2.4.4. GRLD ⇒ AFN-ε

GRLD
G = (N, Σ, P, S)

AFN-ε
A = (Q, Σ, δ, S, F)

Q = $N \cup \{F\}$
δ :
Si $A \rightarrow \sigma_1\sigma_2\sigma_3\ldots\sigma_n \in P$ entonces
$\delta = \delta \cup \delta(A, \sigma_1\sigma_2\sigma_3\ldots\sigma_n) = \delta(q_1, \sigma_2\sigma_3\ldots\sigma_n) = \delta(q_2, \sigma_3\ldots\sigma_n) = \ldots = \delta(q_{n-1}, \sigma_n) = \{F\}$
$Q = Q \cup \{q_1, q_2, q_3, \ldots, q_{n-1}\}$
Fin Si
Si $A \rightarrow \sigma_1\sigma_2\sigma_3\ldots\sigma_n\ B \in P$ entonces
$\delta = \delta \cup \delta(A, \sigma_1\sigma_2\sigma_3\ldots\sigma_n) = \delta(q_1, \sigma_2\sigma_3\ldots\sigma_n) = \delta(q_2, \sigma_3\ldots\sigma_n) = \ldots = \delta(q_{n-1}, \sigma_n) = \{B\}$
$Q = Q \cup \{q_1, q_2, q_3, \ldots, q_{n-1}\}$
Fin Si
F = {F}

Ejemplo:
G = ({S, A, B}, {a, b}, P, S)
P = {
S → aB | bA | ε
A → abaS
B → babS
}

2.4.5. GRLD ⇒ AFN

GRLD ⇒ **AFN**

$G = (N, \Sigma, P, S)$ en forma normal ⇒ $A = (Q, \Sigma, \delta, q_0, F)$

donde $\begin{cases} Q = N \\ \delta(A, \sigma) = \{B \in N \,/\, A \to \sigma B \in P\} \quad \forall A \in N, \sigma \in \Sigma \\ q_0 = S \\ F = \{A \in N \,/\, A \to \varepsilon \in P\} \end{cases}$

Ejemplo:

G = ({S, A, B, D_1, D_2, D_3, D_4}, {a, b}, P, S)

P = {

S → aB | bA | ε

A → aD_1

D_1 → bD_2

D_2 → aS

B → bD_3

D_3 → aD_4

D_4 → bS

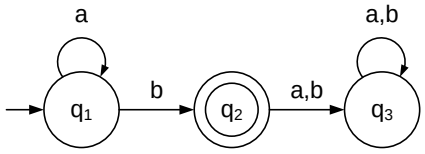
}

2.4.6. AFN ⇒ GRLD

AFN **GRLD**

$$A = (Q, \Sigma, \delta, q_0, F) \quad \Rightarrow \quad G = (N, \Sigma, P, S) \text{ donde } \begin{cases} N = Q \\ P = \{q \to \sigma p \,/\, p \in \delta(q, \sigma)\} \cup \{q \to \varepsilon \,/\, q \in F\} \\ S = q_0 \end{cases}$$

Ejemplo:



Ejercicio: