PLATZWART BÄLLE

UML

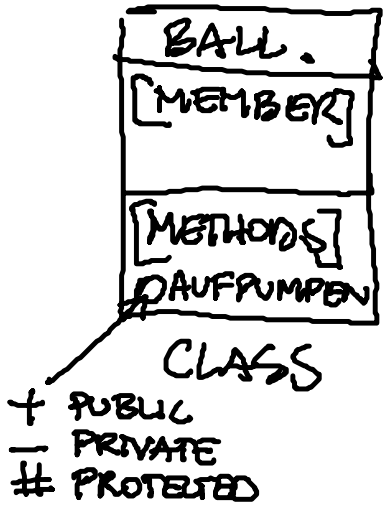
BALL

- SPORTART
- DURCHMESSER
- WEICHHEIT

} EIGENSCHAFTEN

- AUFPUMPEN
- SAUBER MACHEN
- INS REGAL LEGEN
- ORDNEN

} HANDLUNGEN



+ PUBLIC
− PRIVATE
PROTECTED

ARTEN VON BÄLLEN

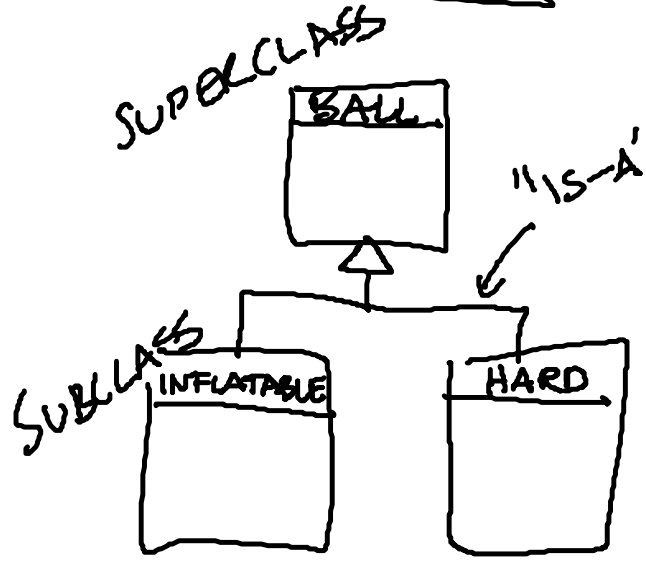
(A) HART
WEICHE

(B) DRINNEN
DRAUSSEN

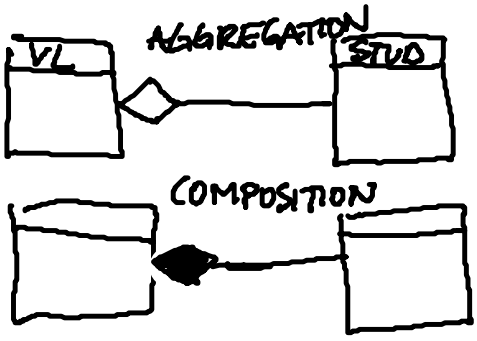
(C) AUFBLASBAR
HART

↘ LUFTDRUCK SETZEN

↘ OBERFLÄCHE REINIGEN



"HAS-A"



