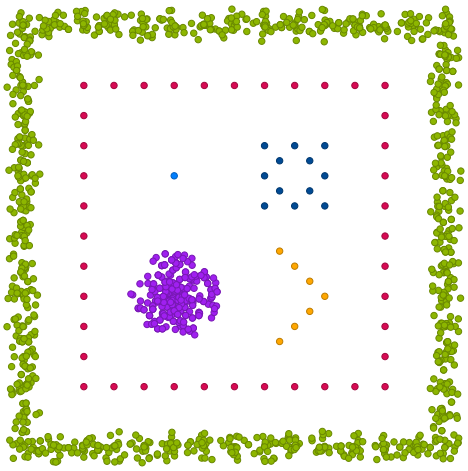

Eigene/Proseminar/Cluster/rolf-circles

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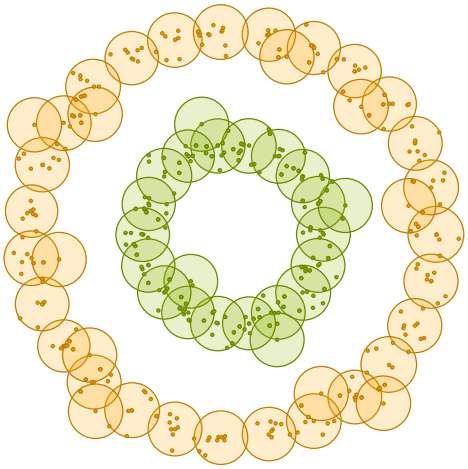

Eigene/Proseminar/Cluster/rolf-clusters

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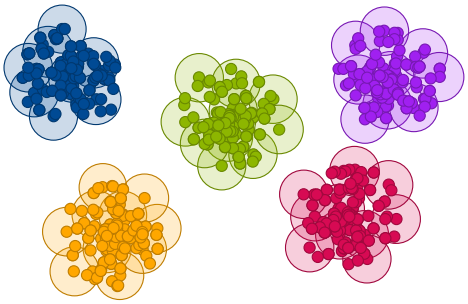

Eigene/Proseminar/Cluster/rolf-moons

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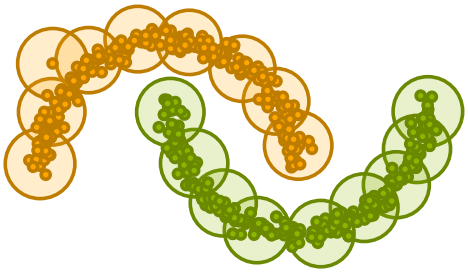

Eigene/Proseminar/Cluster/rolf-special

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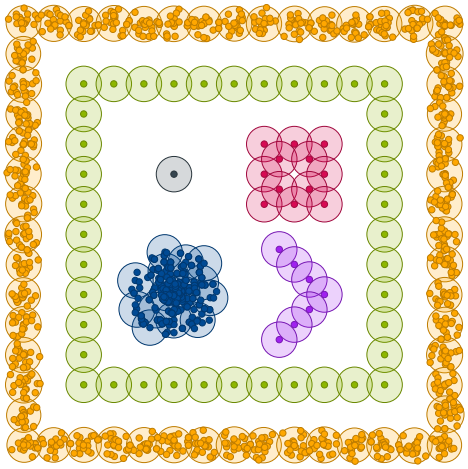
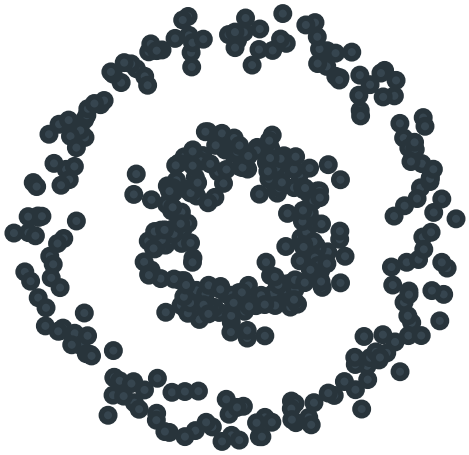
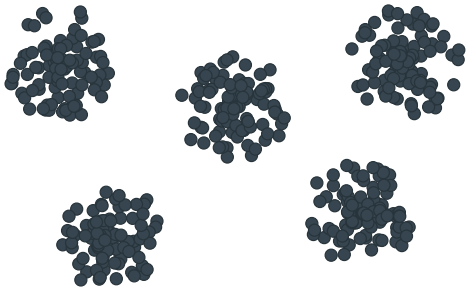
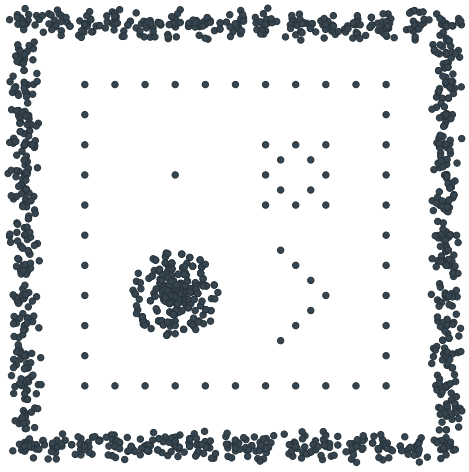
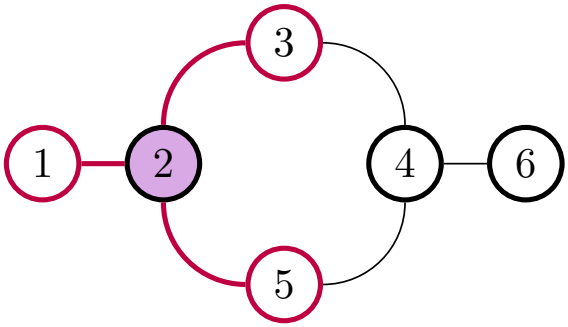


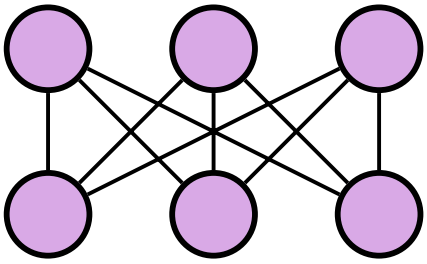
Eigene/Proseminar/Cluster/thumb-circles pdf	
Eigene/Proseminar/Cluster/thumb-clusters pdf	
Eigene/Proseminar/Cluster/thumb-moons pdf	
Eigene/Proseminar/Cluster/thumb-special pdf	

