Definición formal de la Gramática Independiente del Contexto (GIC)

G = {∑T, ∑N, S, P}

∑T = {A, B, C, D …… x, y, z, 0, 1, 2 … , 8, 9, (,), =, +, -, *, /, %, _, ;}

∑N = {IN, E1, E2, OP, ID, ID2, C, CD, CDR, CDE, CO, CH}

P = {

IN → ID = E1;

E1 → ID | ID = E1 | E2

E2 → C1 | (-C1) | (+C1) | ID | E2OPE2 | E2

OP → + | - | * | / | %

ID → AID2 | BID2 | …… | yID2 | zID2 | _ID2

ID2 → AID2 | BID2 | …… | yID2 | zID2 | _ID2 | 0ID2 | 1ID2 | …… | 8ID2 | 9ID2 | λ

C1 → 1CD | 2CD | …… | 9CD | 0CO | 0xCH | 0.CDR

CD → 0CD | 1CD | …… | 9CD | .CDR | E+CDE | E-CDE | ECDE

CDR → 0CDR | 1CDR | …… | 9CDR | λ

CDE → 0CDE | 1CDE | …… | 9CDE | 0 | 1 | 2 | …… | 9

CO → 0CO | 1C0 | 2C0 | …… | 7C0 | λ

CH → 0CH | 1CH | 2CH | …… | ECH | FCH | 0 | 1 | 2 | …… | E | F

}

Definición formal del AP

AP = {Q, ∑, Γ, f, q0, z0, F}

Q = {q0,q1,q2}

∑ = {A, B, C, D …… x, y, z, 0, 1, 2 … , 8, 9, (,), =, +, -, *, /, %, _, ;}

Γ = {z0, IN, E1, E2, OP, ID, ID2, C, CD, CDR, CDE, CO, CH, A, B, C, D … x, y, z, 0, 1 … , 8, 9, (,), =, +, -, *, /, %, _, ;}

F = {q2}

f = *Diagrama de estados del AP*

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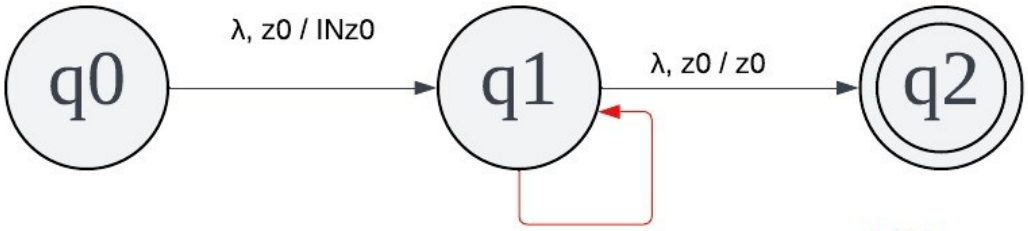
Diagrama de estados del AP



λ, IN / ID=E1;
λ, E1 / ID=E1
λ, E1 / ID=E1
λ, E1 / E2
λ, E2 / C1
λ, E2 / (-C1)
λ, E2 / (+C1)
λ, E2 / ID
λ, E2 / E2OPE2
λ, E2 / E2
λ, OP / +
λ, OP / -
λ, OP / *
λ, OP / /
λ, OP / %
λ, ID / AID2
λ, ID / BID2
.
.
λ, ID / zID2
λ, ID / _ID2
λ, ID2 / AID2
λ, ID2 / BID2
.
.
λ, ID2 / zID2
λ, ID2 / _ID2
λ, ID2 / 0ID2
λ, ID2 / 1ID2
.
.
λ, ID2 / 9ID2
λ, ID2 / λ

λ, C1 / 1CD
λ, C1 / 2CD
.
.
λ, C1 / 9CD
λ, C1 / 0CO
λ, C1 / 0xCH
λ, C1 / 0.CDR
λ, CD / 0CD
λ, CD / 1CD
.
.
λ, CD / 9CD
λ, CD / .CDR
λ, CD / ECDE
λ, CD / E+CDE
λ, CD / E-CDE
λ, CDR / 0CDR
λ, CDR / 1CDR
.
.
λ, CDR / 9CDR
λ, CDR / λ
λ, CDE / 0CDE
λ, CDE / 1CDE
.
.
λ, CDE / 9CDE
λ, CDE / 0
λ, CDE / 1
.
.
λ, CDE / 9

λ, C0 / 0CO
λ, C0 / 1CO
.
.
λ, C0 / 7CO
λ, C0 / λ
λ, CH / 0CH
λ, CH / 1CH
.
.
λ, CH / ECH
λ, CH / FCH
λ, CH / 0CH
λ, CH / 1CH
.
.
λ, CH / FCH
A, A / λ
B, B / λ
.
.
y, y / λ
z, z / λ
0, 0 / λ
1, 1 / λ
.
.
9, 9 / λ
(, (/ λ
),) / λ
=, = / λ
+, + / λ
-, - / λ
*, * / λ

/, / / λ
%, % / λ
_, _ / λ
;. ; / λ