Super

Static

Substitution

Typecast

Object

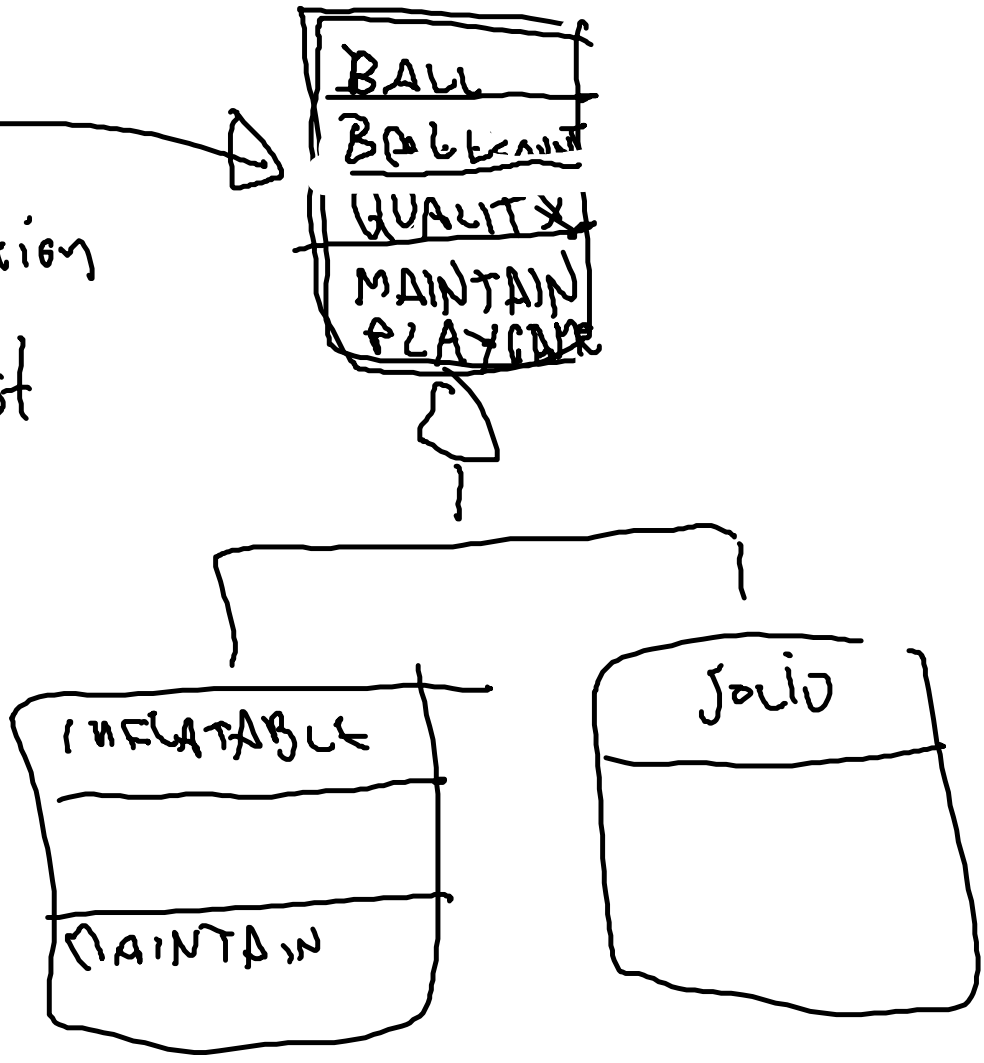
equals

Clone

try

catch

throw



Implements interface throw

Exceptions try

:

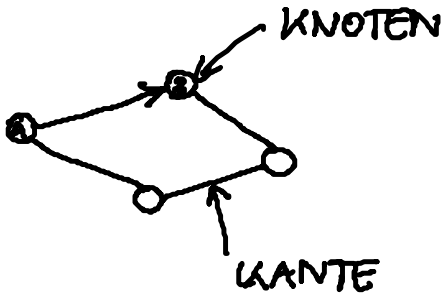
:

