Archivo de configuracion del mapa.

Analizador Lexico

Definiciones regulares:

Letras: L=[a-zA-Z]
Numeros: N=[0-9]

Listado de Tokens:

	Lexema	Token	Expresion Regular
1		NAMEID	"(L | _ | $)(L | N | _ | $ | -)*"
2		NAMEPLANET	"(L | L? | L?)"
3		NAMEPLAYER	"(L)(L|N)? (L|N)?(L|N)?(L|N)?(L|N)?(L|N)?(L|N)?(L|N)?"
4	{	CURLYBRACKETO	{
5	}	CURLYBRACKETC	}
6	[	SQUAREBRACKETO	[
7	]	SQUAREBRACKETC	]
8	:	COLON	:
9	,	COMMA	,
10		INTEGER	(0) | ((1|2|3|4|5|6|7|8|9)(N)*)
11		DOUBLE	(0.)(N)?(N)?(N)?(N)?(N)?(N)?
12	true	TRUE	true
13	false	FALSE	false
14	MAPA	MAP	MAPA
15	id	ID	id
16	tamaño	SIZE	tamaño
17	filas	ROWS	filas
18	columnas	COLUMNS	columnas
19	alAzar	RANDOM	alAzar
20	planetasNeutrales	NEUTRALP	planetasNeutrales
21	mapaCiego	BLIND	mapaCiego
22	acumular	ACCUMULATE	acumular
23	NEUTRALES	NEUTRAL	NEUTRALES
24	mostrarNaves	SHOWSPACESHIPS	mostrarNaves
25	mostrarEstadisticas	SHOWSTATISTICS	mostrarEstadisticas
26	produccion	PRODUCTION	produccion
27	finalizacion	COMPLETION	finalizacion
28	PLANETAS	PLANETS	PLANETAS
29	naves	SPACESHIPS	naves

30	porcentajeMuertes	DEATHRATE	porcentajeMuertes
31	PLANETAS_NEUTRALES	NEUTRALPLANETS	PLANETAS_NEUTRALES
32	JUGADORES	PLAYERS	JUGADORES
33	planetas	PLAYERPLANETS	planetas
34	nombre	NAME	nombre
35	tipo	TYPE	tipo
36	HUMANO	HUMAN	HUMANO
37	DIFICIL	HARD	DIFICIL
38	FACIL	EASY	FACIL

Analizador Sintactico

G={N, T, P, S}

N = {   konquest, players, playerRulesSelector, playersDescription, playerName, name,
         playerPlanets, planetsName, playerType, type, planets, planetsDescription, planetName
         planetRulesSelector, planetSpaceShips, planetProduction, planetDeathRate,
         accumulate, neutralPlanets, neutralPlanetsDescription, neutralPlanetRulesSelector,
         map, mapRulesSelector, id, size, neutralPlanetsMap, neutral, random, blindMap,
         completion, konquestRulesSelector, mapName, sizeRulesSelector, rows, columns,
         neutralRulesSelector, showSpaceShips, showStatistics, production, boolean}

T = {   NAMEID, NAMEPLANET, NAMEPLAYER, CURLYBRACKETO, CURLYBRACKETC,
         SQUAREBRACKETO, SQUAREBRACKETC, COLON, COMMA, INTEGER, NAME.
         DOUBLE, TRUE, FALSE, MAP, ID, SIZE, ROWS, COLUMNS, RANDOM, HUMAN,
         NEUTRALP, BLIND, ACCUMULATE, NEUTRAL, SHOWSPACESHIPS, EASY,
         SHOWSTATISTICS, PRODUCTION, COMPLETION, PLANETS, SPACESHIPS,
         DEATHRATE, NEUTRALPLANETS, PLAYERS, PLAYERPLANETS, TYPE,   HARD}

S = konquest

P = {
Estructura Principal del Juego
konquest →   CURLYBRACKETO konquestRulesSelector CURLYBRACKETC

