

05 - TIN

23.10.
2020

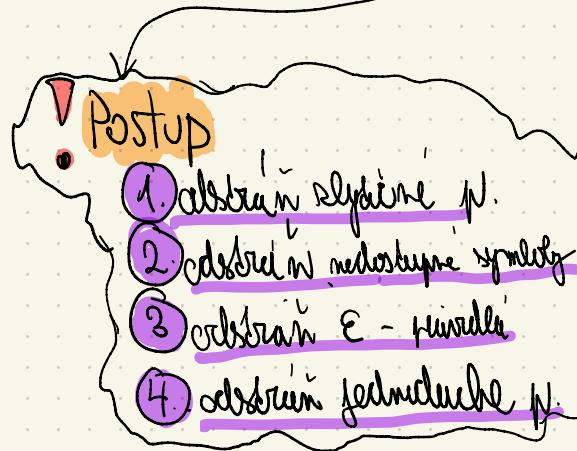
(PREWD BKG, ZA, RZA,
DZA, DRZA...)

1) BKG

Freiwillige grammatische Typen \rightarrow werden zu parallelisieren do CNF
oder zu algorithmisch

Prinzipien:

$$\begin{aligned} S &\rightarrow aTb \mid aSM \mid IT \\ M &\rightarrow aOM \\ O &\rightarrow ab \\ P &\rightarrow a \\ T &\rightarrow E \mid TS \mid \omega \end{aligned}$$



1.

a) Spezielle Minimierung N_t

$$N_t = \{O, PT, S\}$$

N_t^1 N_t^2

$$N_t^{i+1} = \left\{ A \in IN \mid \exists (A \rightarrow \omega) \in P \wedge \left(\sum_{t=0}^{i-1} N_t^{i+1} \right)^* \right\}$$

FOR DUMMIES

Alle Werte minima (neterminale) genauer
mehr minima (terminale)

b) vyhodíme T pravidla, kdežto ne je v N_E

$$S \rightarrow aTb \mid \alpha \cancel{SM} \mid IT$$

$$M \rightarrow \cancel{\alpha \beta M}$$

$$O \rightarrow ab$$

$$P \rightarrow a$$

$$T \rightarrow \epsilon \mid TS \mid \alpha$$

2.

a) $- V = \{ \underbrace{S, T, \alpha, b}_{V_1} \}$

$$\begin{aligned} S &\rightarrow aTb \mid T \\ O &\rightarrow ab \\ P &\rightarrow a \\ T &\rightarrow \epsilon \mid TS \mid \alpha \end{aligned}$$

FOR DUMMIES

Kw když máme nějakého a když máme nějakého slova, které jsou do této sekvence vložena.

$$\begin{array}{ll} X \rightarrow aY & X \rightarrow a \\ Y \rightarrow b & Y \rightarrow b \\ Z \rightarrow z & Z \rightarrow z \end{array}$$

3.

N_E - množina N_E

$$- N_E^0 = \emptyset$$

$$N_E = \{ T, S \}$$

$$\begin{matrix} N_E^1 \\ N_E^2 \end{matrix}$$

FOR DUMMIES

Pozor na naše nejdůležitější slovo, kdežto se prepisuje na ϵ .

$$S' \rightarrow S \mid \epsilon$$

$$S \rightarrow ab \mid aTb \mid \cancel{IT}$$

$$T \rightarrow \cancel{\epsilon} \mid TS \mid T \mid S \mid \cancel{a}$$

!
pro každý Non-terminal
máte své perekam
alebo upravte

4.

$$A \rightarrow B$$

$$N_A = \{B_A^1 \mid A \xrightarrow{*} B\}$$

$$N_S^1 = \{S_1^1 | S_1^0 | T\}$$

S_1^0 S_1^1 T

$$N_S = \{S_1^1 | T\}$$

N_S^0 N_S^1

$$N_T = \{T_1^1 | S_1^1\}$$

T_1^0 T_1^1
 S_1^0 S_1^1

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Preceding deterministic A in non-deterministic non-terminal N_A will be deterministically $\Rightarrow B$ due to τ + the rule hypersequent w/ 1 allele where brother B

$$\left. \begin{array}{l} A \rightarrow B \\ B \rightarrow C \\ C \rightarrow D \\ D \rightarrow \text{methyl} \end{array} \right\} \Rightarrow A \rightarrow \text{methyl}$$

$$\boxed{\begin{array}{l} S^1 \rightarrow \cancel{\epsilon} | \cancel{\epsilon} | ab | aTb | \cancel{\tau} | TS | \omega \\ S \rightarrow ab | aTb | TS | \cancel{\tau} | \cancel{\epsilon} | \omega \\ T \rightarrow TS | \omega | ab | aTb \end{array}}$$

Lexical
Grammar

5.

