Departamento de Computación,
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Trabajo Práctico 2

Compositor Musical

Teoría de Lenguajes

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Grupo: Autores del Autómata Automático Autodestructivo

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2. Descripción del problema resuelto

3.   Gramática

3.1.   Gramática deducida

3.1.1.   Tupla

$G = (V_t, V_n, P, H)$

3.1.2.   Conjunto finito de terminales (V_t)

{ #tempo, #compas, /, ';', ',', =, (,), {, }, '.', +, −, const, voz, compas, repetir, nota, silencio, blanca, negra, redonda, semicorchea, corchea, fusa, semifusa, do, re, mi, fa, sol, la, si }

3.1.3.   Conjunto finito de no terminales (V_n)

{ H, TEMPO, COMPASHEADER, CONSTINIT, CONSTLIST, CONST, VOICELIST, VOICE, VOICE-CONTENT, COMPASLOOP, COMPASLIST, COMPAS, NOTELIST, NOTE, SILENCE, VALUE, SHAPE, NUM, CNAME, NOTENAME, ALTER }

3.1.4.   Producciones (P)

H → {TEMPO}{COMPASHEADER}{CONSTINIT}{VOICELIST}
H → {TEMPO}{COMPASHEADER}{VOICELIST}
TEMPO → {tempobegin}{shape}{num}
COMPASHEADER → {compasheaderbegin}{num}{slash}{num}
CONSTINIT → {CONSTLIST}
CONSTLIST → {CONST}
CONSTLIST → {CONSTLIST}{CONST}
CONST → {const}{VALUE}{equals}{VALUE}{semicolon}
VOICELIST → {VOICE}
VOICELIST → {VOICELIST}{VOICE}
VOICE → {voicebegin}{leftpar}{VALUE} {rightpar}{leftcurl}{VOICECONTENT}{rightcurl}
VOICECONTENT → {COMPAS}
VOICECONTENT → {COMPASLOOP}
VOICECONTENT → {VOICECONTENT}{COMPAS}
VOICECONTENT → {VOICECONTENT}{COMPASLOOP}
COMPASLOOP → {loopbegin}{leftpar}{VALUE} rightpar}{leftcurl}{COMPASLIST}{rightcurl}
COMPASLIST → {COMPAS}
COMPASLIST → {COMPASLIST}{COMPAS}
COMPAS → {compasbegin}{leftcurl}{NOTELIST}{rightcurl}
NOTELIST → {NOTE}
NOTELIST → {SILENCE}
NOTELIST → {NOTELIST}{NOTE}
NOTELIST → {NOTELIST}{SILENCE}
NOTE → {notebegin}{leftpar}{notename}{alter}{comma}{VALUE} {comma}{shape}{punto}{rightpar}{semicolon}
NOTE → {notebegin}{leftpar}{notename}{alter}{comma}{VALUE} {comma}{shape}{rightpar}{semicolon}
NOTE → {notebegin}{leftpar}{notename}{comma}{VALUE} {comma}{shape}{punto}{rightpar}{semicolon}
NOTE → {notebegin}{leftpar}{notename}{comma}{VALUE} {comma}{shape}{rightpar}{semicolon}
SILENCE → {silencebegin}{leftpar}{shape}{rightpar}{semicolon}
SILENCE → {silencebegin}{leftpar}{shape}{punto}{rightpar}{semicolon}
VALUE → {cname}
VALUE → {num}

3.2. Tokens

- TEMPOBEGIN: # tempo

- CONST: const

- EQUALS: =

- SEMICOLON: ;

- VOICEBEGIN: voz

- LEFTPAR: (

- RIGHTPAR:)

- LEFTCURL: {

- RIGHTCURL: }

- COMPASHEADERBEGIN: # compas

- COMPASBEGIN: compas

- LOOPBEGIN: repetir

- SLASH: /

- NOTEBEGIN: nota

- SILENCEBEGIN: silencio

- PUNTO: .

- ALTER: $+|-$

- SHAPE: $blanca|negra|redonda|semicorchea|corchea|semifusa|fusa$

- NOTENAME: $do|re|mi|fa|sol|la|si$

- COMMA: ,

- CNAME: $(([a-z]|[A-Z])([0-9]|[a-z]|[A-Z])*)$

- NUM: $([0]|[1-9][0-9]*)$

4. Tests

5.   Manual del programa

6. Conclusiones