konquestRulesSelector→   map COMMA planets COMMA neutralPlanets COMMA players
                            | planets COMMA map COMMA neutralPlanets COMMA players
                            | planets COMMA neutralPlanets COMMA map COMMA players
                            | planets COMMA neutralPlanets COMMA players COMMA map
                            | map COMMA planets COMMA players COMMA neutralPlanets
                            | planets COMMA map COMMA players COMMA neutralPlanets
                            | planets COMMA players COMMA map COMMA neutralPlanets
                            | planets COMMA players COMMA neutralPlanets COMMA map
                            | map COMMA neutralPlanets COMMA planets COMMA players
                            | neutralPlanets COMMA map COMMA planets COMMA players
                            | neutralPlanets COMMA planets COMMA map COMMA players
                            | neutralPlanets COMMA planets COMMA players COMMA map

```
                              | map COMMA neutralPlanets COMMA players COMMA planets
                              | neutralPlanets COMMA map COMMA players COMMA planets
                              | neutralPlanets COMMA players COMMA map COMMA planets
                              | neutralPlanets COMMA players COMMA planets COMMA map
                              | map COMMA players COMMA planets COMMA neutralPlanets
                              | players COMMA map COMMA planets COMMA neutralPlanets
                              | players COMMA planets COMMA map COMMA neutralPlanets
                              | players COMMA planets COMMA neutralPlanets COMMA map
                              | map COMMA players COMMA neutralPlanets COMMA planets
                              | players COMMA map COMMA neutralPlanets COMMA planets
                              | players COMMA neutralPlanets COMMA map COMMA planets
                              | players COMMA neutralPlanets COMMA planets COMMA map
```

Estructura Mapa

```
mapRulesSelector →  id
                   | size
                   | neutral
                   | random
                   | neutralPlanetsMap
                   | blindMap
                   | accumulate
                   | completion
                   | id COMMA mapRulesSelector
                   | size COMMA mapRulesSelector
                   | neutral COMMA mapRulesSelector
                   | random COMMA mapRulesSelector
                   | neutralPlanetsMap COMMA mapRulesSelector
                   | blindMap COMMA mapRulesSelector
                   | accumulate COMMA mapRulesSelector
                   | completion COMMA mapRulesSelector


mapName →   NAMEID
           | NAMEPLANET
           | NAMEPLAYER


sizeRulesSelector →        rows COMMA columns
                          | columns COMMA rows


rows →    ROWS COLON INTEGER


columns →   COLUMNS COLON INTEGER


neutral →   NEUTRAL COLON CURLYBRACKETO neutralRulesSelector CURLYBRACKETC


neutralRulesSelector →       showSpaceShips COMMA showStatistics COMMA production
                            | showSpaceShips COMMA production COMMA showStatistics
                            | showStatistics COMMA showSpaceShips COMMA production
                            | showStatistics COMMA production COMMA showSpaceShips
                            | production COMMA showSpaceShips COMMA showStatistics
                            | production COMMA showStatistics COMMA showSpaceShips


showSpaceShips →   SHOWSPACESHIPS COLON boolean


showStatistics →   SHOWSTATISTICS COLON boolean


production →   PRODUCTION COLON INTEGER
```

boolean →   TRUE
             | FALSE

random →   RANDOM COLON boolean

neutralPlanetsMap →   NEUTRALP COLON INTEGER

blindMap →   BLIND COLON boolean

accumulate →   ACCUMULATE COLON boolean

completion →   COMPLETION COLON INTEGER

Estructura Planetas
planets →   PLANETS COLON SQUAREBRACKETO planetsDescription SQUAREBRACKETC

planetsDescription →   CURLYBRACKETO planetRulesSelector CURLYBRACKETC COMMA
                           planetsDescription
                           | CURLYBRACKETO planetRulesSelector CURLYBRACKETC