CNF

$$A \rightarrow BC | \alpha | \epsilon$$

$$S^1 \rightarrow \epsilon | <\alpha> | <\alpha> <Tb> | TS | \omega$$

$$<\alpha> \rightarrow \alpha$$

$$ \rightarrow b$$

$$<Tb> \rightarrow T $$

$$S \rightarrow <\alpha> | <\alpha> <Tb> | TS | \omega$$

$$T \rightarrow TS | \omega | <\alpha> | <\alpha> <Tb>$$

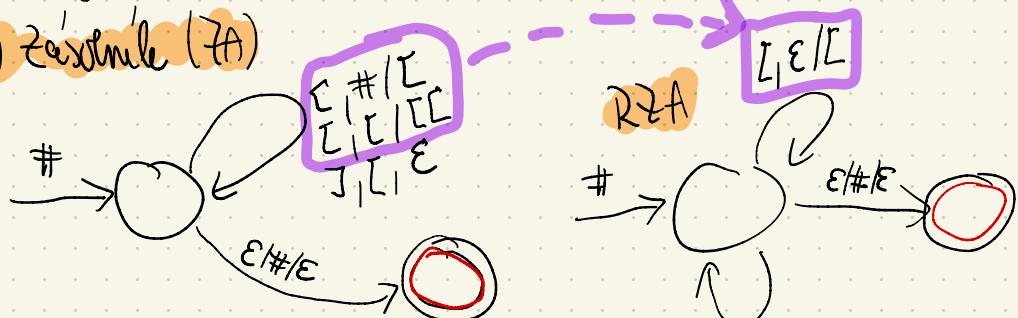
2) BKGZA

Zostanęte jedyne symbole w ZA po Wyklasowaniu jedyne \rightarrow 1 symbol
zatrzymał, np. {ε, {}, {}, {}, {}, {}, {}, {}, ...}

a) Gramatyka

$$P: S \rightarrow \Sigma \cup (S)S \quad G = (\{S\}, \{\Sigma\}, P, S)$$

b) Zasóbne (ZA)



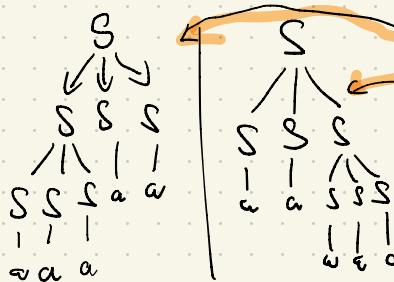
3) Gramatyka jednoznaczna i nasta

$$G = (\{S\}, \{a\}, \{S \rightarrow SSS(a)\}, S)$$

jednoznaczna

a) jednoznaczny?

nie!



pre veces a^5 mimoż. warstwa
deriwujących struktur

b) $L(G)$ jednomerný? ANO

$$L(G) = \{a^{2^m-1} \mid m \geq 0\}$$

ne schvýkává se
gramatiku, která je
jednomerná?

označ P: $S \rightarrow a a S \mid a$

$G = \{\{S\}, \{a\}, P, S\} \ni$ tato gramatika je jednomerná

4) Syntaktická analýza

a) Pre Dychov jazyk typu 1 napište ZA príkladom $\Sigma = \{a, b, c\}$
nepoužívajúc rekurzívnu a medzičas syntaktickú analýzu
čiara Dlu.