Graphen/GraphNachbarschaftGrad



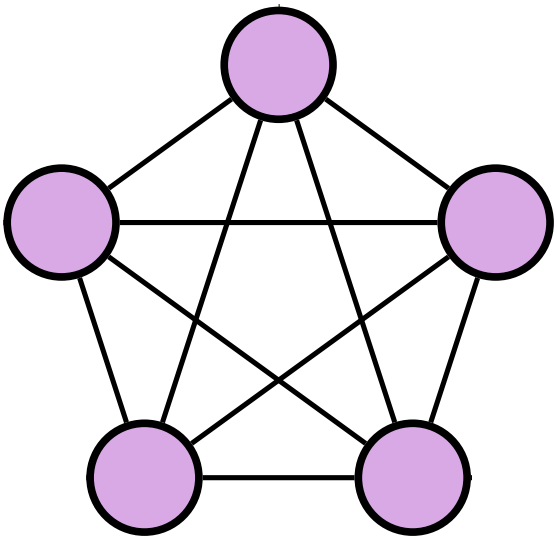
$K_{3,3}$

Graphen/GraphNichtPlanarK33

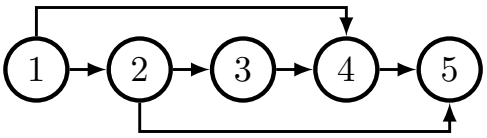


K_5

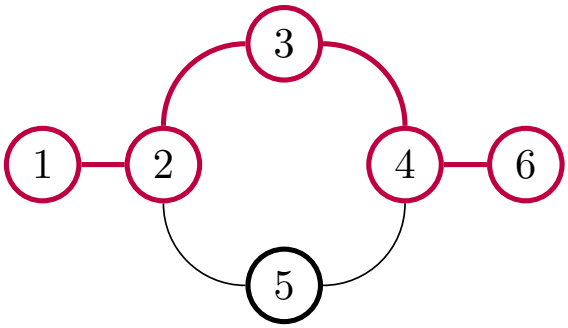
Graphen/GraphNichtPlanarK5



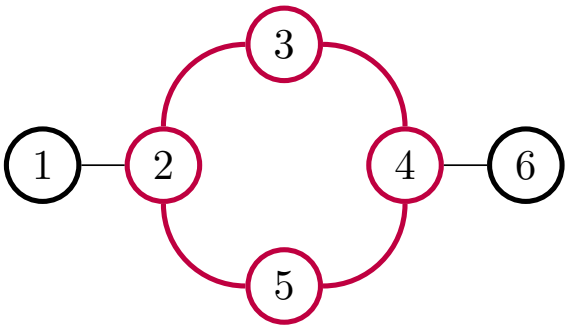
`Graphen/GraphTopologie`



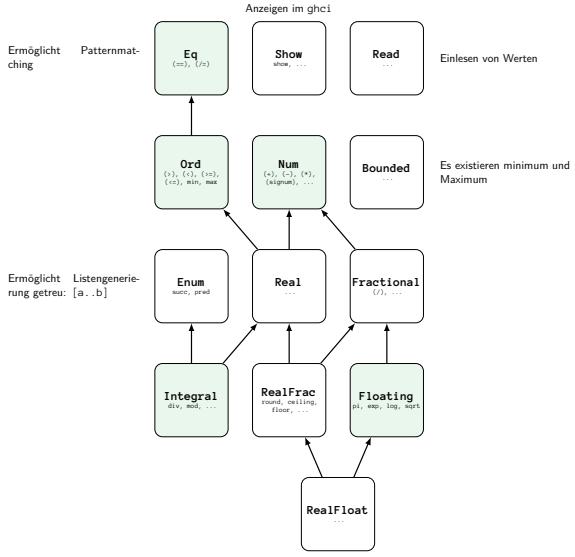
`Graphen/GraphWegPfad`



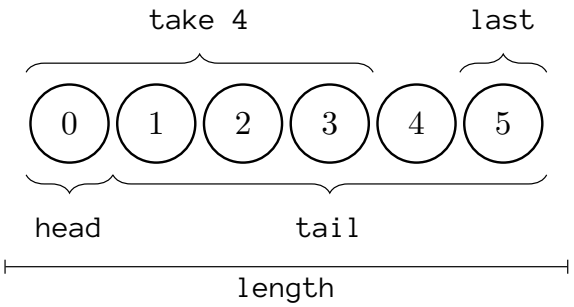
`Graphen/GraphZyklus`



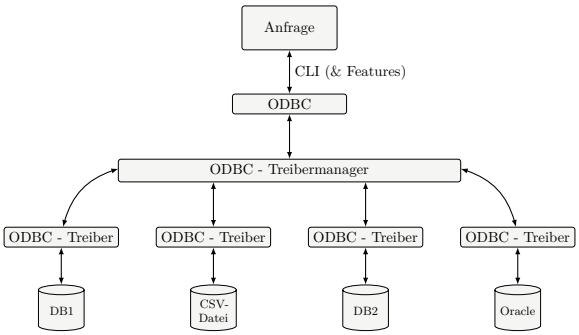
`Haskell/HaskellTypen`



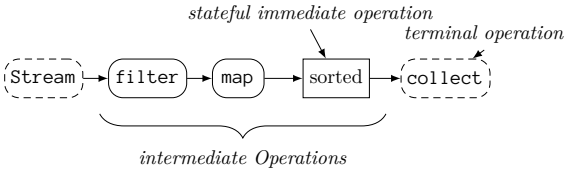
Haskell/Listenoperationen



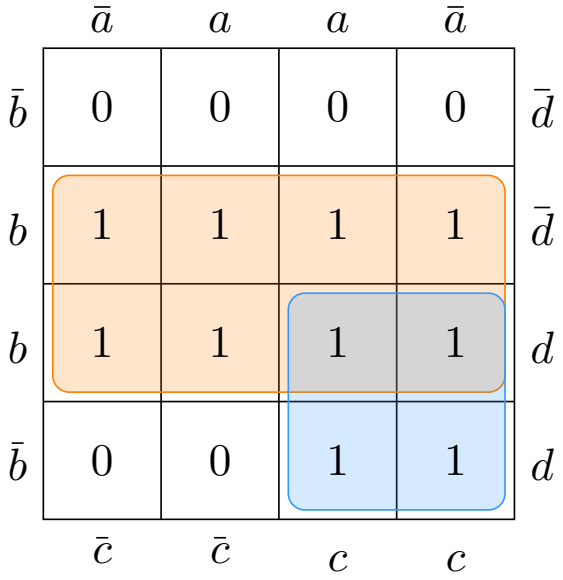
Java/ODBCSchematisch



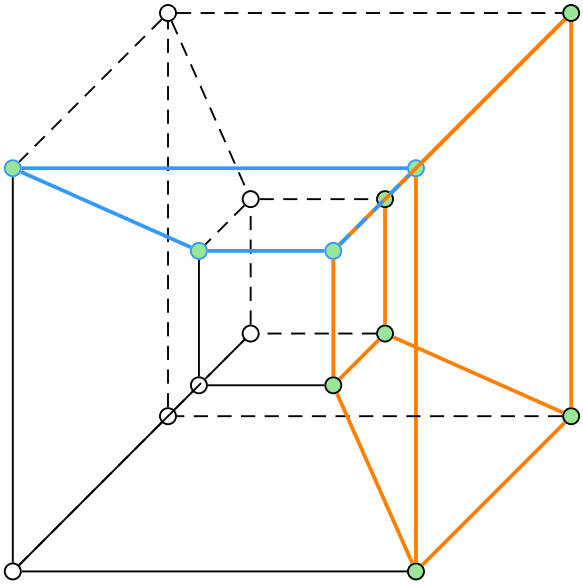
Java/StreamDemo



Logik/KVDiagramm



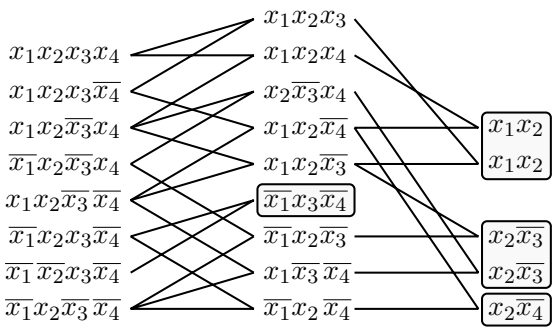
Logik/KVWuerfel



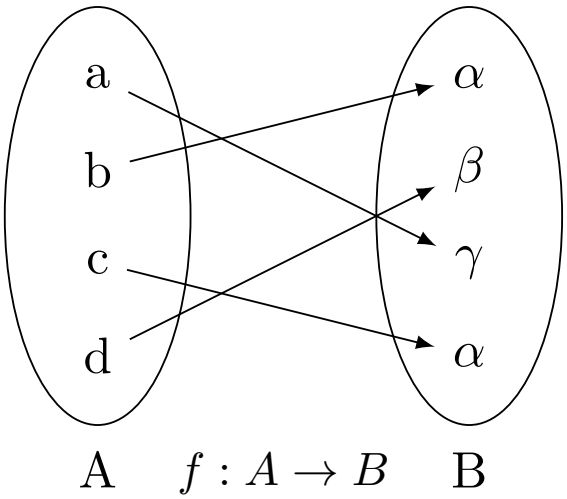
Logik/QuineMCCluskeyTabelle

	1	2	3	4	5	6	7	8
x_1x_2	+	+	+		+			
$x_2\overline{x_3}$			+	+	+			+
$x_2\overline{x_4}$		+			+	+		+
$\overline{x_1}x_3\overline{x_4}$						+	+	