planetRulesSelector →   planetName COMMA planetProduction COMMA planetSpaceShips
                           COMMA planetDeathRate
        | planetProduction COMMA planetName COMMA planetSpaceShips COMMA planetDeathRate
        | planetProduction COMMA planetSpaceShips COMMA planetName COMMA planetDeathRate
        | planetProduction COMMA planetSpaceShips COMMA planetDeathRate COMMA planetName
        | planetName COMMA planetProduction COMMA planetDeathRate COMMA planetSpaceShips
        | planetProduction COMMA planetName COMMA planetDeathRate COMMA planetSpaceShips
        | planetProduction COMMA planetDeathRate COMMA planetName COMMA planetSpaceShips
        | planetProduction COMMA planetDeathRate COMMA planetSpaceShips COMMA planetName
        | planetName COMMA planetSpaceShips COMMA planetDeathRate COMMA planetProduction
        | planetSpaceShips COMMA planetName COMMA planetDeathRate COMMA planetProduction
        | planetSpaceShips COMMA planetDeathRate COMMA planetName COMMA planetProduction
        | planetSpaceShips COMMA planetDeathRate COMMA planetProduction COMMA planetName
        | planetName COMMA planetSpaceShips COMMA planetProduction COMMA planetDeathRate
        | planetSpaceShips COMMA planetName COMMA planetProduction COMMA planetDeathRate
        | planetSpaceShips COMMA planetProduction COMMA planetName COMMA planetDeathRate
        | planetSpaceShips COMMA planetProduction COMMA planetDeathRate COMMA planetName
        | planetName COMMA planetDeathRate COMMA planetSpaceShips COMMA planetProduction
        | planetDeathRate COMMA planetName COMMA planetSpaceShips COMMA planetProduction
        | planetDeathRate COMMA planetSpaceShips COMMA planetName COMMA planetProduction
        | planetDeathRate COMMA planetSpaceShips COMMA planetProduction COMMA planetName
        | planetName COMMA planetDeathRate COMMA planetProduction COMMA planetSpaceShips
        | planetDeathRate COMMA planetName COMMA planetProduction COMMA planetSpaceShips
        | planetDeathRate COMMA planetProduction COMMA planetName COMMA planetSpaceShips
        | planetDeathRate COMMA planetProduction COMMA planetSpaceShips COMMA planetName

planetName →   NAME COLON NAMEPLANET

planetSpaceShips →   SPACESHIPS COLON INTEGER

planetProduction →   PRODUCTION COLON INTEGER

planetDeathRate →   DEATHRATE COLON DOUBLE

Estructura Planetas Neutrales

neutralPlanets →   NEUTRALPLANETS COLON SQUAREBRACKETO neutralPlanetsDescription
                     SQUAREBRACKETC

neutralPlanetsDescription →   CURLYBRACKETO neutralPlanetRulesSelector CURLYBRACKETC
                              COMMA neutralPlanetsDescription
                              | CURLYBRACKETO neutralPlanetRulesSelector CURLYBRACKETC

neutralPlanetRulesSelector →   planetName COMMA planetSpaceShips COMMA planetDeathRate
                                 | planetName COMMA planetDeathRate COMMA planetSpaceShips
                                 | planetSpaceShips COMMA planetName COMMA planetDeathRate
                                 | planetSpaceShips COMMA planetDeathRate COMMA planetName
                                 | planetDeathRate COMMA planetName COMMA planetSpaceShips
                                 | planetDeathRate COMMA planetSpaceShips COMMA planetName
                                 | planetRulesSelector

Estructura Jugadores

players →   PLAYERS COLON SQUAREBRACKETO playersDescription SQUAREBRACKETC

playersDescription →   CURLYBRACKETO playerRulesSelector CURLYBRACKETC COMMA
                       playersDescription
                       | CURLYBRACKETO playerRulesSelector CURLYBRACKETC

playerRulesSelector →   playerPlanets COMMA playerName COMMA playerType
                            | playerPlanets COMMA playerType COMMA playerName
                            | playerName COMMA playerPlanets COMMA playerType
                            | playerName COMMA playerType COMMA playerPlanets
                            | playerType COMMA playerName COMMA playerPlanets
                            | playerType COMMA playerPlanets COMMA playerName

playerName →   NAME COLON name

name →   NAMEPLANET
                 | NAMEPLAYER

playerPlanets →   PLAYERPLANETS COLON SQUAREBRACKETO planetsName
                    SQUAREBRACKETC

planetsName →   NAMEPLANET COMMA planetsName
                    | NAMEPLANET

playerType →   TYPE COLON type

type →   HUMAN
                | EASY
                | HARD

Archivo de guardado de partida.

Analizador Lexico

Definiciones regulares:

Letras: L=[a-zA-Z]
Numeros: N=[0-9]

Listado de Tokens:

