MANUAL TÉCNICO

El programa IndigoOrion fue realizado por medio de la herramienta léxica versión 1.8.2 y la versión de cup 11, usando jdk 16, y versión JEE 7. Se uso tomcat versión 9.0.38

Gramáticas Utilizadas:
Para el Lenguaje Indigo:
Analizador Léxico
LENGUAJE INDIGO******************************

LEXEMA	TOKEN
\![i|I][n|N][i|I]_[s|S][o|O][l|L][i|I][c|C][i|I][t|T][u|U][d|D][e|E][s|S]	START
\![f|F][i|I][n|N]_[s|S][o|O][l|L][i|I][c|C][i|I][t|T][u|U][d|D][e|E][s|S]	FINAL
<	LESS
>	GREATER
\![i|I][n|N][i|I]_[s|S][o|O][l|L][i|I][c|C][i|I][t|T][u|U][d|D]	APERTURE
:	COLON
{	OPEN_CURLY
}	CLOSE_CURLY
[	OPEN_BRACKET
]	CLOSE_BRACKET
"	QUOTE_D
,	COMA
\![f|F][i|I][n|N]_[s|S][o|O][l|L][i|I][c|C][i|I][t|T][u|U][d|D]	END
CREDENCIALES_USUARIO	CREDENTIAL
"[^]"	TEXTWS
"[^]"	TEXTWIS
"[$|_|-][^]"	TEXTID
USUARIO	USER
PASSWORD	PASSWORD
FECHA_CREACION	DATE
USUARIO_ANTIGUO	PAST_USER
USUARIO_NUEVO	NEW_USER
NUEVO_PASSWORD	NEW_PASSWORD
CREAR_USUARIO	CREATE_U
MODIFICAR_USUARIO	MODIFY_U
ELIMINAR_USUARIO	DELETE_U
LOGIN_USUARIO	LOGIN_U
NUEVO_FORMULARIO	NEW_F
ELIMINAR_FORMULARIO	DELETE_F
MODIFICAR_FORMULARIO	MODIFY_F
PARAMETROS_FORMULARIO	FORM_PARAMETERS
ID	ID

TITULO	TITTLE
NOMBRE	NAME
TEMA	TOPIC
AGREGAR_COMPONENTE	ADD_C
ELIMINAR_COMPONENTE	DELETE_C
MODIFICAR_COMPONENTE	MODIFY_C
PARAMETROS_COMPONENTE	C_PARAMETERS
INDICE	INDEX
NOMBRE_CAMPO	NAME_C
FORMULARIO	FORM
CLASE	CLASS
TEXTO_VISIBLE	TEXTV
ALINEACION	ALIGNMENT
CENTRO|IZQUIERDO	
DERECHA|JUSTIFICAR	POSALIGNMENT
SI|NO	BOOL
CAMPO_TEXTO	TEXT_CAMP
AREA_TEXTO	TEXT_AREA
CHECKBOX	CHECKBOX
RADIO	RATIO
FICHERO	FILE
IMAGEN	IMAGE
COMBO	COMBO
BOTON	BUTTON
REQUERIDO	REQUIRED
OPCIONES	OPTIONS

//   (Palabras y numeros)

Analizador Sintáctico Indigo:
Empieza en ip.
/* LEVEL 1 */
        sp ->   LESS START GREATER;
        fp ->   LESS FINAL GREATER;

        so ->   LESS APERTURE COLON;

        ip ->   sp iop
                    |io
                    |error iop
                    |error io;
        iop->   io iop
                    |fp

        io ->   so partiture
                    |error partiture;

/* LEVEL 2 */
        initu -> GREATER OPEN_CURLY CREDENTIAL COLON OPEN_BRACKET OPEN_CURLY;
        close -> CLOSE_CURLY CLOSE_BRACKET CLOSE_CURLY LESS END GREATER

        initf -> GREATER OPEN_CURLY FORM_PARAMETERS COLON OPEN_BRACKET
OPEN_CURLY;
        initc -> GREATER OPEN_CURLY C_PARAMETERS COLON OPEN_BRACKET
OPEN_CURLY;

        partiture -> keywordu
                        |keywordf
                        |keywordc