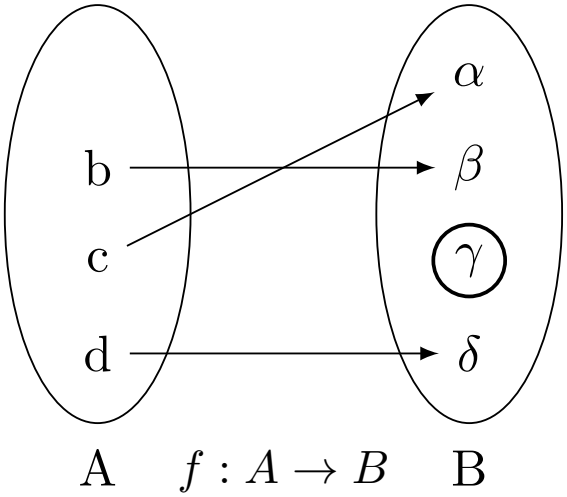
Logik/QuineMCCluskeyZusammenfassen



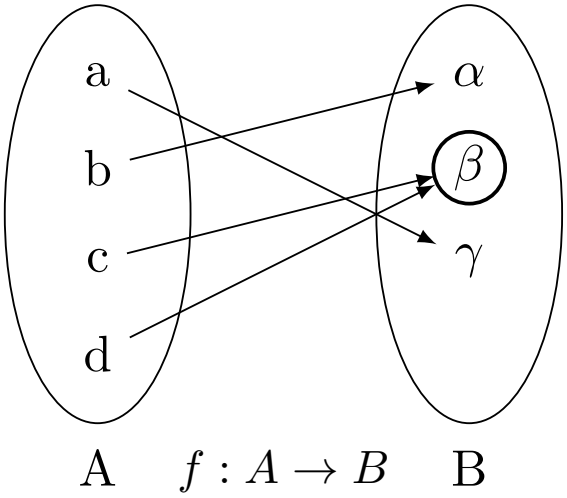
`Mengen/FunktionBijektiv`



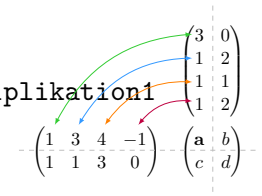
`Mengen/FunktionInjektiv`



`Mengen/FunktionSurjektiv`

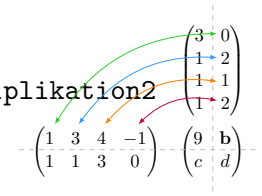


Mengen/Mengenmultiplikation/Mengenmultiplikation1



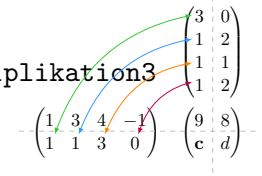
Für a ergibt sich also:
$a = 1 * 3 + 3 * 1 + 4 * 1 + (-1) * 1$
$= 9$

Mengen/Mengenmultiplikation/Mengenmultiplikation2



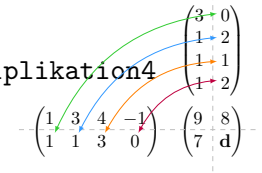
Für b ergibt sich also:
$b = 1 * 0 + 3 * 2 + 4 * 1 + (-1) * 2$
$= 8$

Mengen/Mengenmultiplikation/Mengenmultiplikation3



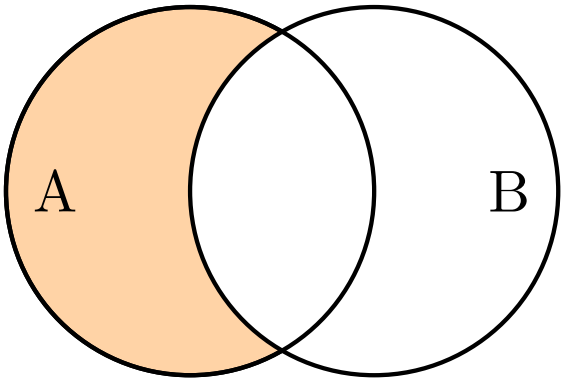
Für c ergibt sich also:
$c = 1 * 3 + 1 * 1 + 3 * 1 + 0 * 1$
$= 7$

Mengen/Mengenmultiplikation/Mengenmultiplikation4

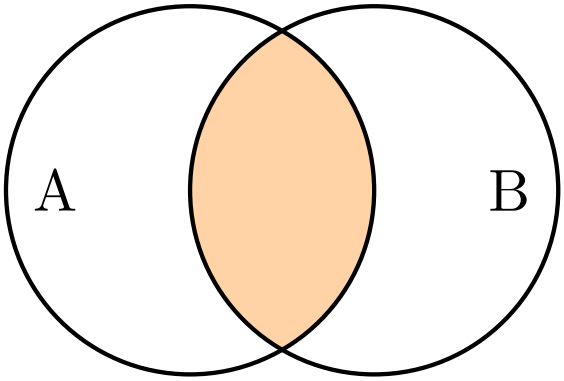


Für d ergibt sich also:
$d = 1 * 0 + 1 * 2 + 3 * 1 + 0 * 2$
$= 5$

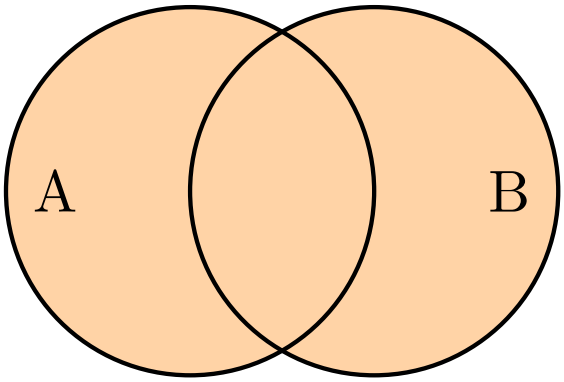
Mengen/VennDifferenz



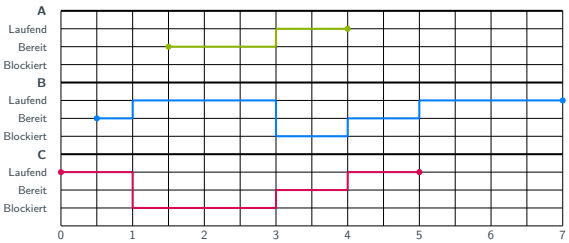
Mengen/VennSchnitt



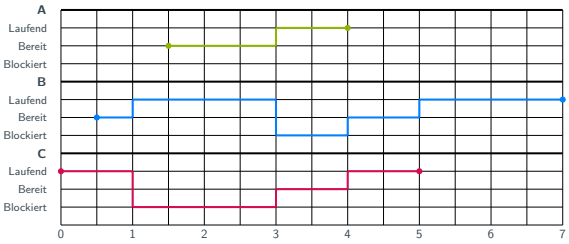
Mengen/VennVereinigung



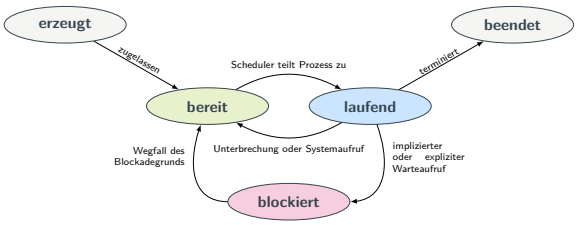
Prozesse/FCFS-WorstCase



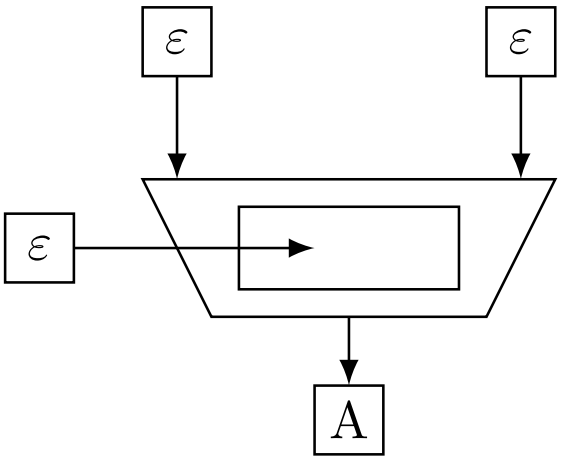
Prozesse/FCFS



Prozesse/Prozesszustaende



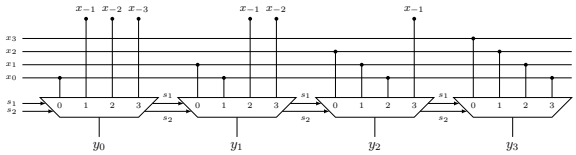
Rechner/ALU



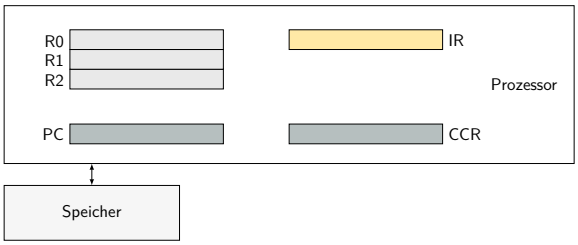
Rechner/AmpelPLA

δ	Zustand h_0	z_0	z_1	Folgez. z_0'	z_1'	NS			WO			T
δ_0	0	0	0	0	1	●	○	○	○	○	●	$7 \Rightarrow h_0' = 1$
δ_1	1	0	1	0	1	●	○	○	○	○	●	$\mathtt{T} - 1$
δ_3	0	0	1	1	0	○	●	○	○	●	●	$2 \Rightarrow h_0' = 1$
δ_4	1	1	0	1	0	○	●	○	○	●	●	$\mathtt{T} - 1$
δ_6	0	1	0	1	1	○	○	●	●	○	○	$7 \Rightarrow h_0' = 1$
δ_7	1	1	1	1	1	○	○	●	●	○	○	$\mathtt{T} - 1$
δ_9	0	1	1	0	0	○	●	●	○	●	○	$2 \Rightarrow h_0' = 1$
δ_{10}	1	0	0	0	0	○	●	●	○	●	○	$\mathtt{T} - 1$