	Lexema	Token	Expresion Regular
1		NAMEPLANET	"(L | L? | L?)"
2		NAMEPLAYER	"(L)(L|N)? (L|N)?(L|N)?(L|N)?(L|N)?(L|N)?(L|N)?(L|N)?"
3	{	CURLYBRACKETO	{
4	}	CURLYBRACKETC	}
5	[	SQUAREBRACKETO	[
6	]	SQUAREBRACKETC	]
7	:	COLON	:
8	,	COMMA	,
9		INTEGER	(0) | ((1|2|3|4|5|6|7|8|9)(N)*)
10		DOUBLE	(0.)(N)?(N)?(N)?(N)?(N)?(N)?
11	true	TRUE	true
12	false	FALSE	false
13	MAPA	MAP	MAPA
14	tamaño	SIZE	tamaño
15	filas	ROWS	filas
16	columnas	COLUMNS	columnas
17	mapaCiego	BLIND	mapaCiego
18	acumular	ACCUMULATE	acumular
19	NEUTRALES	NEUTRAL	NEUTRALES
20	mostrarNaves	SHOWSPACESHIPS	mostrarNaves
21	mostrarEstadisticas	SHOWSTATISTICS	mostrarEstadisticas
22	produccion	PRODUCTION	produccion
23	finalizacion	COMPLETION	finalizacion
24	PLANETAS	PLANETS	PLANETAS
25	naves	SPACESHIPS	naves
26	porcentajeMuertes	DEATHRATE	porcentajeMuertes
27	PLANETAS_NEUTRALES	NEUTRALPLANETS	PLANETAS_NEUTRALES
28	JUGADORES	PLAYERS	JUGADORES
29	nombre	NAME	nombre

30	tipo	TYPE	tipo
31	HUMANO	HUMAN	HUMANO
32	DIFICIL	HARD	DIFICIL
33	FACIL	EASY	FACIL
34	propietario	OWNER	propietario
35	neutral	NEUTRALTYPE	neutral
36	color	COLOR	color
37	azul	BLUE	azul
38	amarillo	YELLOW	amarillo
39	verde	GREEN	verde
40	rojo	RED	rojo
41	naranja	ORANGE	naranja
42	grisClaro	LIGHTGRAY	grisClaro
43	cyan	CYAN	cyan
44	grisOscuro	DARKGRAY	grisOscuro
45	blanco	WHITE	blanco
46	magenta	MAGENTA	magenta
47	fila	ROW	fila
48	columna	COLUMN	columna
49	turnoEnvio	INITIALTURN	tunoEnvio
50	turnoLlegada	ARRIVALTURN	turnoLlegada
51	filaInicial	INITIALROW	filaInicial
52	columnaInicial	INITIALCOLUMN	columnaInicial
53	filaObjetivo	TARGETROW	filaObjetivo
54	columnaObjetivo	TARGETCOLUMN	columnaObjetivo
55	ENVIOS	SENDINGS	ENVIOS

Analizador Sintactico

G={N, T, P, S}

N = { konquest, players, , playersDescription, playerName, name, playerPlanets, planetsName, playerType, type, planets, planetsDescription, planetName , planetSpaceShips, planetProduction, planetDeathRate, accumulate, neutralPlanets, neutralPlanetsDescription, map, size, neutral, blindMap, completion, sizeRulesSelector, rows, columns, showSpaceShips, showStatistics, production, boolean, color, sendings, sendingsDescription, arrivalTurn, initialRow, initialColumn, targetRow, targetColumn, spaceShipsAmount, attackingPlayer, integerValue, playerColor}

T = { NAMEID, NAMEPLANET, NAMEPLAYER, CURLYBRACKETO, CURLYBRACKETC,
         SQUAREBRACKETO, SQUAREBRACKETC, COLON, COMMA, INTEGER, NAME.
         DOUBLE, TRUE, FALSE, MAP, SIZE, ROWS, COLUMNS, HUMAN, BLIND,
ACCUMULATE, NEUTRAL, SHOWSPACESHIPS, EASY,   SHOWSTATISTICS,
PRODUCTION, COMPLETION, PLANETS, SPACESHIPS, DEATHRATE,
NEUTRALPLANETS, PLAYERS, PLAYERPLANETS, TYPE,   HARD, BLUE, YELLOW, GREEN,
RED, ORANGE, LIGHTGRAY, CYAN, DARKGRAY, WHITE, MAGENTA, SENDINGS, ARRIVALTURN,
INITIALROW, INITIALCOLUMN, TARGETROW, TARGETCOLUMN, SPACESHIPS}

S = konquest

P = {

Estructura General del Juego
konquest->   CURLYBRACKETO map COMMA planets COMMA neutralPlanets COMMA players
                  COMMA sendings CURLYBRACKETC
              | CURLYBRACKETO map COMMA planets COMMA players COMMA sendings
                  CURLYBRACKETC
              | CURLYBRACKETO map COMMA planets COMMA neutralPlanets COMMA players
                  CURLYBRACKETC
              | CURLYBRACKETO map COMMA planets COMMA players CURLYBRACKETC