/*LEVEL 3 */
        /* USERS */
                gcreate_partiture ->   COMA gcreate_user
                                    | close
                                    |error close
                                    |error gcreate_user;
                gmodify_partiture ->   COMA gmodify_user
                                    | close
                                    |error close
                                    |error gmodify_user
                                    ;
                glogin_partiture -> COMA glogin_user
                                    | close
                                    |error close
                                    |error glogin_user
                                    ;

                gcreate ->   CREATE_U initu gcreate_user
                gcreate_user -> USER COLON TEXTWIS:text gcreate_partiture
                                |PASSWORD COLON TEXTWIS:text gcreate_partiture
                                |PASSWORD COLON TEXTWS:text gcreate_partiture
                                |DATE COLON TEXTWIS:text gcreate_partiture
                                 | error gcreate_partiture

                gmodify ->   MODIFY_U initu gmodify_user
                gmodify_user -> PAST_USER COLON TEXTWIS:text gmodify_partiture
                                |NEW_USER COLON TEXTWIS:text gmodify_partiture
                                |NEW_PASSWORD COLON TEXTWIS:text gmodify_partiture
                                |NEW_PASSWORD COLON TEXTWS:text gmodify_partiture
                                |DATE COLON TEXTWIS:text gmodify_partiture
                                | error gmodify_partiture

```
        gdelete ->      DELETE_U initu gdelete_user;
        gdelete_user -> USER COLON TEXTWIS:text close
                                    |error close

        glogin ->       LOGIN_U initu glogin_user
        glogin_user ->          USER COLON TEXTWIS:text glogin_partiture
                        |PASSWORD COLON TEXTWIS:text glogin_partiture
                        |PASSWORD COLON TEXTWS:text glogin_partiture
                        | error glogin_partiture;

        keywordu -> gcreate
                    |gmodify
                    |gdelete
                    |glogin
/* END USER */

/* FORM        */
        gcreatef_partiture ->       COMA gcreatef_form
                            |close
                            |error close
                            |error gcreatef_form;
        gmodifyf_partiture ->       COMA gmodifyf_form
                            |close
                            |error close
                            |error gmodifyf_form;

        gcreatef ->    NEW_F initf gcreatef_form
        gcreatef_form-> ID COLON TEXTID:text gcreatef_partiture
                    |TITTLE COLON TEXTWS:text gcreatef_partiture
                    |TITTLE COLON TEXTWIS:text gcreatef_partiture
                    |NAME_F COLON TEXTID:text gcreatef_partiture
                    |TOPIC COLON TEXTWS:text gcreatef_partiture
                    |TOPIC COLON TEXTWIS:text gcreatef_partiture
                    |NEW_USER COLON TEXTWIS:text gcreatef_partiture
                    |DATE COLON TEXTWS:text gcreatef_partiture
                    |DATE COLON TEXTWIS:text gcreatef_partiture
                    |error gcreatef_partiture;

        gdeletef ->    DELETE_F initf gdeletef_form ;
        gdeletef_form-> ID COLON TEXTID:text close
                                    |error close
                                    ;

        gmodifyf ->   MODIFY_F initf gmodifyf_form
        gmodifyf_form-> ID COLON TEXTID:text gmodifyf_partiture
                    |TITTLE COLON TEXTWS:text gmodifyf_partiture
```

```
                    |TITTLE COLON TEXTWIS:text gmodifyf_partiture
                    |NAME_F COLON TEXTID:text gmodifyf_partiture
                    |TOPIC COLON TEXTWS:text gmodifyf_partiture
                    |TOPIC COLON TEXTWIS:text gmodifyf_partiture
                    |NEW_USER COLON TEXTWIS:text gmodifyf_partiture
                    |DATE COLON TEXTWS:text gmodifyf_partiture
                    |error gmodify_partiture

        keywordf ->  gcreatef
                     |gdeletef
                     |gmodifyf;


/* END FORM */

/* COMPONENT */


    modifyc_partiture ->       COMA modifyc_component
                         |close
                         |error close
                         |error modifyc_component;
    createc_partiture ->COMA createc_component
                         |close
                         |error close
                         |error createc_component;

    classnames   ->      TEXT_CAMP
                         |TEXT_AREA
                         |CHECKBOX
                         |RATIO
                         |FILE
                         |IMAGE
                         |COMBO
                         |BUTTON
                         |error createc_partiture;

    createc ->     ADD_C initc createc_componen

    createc_component ->      ID COLON TEXTID:text createc_partiture
                         |NAME_C COLON TEXTWS:text createc_partiture
                         |NAME_C COLON TEXTWIS:text createc_partiture
                         |FORM COLON TEXTID:text createc_partiture
                         |CLASS COLON classnames:CLASS createc_partiture
                         |OPTIONS COLON TEXTWS:text createc_partiture
                         |OPTIONS COLON TEXTWIS:text createc_partiture
                         |TEXTV COLON TEXTWS:text createc_partiture
                         |TEXTV COLON TEXTWIS:text createc_partiture
```

```
                                    |ALIGNMENT        COLON         POSALIGNMENT:text
createc_partiture
                                    |REQUIRED COLON BOOL:text createc_partiture
                                    |ROWS COLON TEXTWIS:number createc_partiture
                                    |COLS COLON TEXTWIS:number createc_partiture
                                    |URL COLON TEXTWS:text createc_partiture
                                    |URL COLON TEXTWIS:text createc_partiture
                                    |error createc_partiture

        deletec ->    DELETE_C initc deletec_component;
        deletec_component ->    ID   COLON   TEXTID:text   COMA   FORM   COLON
TEXTID:texto close
                                                |error close;

        modifyc ->    MODIFY_C initc      modifyc_component
        modifyc_component ->ID COLON TEXTID:text modifyc_partiture
                            |NAME_C COLON TEXTWS:text modifyc_partiture
                            |NAME_C COLON TEXTWIS:text modifyc_partiture
                            |FORM COLON TEXTID:text modifyc_partiture
                            |CLASS COLON classnames:CLASS modifyc_partiture
                            |OPTIONS COLON TEXTWS:text modifyc_partiture
                            |OPTIONS COLON TEXTWIS:text modifyc_partiture
                            |TEXTV COLON TEXTWS:text modifyc_partiture
                            |TEXTV COLON TEXTWIS:text modifyc_partiture {:
                            |ALIGNMENT COLON POSALIGNMENT:text
                            |REQUIRED COLON BOOL:text modifyc_partiture
                            |ROWS COLON TEXTWIS:number modifyc_partiture
                            |COLS COLON TEXTWIS:number modifyc_partiture
                            |INDEX COLON TEXTWIS:number modifyc_partiture
                            |URL COLON TEXTWS:text modifyc_partiture
                            |URL COLON TEXTWIS:text modifyc_partiture
                            |error modifyc_partiture

        keywordc -> createc
                    |deletec
                    |modifyc
    /* END COMPONENT */
```