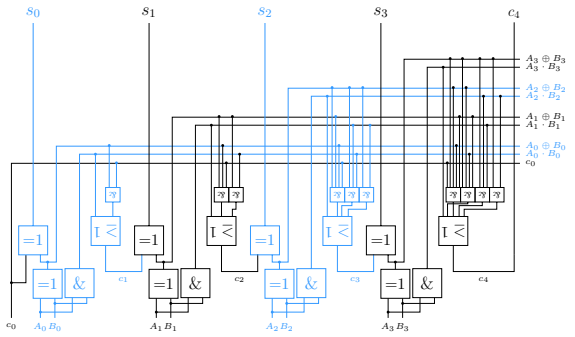
Rechner/BarrelShifter



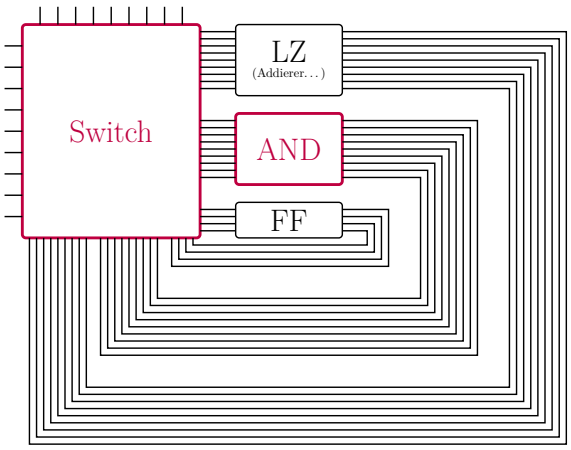
Rechner/Beispielprozessor



Rechner/CLA

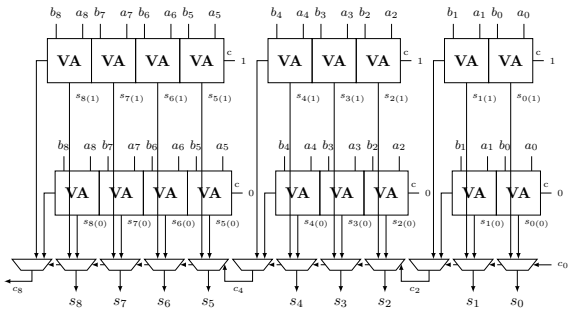


Rechner/CPLD

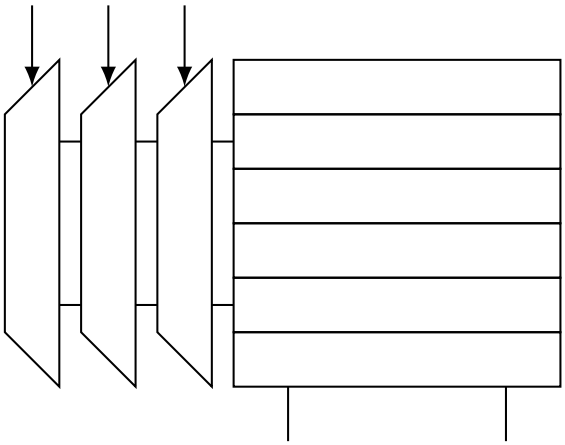


Rechner/CSA

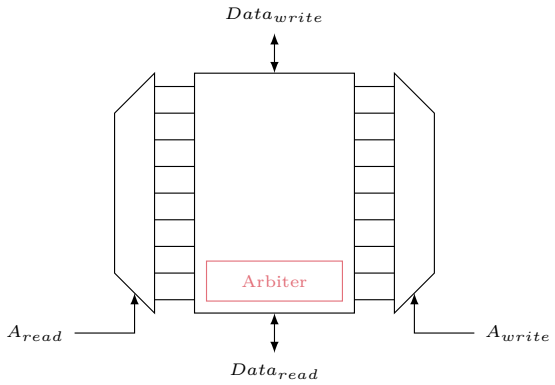
CSA - 9-bit Carray-Select-Addierer



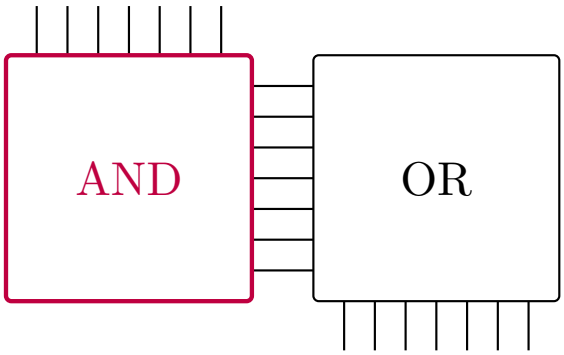
Rechner/DreiTorRegister



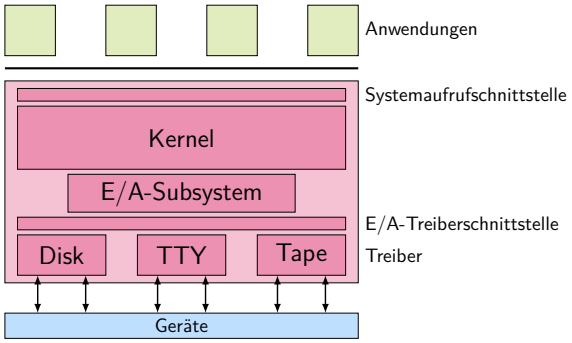
Rechner/Eintorspeicher



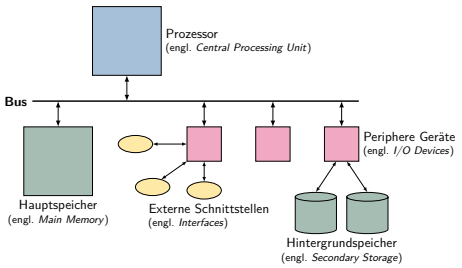
Rechner/GALPAL



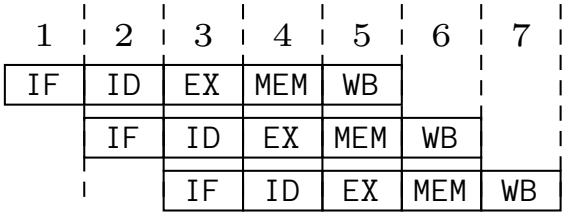
Rechner/Geraeteverwaltung



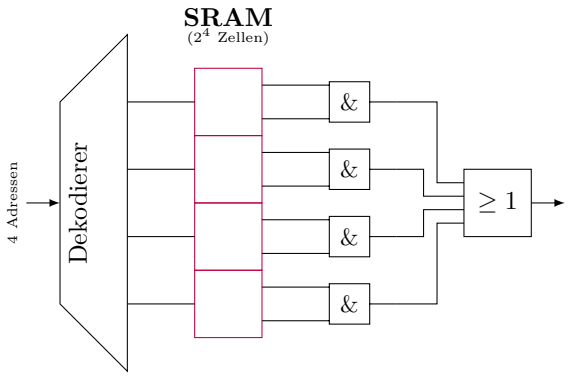
Rechner/HardwareSkizze



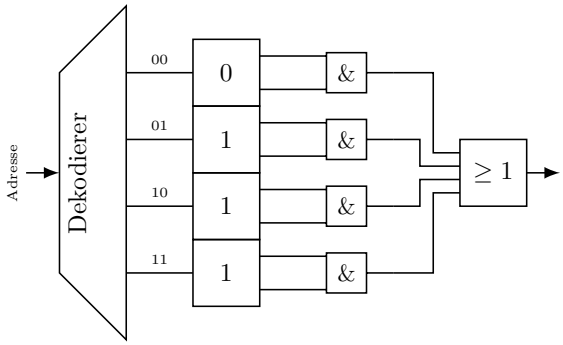
Rechner/ISA



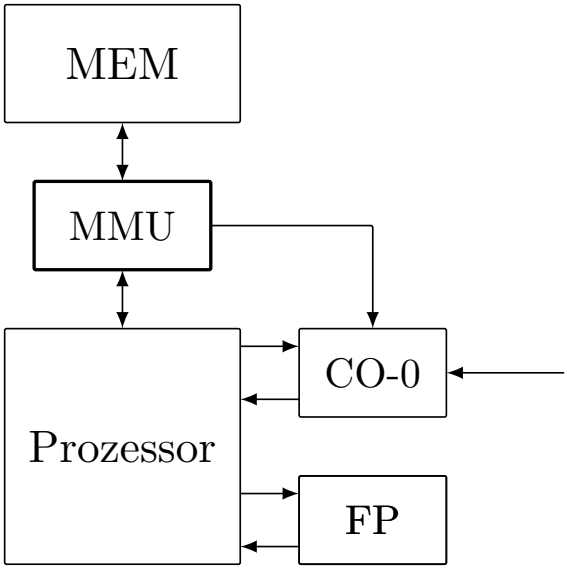
Rechner/LUT



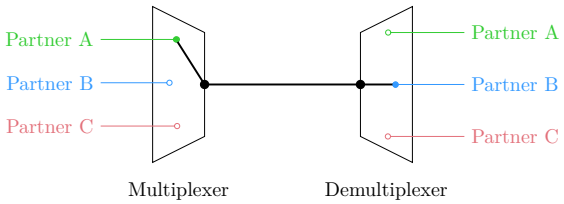
Rechner/LUTOder



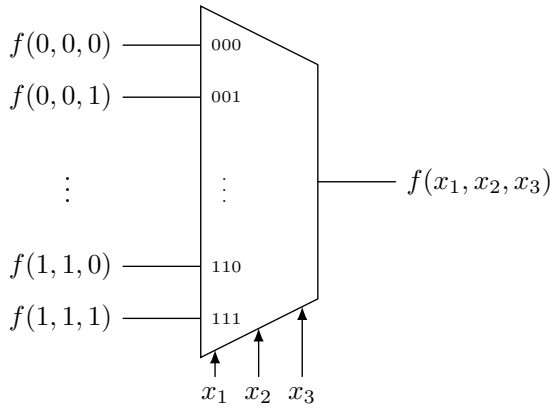
Rechner/MIPS



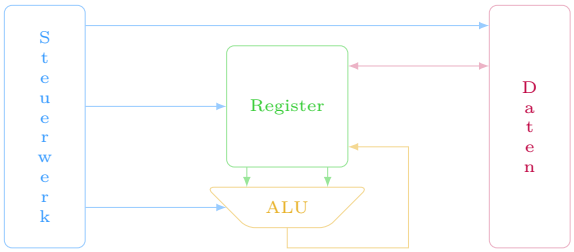
`Rechner/MuxDemuxKommunikation`