Estructura Mapa
map->   MAP COLON CURLYBRACKETO SIZE COLON CURLYBRACKETO rows COMMA
                  columns CURLYBRACKETC COMMA blindMap COMMA accumulate COMMA
                  NEUTRAL COLON CURLYBRACKETO showSpaceShips COMMA
                  showStatistics CURLYBRACKETC COMMA completion CURLYBRACKETC
              | MAP COLON CURLYBRACKETO SIZE COLON CURLYBRACKETO rows COMMA
                  columns CURLYBRACKETC COMMA blindMap COMMA accumulate COMMA
                  NEUTRAL COLON CURLYBRACKETO
                  showSpaceShips COMMA showStatistics CURLYBRACKETC
                  CURLYBRACKETC

rows->   ROWS COLON INTEGER

columns-> COLUMNS COLON INTEGER

showSpaceShips->   SHOWSPACESHIPS COLON boolean

showStatistics->   SHOWSTATISTICS COLON boolean

boolean->   TRUE:value {:RESULT = Boolean.valueOf(value);:}
         | FALSE:value {:RESULT = Boolean.valueOf(value);:}

blindMap->   BLIND COLON boolean

accumulate->   ACCUMULATE COLON boolean

completion->   COMPLETION COLON INTEGER:

Estructura Planetas
planets->   PLANETS COLON SQUAREBRACKETO planetsDescription SQUAREBRACKETC

planetsDescription-> CURLYBRACKETO planetName COMMA planetOwner:owner COMMA
                     planetSpaceShips COMMA planetProduction COMMA planetDeathRate
                     COMMA planetType COMMA planetRow COMMA planetColumn
                     CURLYBRACKETC COMMA planetsDescription
              | CURLYBRACKETO planetName COMMA planetOwner COMMA
                     planetSpaceShips COMMA planetProduction COMMA planetDeathRate
                     COMMA planetType:type COMMA planetRow COMMA planetColumn
                     CURLYBRACKETC

planetName-> NAME COLON NAMEPLANET

planetOwner-> OWNER COLON name

planetSpaceShips->   SPACESHIPS COLON INTEGER

planetProduction->   PRODUCTION COLON INTEGER

planetDeathRate->   DEATHRATE COLON DOUBLE

planetType-> NEUTRALTYPE COLON boolean

planetRow-> ROW COLON INTEGER

planetColumn->   COLUMN COLON INTEGER

Estructura Planetas Neutrales
neutralPlanets->   NEUTRALPLANETS COLON SQUAREBRACKETO planetsDescription
                     SQUAREBRACKETC

Estructura Jugadores
players->   PLAYERS COLON SQUAREBRACKETO playersDescription SQUAREBRACKETC

playersDescription-> CURLYBRACKETO playerNama COMMA playerType COMMA playerColor
                     CURLYBRACKETC COMMA playersDescription
              | CURLYBRACKETO playerName COMMA playerType COMMA playerColor
                     CURLYBRACKETC

playerName-> NAME COLON name

name->   NAMEPLANET
       | NAMEPLAYER

playerType-> TYPE COLON type

type->   HUMAN
       | EASY

```
        | HARD

playerColor->  COLOR COLON color

color->   BLUE
      | YELLOW
      | GREEN
      | RED
      | ORANGE
      | LIGHTGRAY
      | CYAN
      | DARKGRAY
      | WHITE
      | MAGENTA:
```

Estructura Envios

```
sendings->   SENDINGS COLON SQUAREBRACKETO sendingsDescription SQUAREBRACKETC

sendingsDescription->  CURLYBRACKETO initialTurn COMMA arrivalTurn COMMA initialRow
                    COMMA initialColumn COMMA targetRow COMMA targetColumn
                    COMMA spaceShipsAmount COMMA attackingPlayer
                    CURLYBRACKETC COMMA sendingsDescription
               | CURLYBRACKETO initialTurn COMMA arrivalTurn COMMA initialRow COMMA
                    initialColumn COMMA targetRow  COMMA targetColumn COMMA
                    spaceShipsAmount COMMA attackingPlayer CURLYBRACKETC
                    initialTurn->  INITIALTURN integerValue

arrivalTurn->  ARRIVALTURN integerValue

initialRow->   INITIALROW integerValue:

initialColumn->   INITIALCOLUMN integerValue

targetRow->   TARGETROW integerValue

targetColumn->    TARGETCOLUMN integerValue

spaceShipsAmount->    SPACESHIPS integerValue

attackingPlayer->  NAME COLON name

integerValue->    COLON INTEGER

}
```