catch

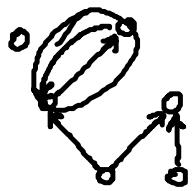
fangen

oft

ALGO DAT — GRAPHEN



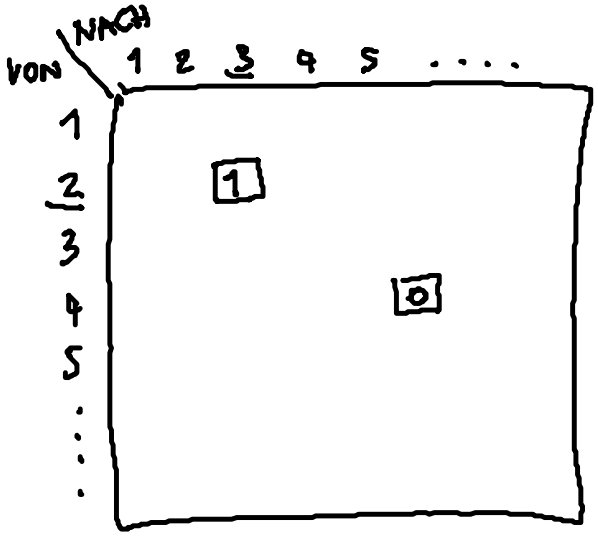
n KNOTEN



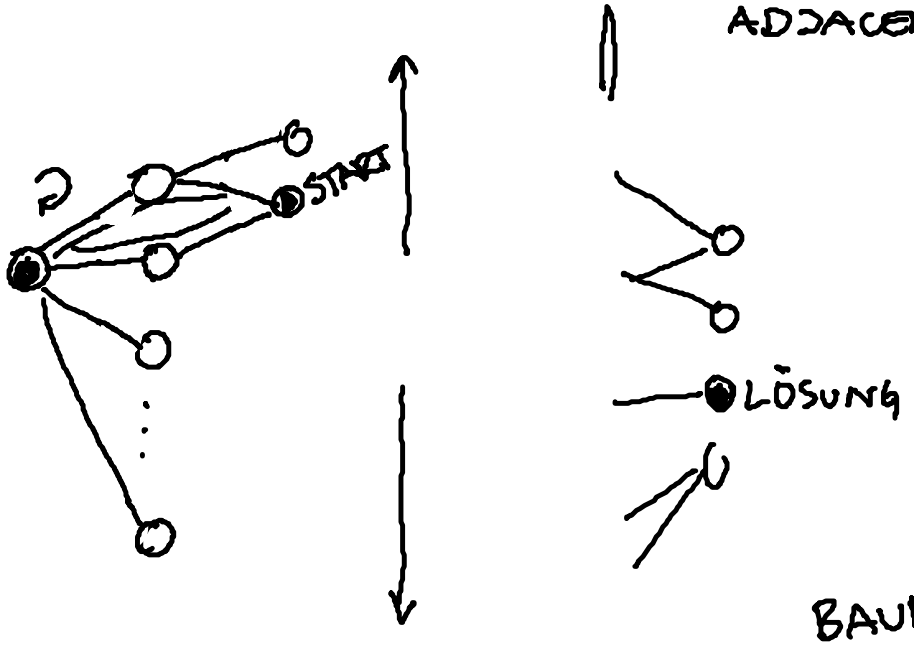
$n^n = 1$

n^{n-1}

$n \cdot (n-1) = \frac{n^2 - n}{2}$



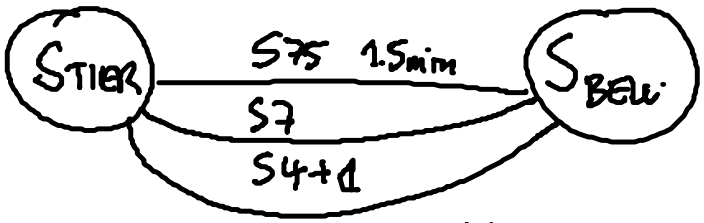
ADJAZENSMATRIX
ADJACENCY MATRIX



BAUM = DAG
DIRECTED
ACYCLIC
GRAPH

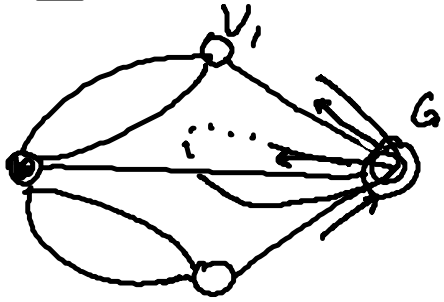
DURCHMESSER DES GRAPHEN

MULTIGRAPH



$G = (V, E)$

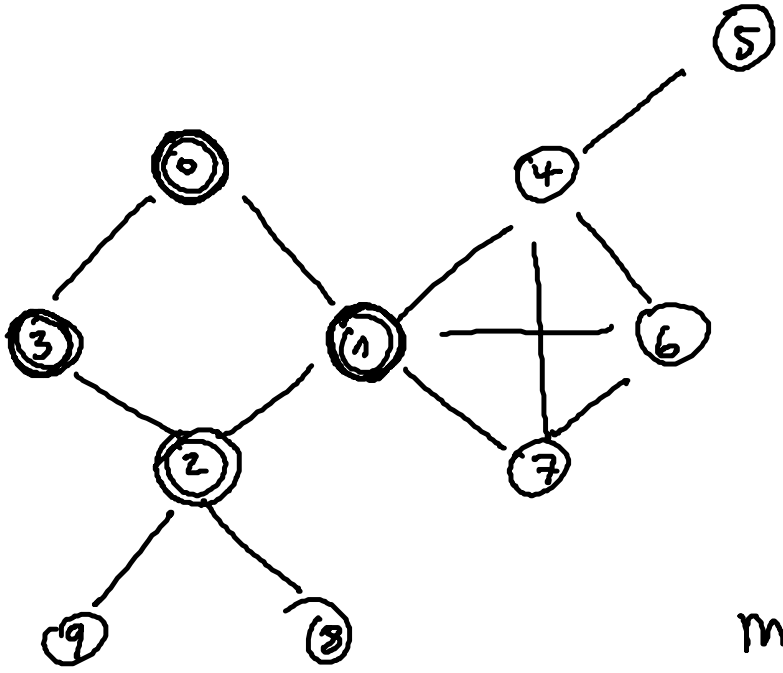
$e_i \in E = \begin{cases} (a,b) & \text{GERICHTET} \\ \{a,b\} & \text{UNGER.} \end{cases}$



GRAD EINES KNOTEN = ANZAHL KANTEN AM KNOTEN

$\deg(V_1) = 3$

VON	NACH
12	16
4	1
⋮	⋮



$|V| = n$

$|E| = m$

~~$n \cdot m$~~

$n + m$

$\max(n, m)$.

FÜR ALLE KNOTEN v

n

FÜR ALLE NACHBARN VON V

IMMER GLEICH

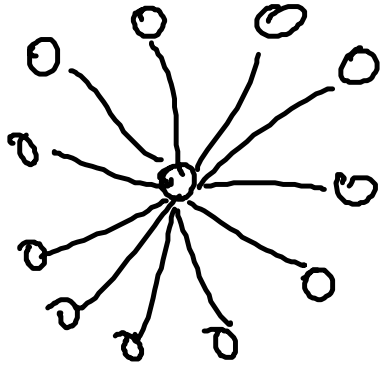
FÜR ALLE SCHLEIFEN DURCHLAUFE

$$\sum_{v \in V} \deg(v) = 2 \cdot |E| = 2m$$

$\sim n + 2m$

$2 \cdot n \cdot \max_{v \in V} (\deg(v))$

$\geq \leq =$



$\max \deg = n-1$

$n \cdot n-1 \approx n^2$