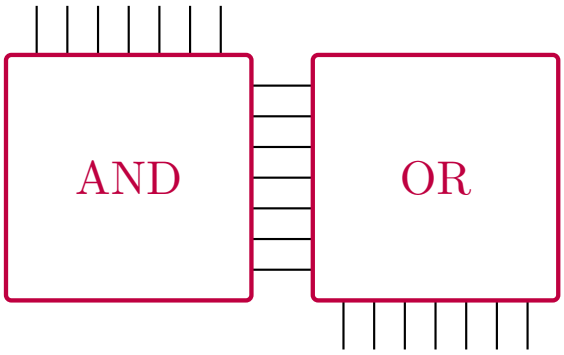
`Rechner/MuxShannon`



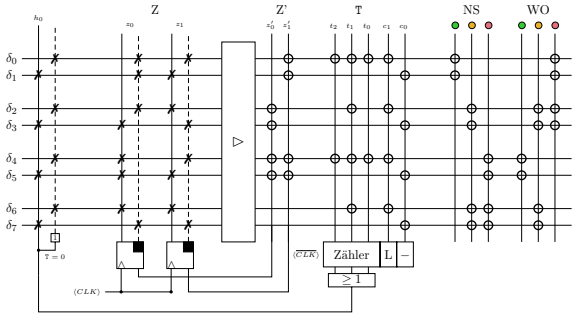
`Rechner/NAdressmaschiene`



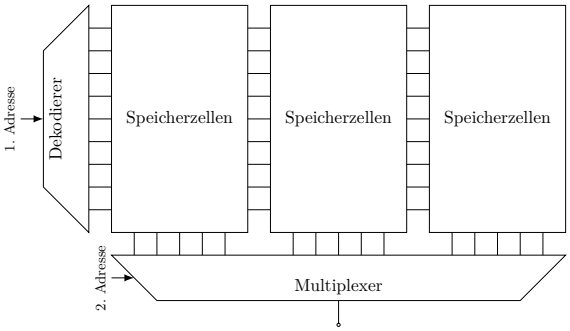
`Rechner/PLA`



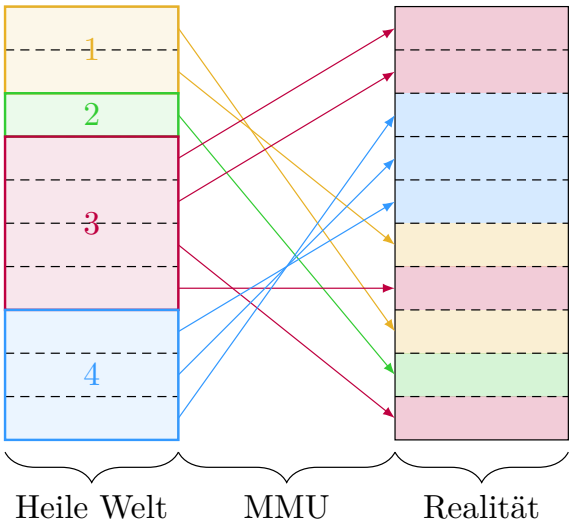
Rechner/PLAAmpel



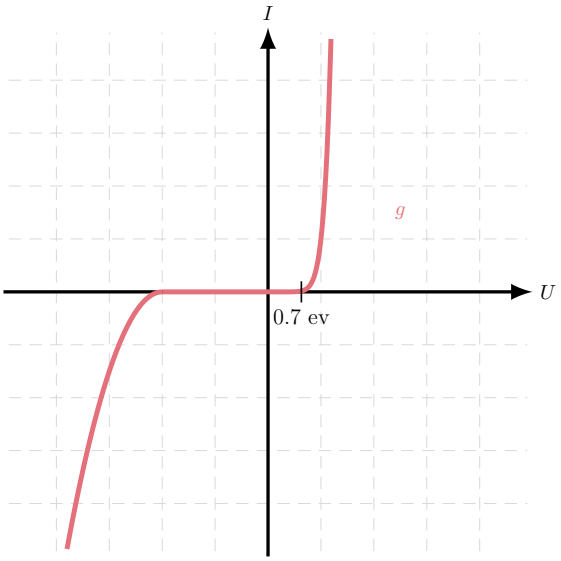
Rechner/PROM



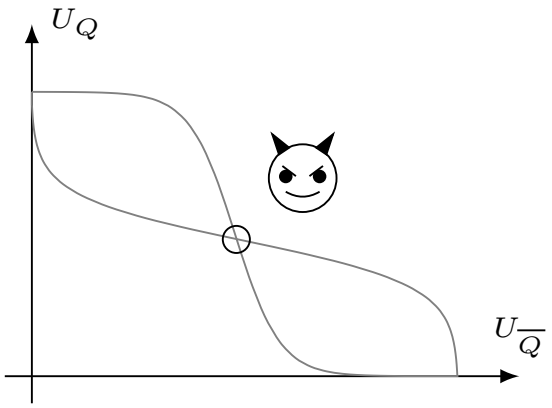
Rechner/Pages



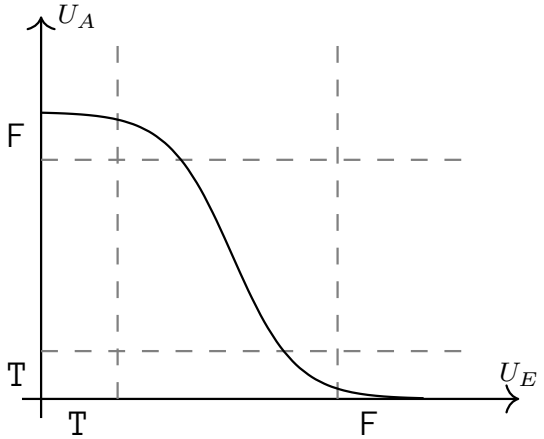
Rechner/Physik/DiodenStromstaerke



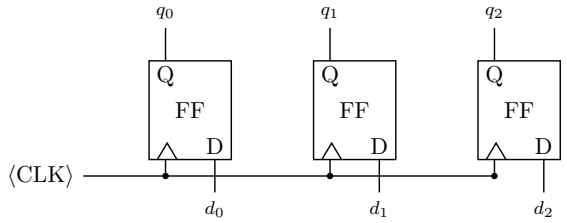
Rechner/Physik/Metastabil



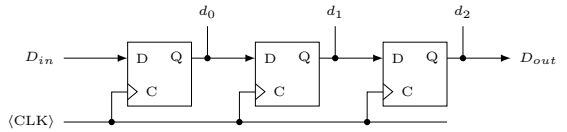
Rechner/Physik/TransistorStoertoleranz



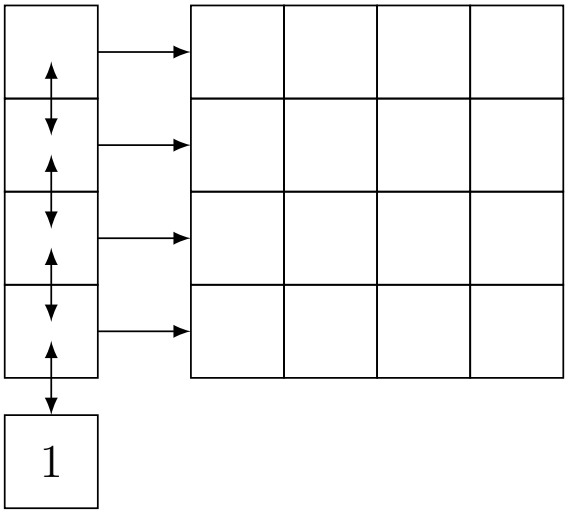
`Rechner/RegisterParallel`



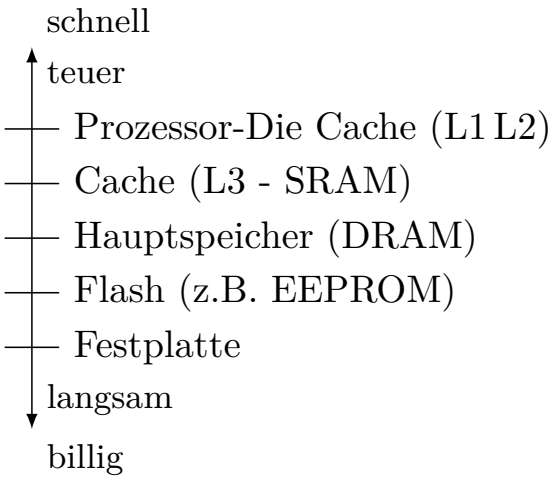
`Rechner/RegisterSeriell`



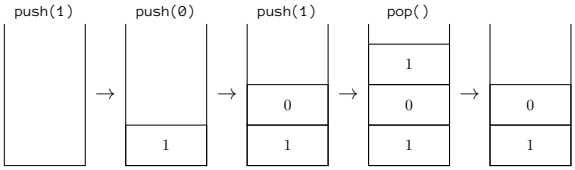
`Rechner/Shiftregister`



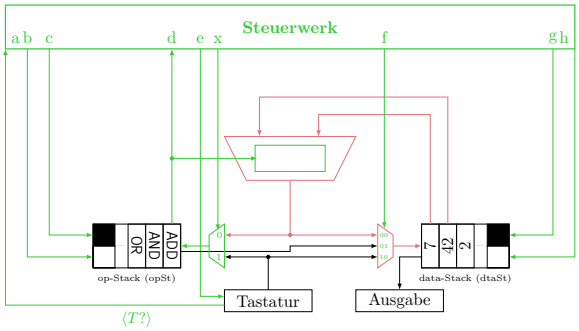
`Rechner/Speicherhierarchie`



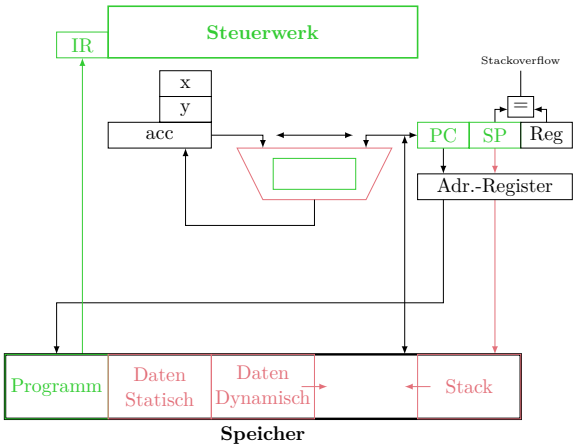
Rechner/StackExample