LENGUAJE SQL PETICIONES
Analizador Lexico

Lexema	Token
<	LESS
>	GREATER
!ini_solicitud	APERTURE
!ini_solicitudes	GREATAPERTURE
!fin_solicitudes	GREATCLOSE
fin_solicitud	END
:	COLON
{	OPEN_CURLY
}	CLOSE_CURLY
[	OPEN_BRACKET
]	CLOSE_BRACKET
"	QUOTE_D
,	COMA
=	EQUAL
"CONSULTAR_DATOS"	CONSULTDATA
"CONSULTAS"	INQUIRIES
"CONSULTA-[0-9]+"	CONSULT
→	TO
SELECT TO FORM	SELECT
WHERE	WHERE
[^ \n\t\r]	TEXTW
>=	MORE_THAN
<=	LESSER_THAN
<>	DIFFERENCE
AND	AND
OR	OR
NOT	NOT

Analizador Sintáctico: empieza con beginning

multiple_start -> LESS GREATEAPERTURE GREATER;
multiple_close -> LESS GREATCLOSE GREATER;

raw_start   -> LESS APERTURE COLON CONSULTDATA GREATER;
open_request ->   OPEN_CURLY INQUIRIES COLON OPEN_BRACKET OPEN_CURLY;
close_request ->   CLOSE_CURLY CLOSE_BRACKET CLOSE_CURLY;
raw_close   -> LESS END GREATER;

beginning -> multiple_start sentence_re
        |sentence
        |error sentence multiple_close
        |error sentence;

sentence -> raw_start consult
        |error consult;
sentence_re -> raw_start consult sentence_re
          |multiple_close
          |error consult sentence_re;