$$S \Rightarrow \{S\} \mid SS \mid \epsilon$$

$$\mathcal{F}: \quad \mathcal{F}(q_1, \epsilon, S) = \{(q_1, \epsilon S), (q_1, S S), (q_1, \epsilon)\}$$

$$\mathcal{F}(q_1, I, \Sigma) = \{(q_1, \epsilon) = \mathcal{F}(q_1, \emptyset, \emptyset)\}$$

$$M = (\{q_1\}, \{I, J\}, \{I, \#S\}, \delta, q_1, S, \emptyset)$$

$$S \Rightarrow \{S\} \mid SS \mid \epsilon$$

b) Zdroj - mechanizmus pre tento jazyk pomocou RZA

\mathcal{F} : Shifty: $\mathcal{F}(q_1, I, \epsilon) = \{(q_1, \emptyset)\}$

$\mathcal{F}(q_1, \emptyset, \epsilon) = \{(q_1, \emptyset)\}$

ACCEPT:

$\mathcal{F}(q_1, \epsilon, \#S) = \{(r_1, \epsilon)\}$

Reduce: $\mathcal{F}(q_1, \epsilon, \epsilon S) = \{(q_1, S)\}$

$\mathcal{F}(q_1, \epsilon, S S) = \{(q_1, S)\}$

$\mathcal{F}(q_1, \epsilon, \epsilon) = \{(q_1, S)\}$

$$M = (\{q\}, \{E, T\}, \{E, T, S^\# \}, \delta, q_1, \#, \{v\})$$

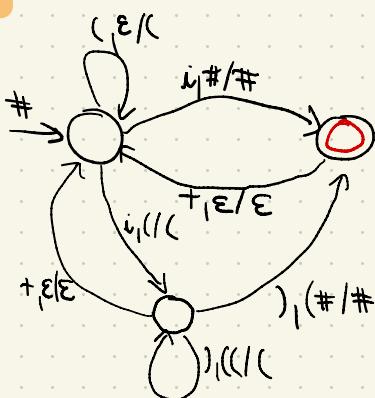
5) DR2A a D2A

a) Zostańcie DR2A a D2A i se jąej pisanie → sprawdzenie

$$E \rightarrow E + T/T$$

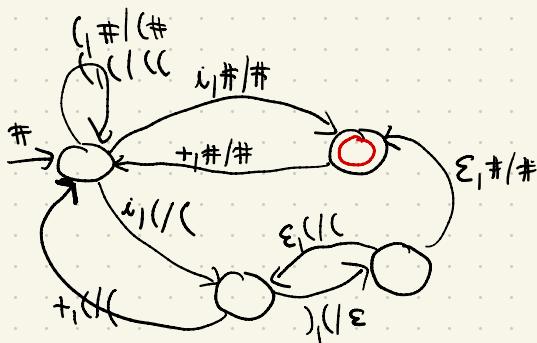
$$T \rightarrow (E) \mid \epsilon$$

a) DR2A



$\epsilon \mid i \mid \#$

b) D2A

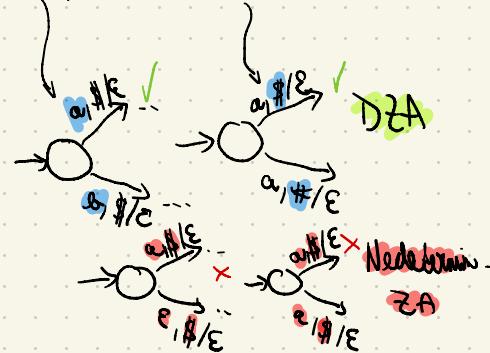


$\epsilon \mid \#$

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D2A - deterministyczny NFA

wszystkie albożycie paralelne

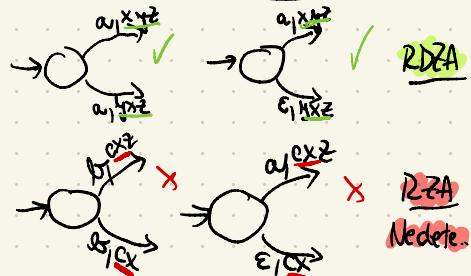


RD2A - res zasadnicze

mögliche mögliche albożycie reduzieren

Nedobranianie moga moga kiedyś

moga kiedyś sprawi now obiegi albożycie
a znowu znowu now obiegi moga znowu je
przyjmuje dalej po przejściu.



RD2A

D2A
Nedobr.