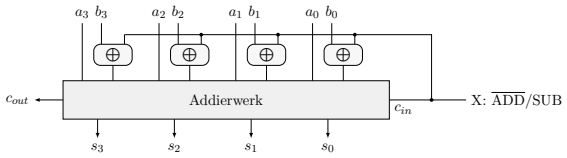
Rechner/Stackmaschiene



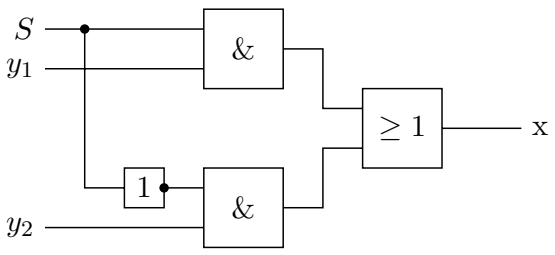
Rechner/StackmaschieneSimpler



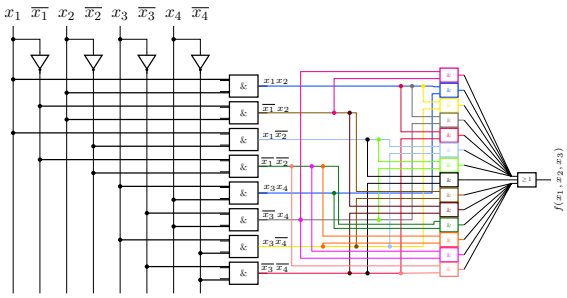
Schaltkreis/Addier-Subtrahierer



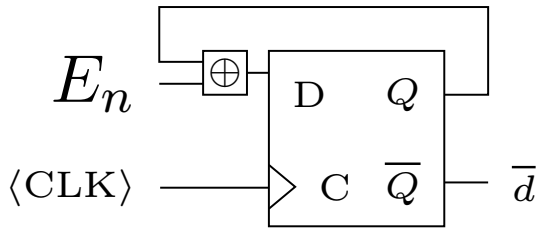
Schaltkreis/Demultiplexer



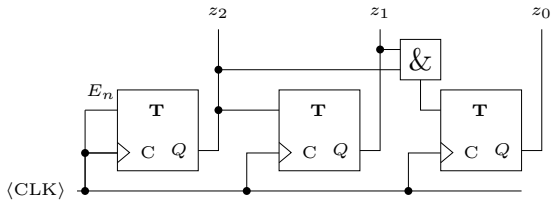
Schaltkreis/KomplexerSchaltkreis



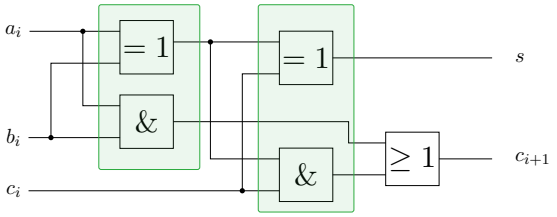
Schaltkreis/SynchronzaehlerDFF



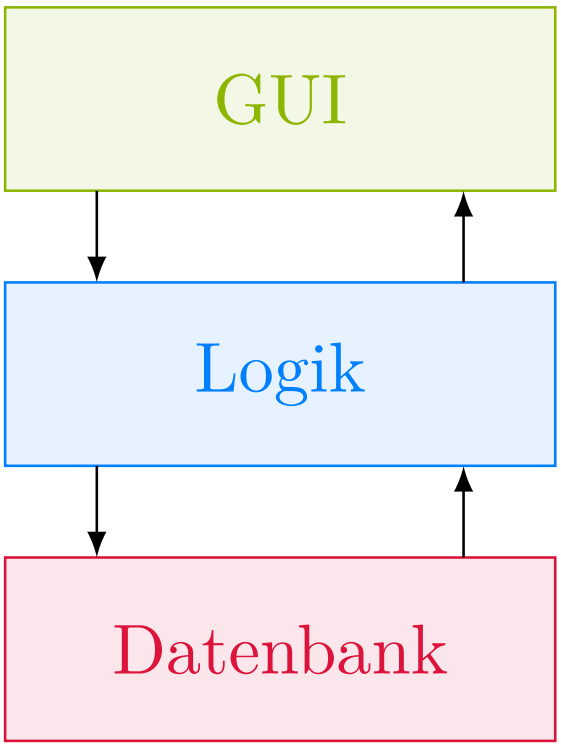
Schaltkreis/SynchronzaehlerTFF



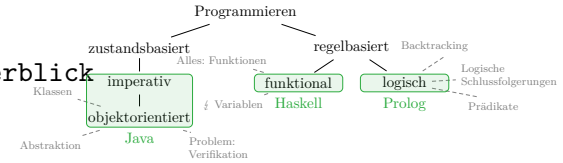
Schaltkreis/Volladdierer



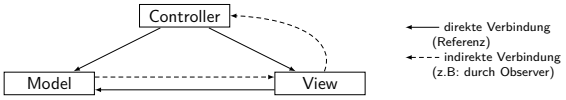
`Software/DreiSchichtenArchitektur`



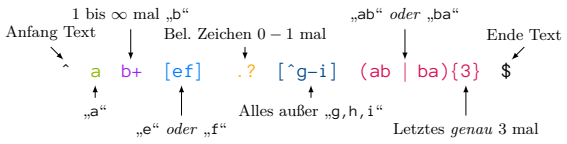
`Software/Meta/ProgrammierparadigmenUeberblick`



`Software/ModelViewController`

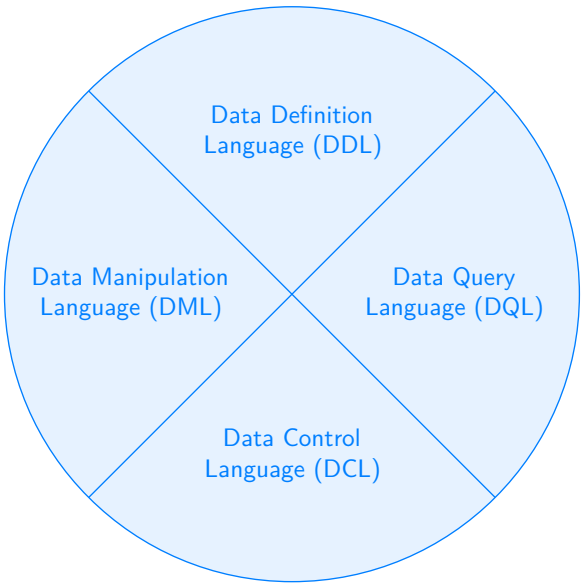


`Software/RegexExample`

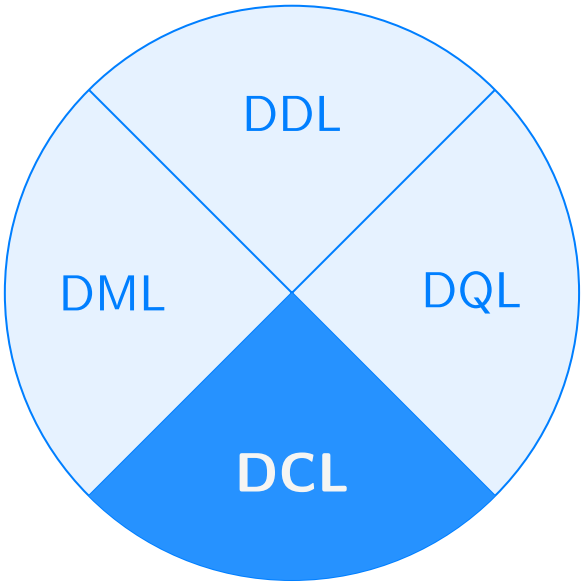


Akzeptiert	Akzeptiert nicht
abbbf#xabbaba	abbbf#gabbaba
abeAbababa	abbbf#oabbabaX

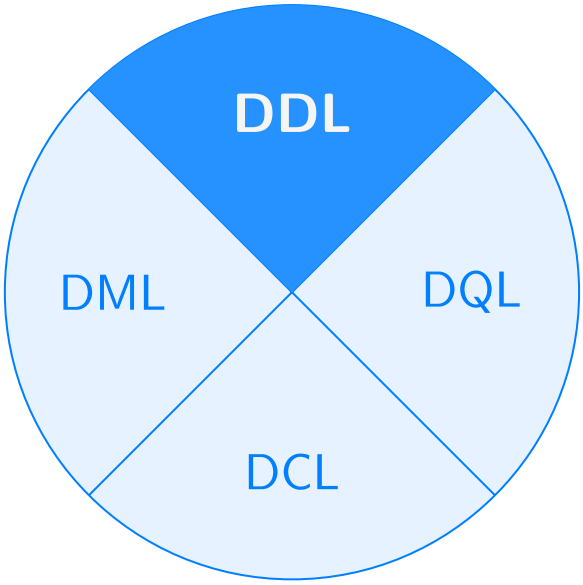
`Software/SQL/SQLFields`



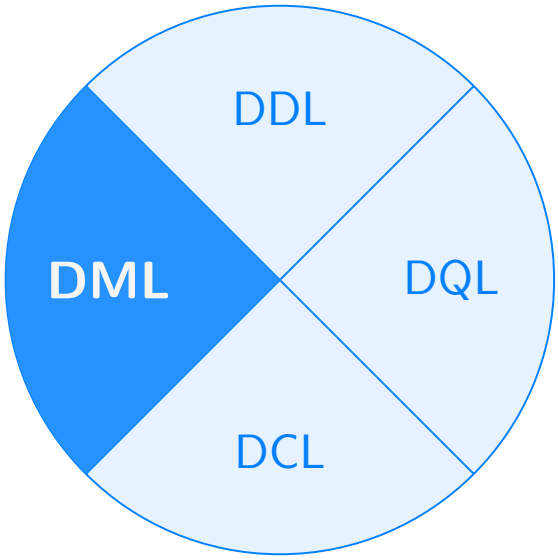
`Software/SQL/SQLFieldsDCL`



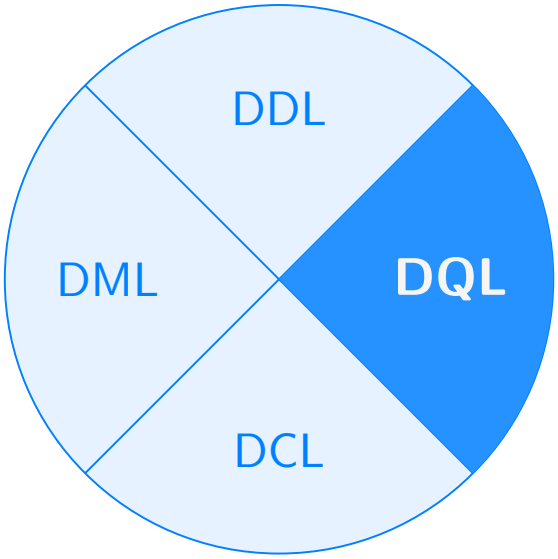
`Software/SQL/SQLFieldsDDL`



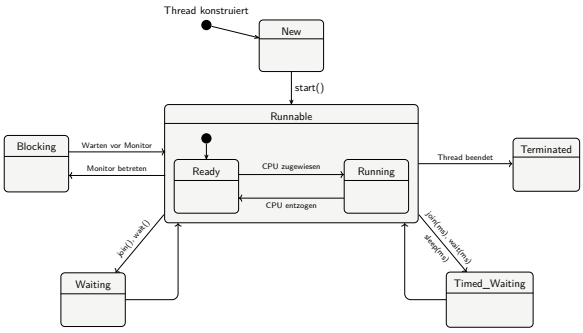
`Software/SQL/SQLFieldsDML`



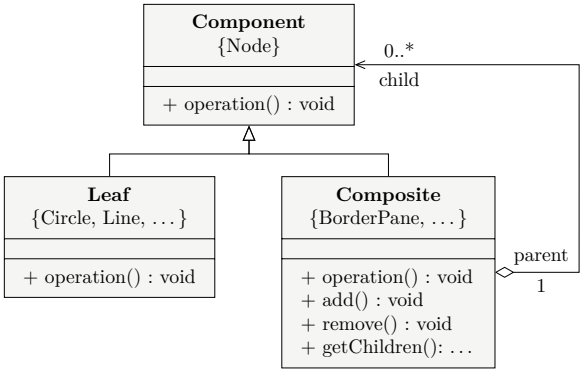
`Software/SQL/SQLFieldsDQL`



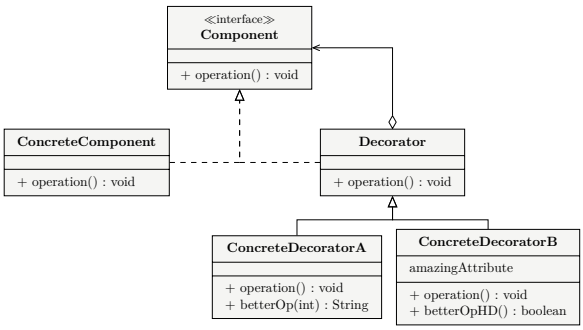
`Software/ThreadStates`



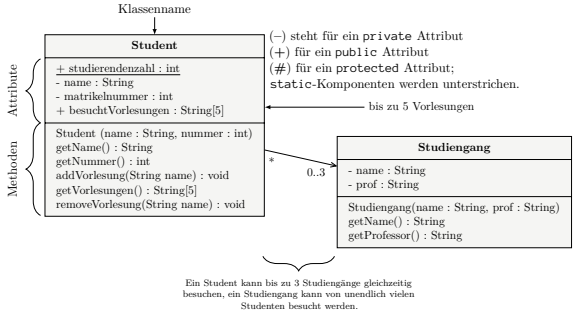
`Software/UML/UMLCompositePattern`



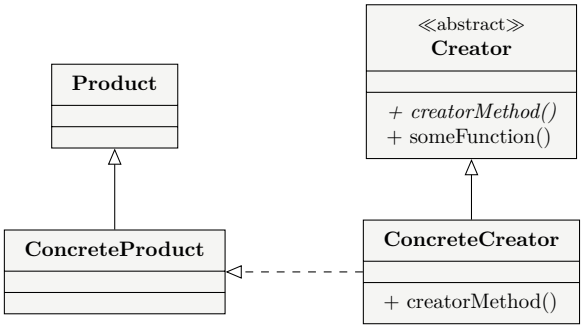
Software/UML/UMLDecoratorPattern



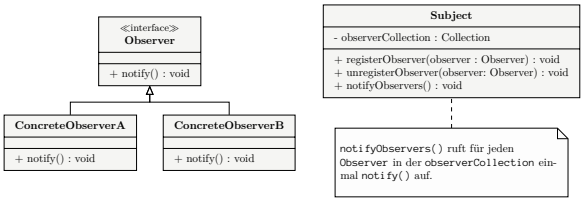
Software/UML/UMLExample



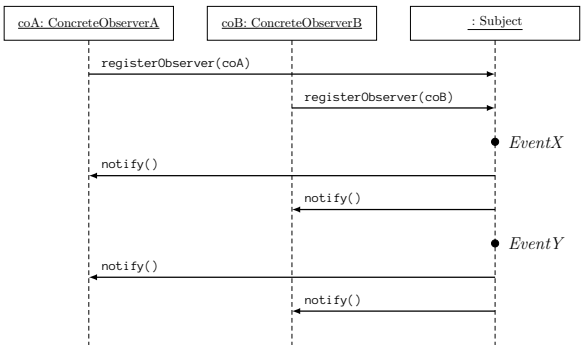
Software/UML/UMLFactoryPattern



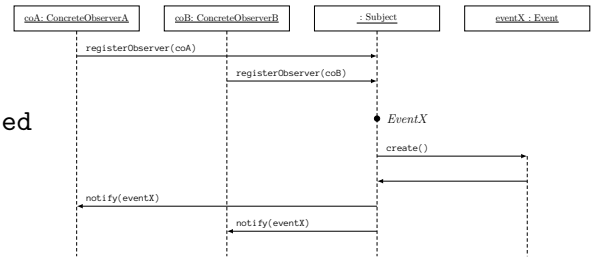
Software/UML/UMLObserverPattern



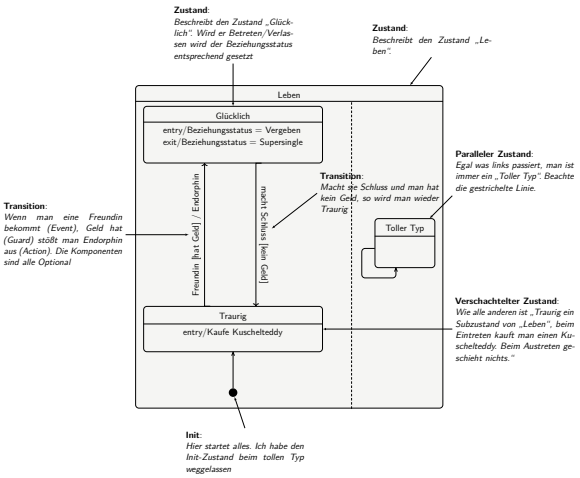
Software/UML/UMLSEQObserverPattern



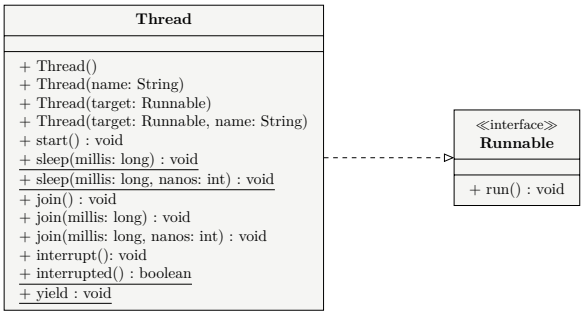
Software/UML/UMLSEQObserverPatternAdapted



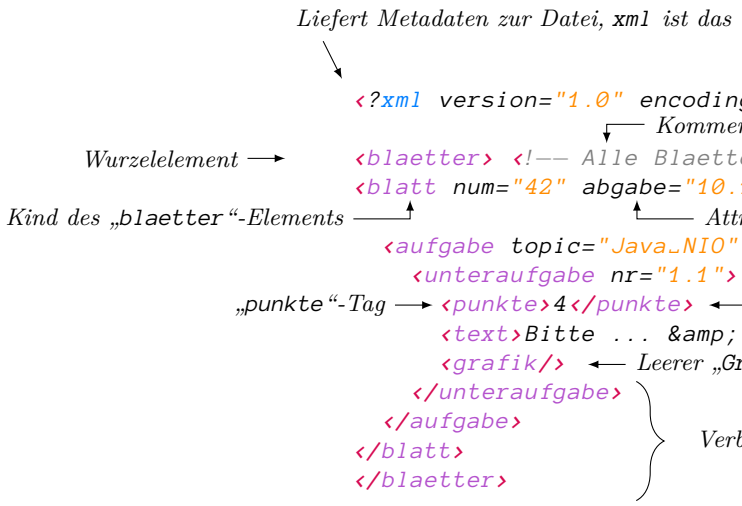
Software/UML/UMLStateDiagramExample



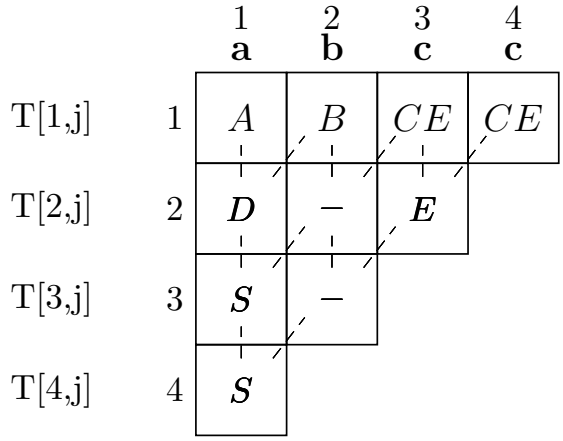
Software/UML/UMLThread



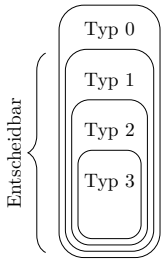
Software/XML/XMLUebersicht



Sprachen/CYKAlgorithmus



Sprachen/ChomskyHierarchie



Jede Grammatik - Aber **nicht** jede Sprache (Beispiel: π, alle irrationalen Zahlen)

Kontextsensitiv:
$|w_1| \leq |w_2| \quad \forall w_1 \to w_2 \in P$

Kontextfrei:
$w_1 \in V \quad \forall w_1 \to w_2 \in P$

Regulär:
$w_2 \in \Sigma \cup \Sigma V$

Kann von NFA und DFA realisiert werden.

Sprachen/Grammatik