consult -> open_request consult_data
        |error consult_data;

consult_data -> CONSULT:text COLON operation consult_data_re
          |error consult_data_re
          |error raw_close

consult_data_re -> CONSULT:text COLON operation {
          |close_request raw_close

operation -> QUOTE_D SELECT TO TEXT:text to_camps
        |error to_camps QUOTE_D

to_camps -> OPEN_BRACKET camps
        |error camps conditions
        |error conditions

camps ->   TEXT:text camps_re
        | CLOSE_BRACKET conditions
        | error camps_re
camps_re ->   COMA TEXT:text camps_re
        | CLOSE_BRACKET conditions
logic_operators -> AND
          |OR
          |NOT
operators ->   MORE_THAN

```
            |LESSER_THAN
            |DIFFERENCE
            |LESS
            |GREATER
            |EQUAL
```

conditions -> WHERE OPEN_BRACKET new_condition
        | QUOTE_D COMA
        |error new_condition;

new_condition -> TEXT:camp operators:operator NUMBER:num new_condition_re
        |TEXT:camp operators:operator SPECIFICATION:spec new_condition_re
        |error new_condition_re;
new_condition_re -> logic_operators:logic TEXT:camp operators:operator NUMBER:num
new_condition_re
                |logic_operators:logic TEXT:camp operators:operator SPECIFICATION:spec
new_condition_re
        | CLOSE_BRACKET QUOTE_D COMA

LENGUAJE GUARDADO ARCHIVOS SQSAVE
ANALIZADOR LÉXICO:

LEXEMA	TOKEN
"NOMBRE_CAMPO"	NAME_C
"NOMBRE"	NAME_C
"FORMULARIO"	FORM
"VISIBILIDAD"	VISIBILITY
"PUBLIC"	PUBLIC
"PRIVATE"	PRIVATE
"CLASE"	CLASS
"TEXT_VISIBLE"	TEXTV
"ALINEACION"	ALIGNMENT
"CAMPO_TEXTO"	TEXT_CAMP
"AREA_TEXTO"	TEXT_AREA
"CHECKBOX"	CHECKBOX
"RADIO"	RATIO
"FICHERO"	FILE
"IMAGEN"	IMAGE
"COMBO"	COMBO
"BOTON"	BUTTON

"REQUERIDO"	REQUIRED
"OPCIONES"	OPTIONS
"FILAS"	ROWS
"COLUMNAS"	COLS
"URL"	URL
"CENTRO"|"IZQUIERDA"|"DERECHA"|"JUSTIFICAR"	POSALIGNMENT
"SI"|"NO"	BOOL
{	OPEN_CURLY
}	CLOSE_CURLY
(	OPEN_PARENTHESIS
)	CLOSE_PARENTHESIS
:	COLON
,	COMA
"[^]"	TEXT_WITHSPACES
"[^]"	TEXT_WITHOUTSPACES
db.formularios	DBFORM
New.formulario	NEWFORM
"ID_FORMULARIO"	IDFORM
"TITULO"	FORMTITTLE
"TEMA"	TOPIC
"USUARIO_CREACION"	USER_CREATOR
"ESTRUCTURA"	STRUCT
"ID_COMPONENTE"	ID_COMPONENT
"USUARIO"	USER
"PASSWORD"	PASSWORD
"FECHA"	DATE

Analizador Sintáctico: Empieza con doom
initform-> OPEN_PARENTHESIS ;

/* INIT */
doom -> DBFORM form
    |NEWFORM form
    |DBUSER user
    |e
    |error form;

/* USERS*/

user -> OPEN_PARENTHESIS user_struct
    |error user_struct;

//Open new User struct
user_struct -> OPEN_CURLY poyo user_newstruct
        |CLOSE_PARENTHESIS
        |error poyo user_newstruct;

//Re-Open new User Struct
user_newstruct -> COMA OPEN_CURLY poyo user_newstruct
          |CLOSE_PARENTHESIS;
//It close the petition of user
poyo -> USER COLON TEXT_NOSPACES:text poyo_reply
    |error poyo_reply /*The lowest error level of user*/;

poyo_reply -> COMA PASSWORD COLON TEXT_WITHSPACES:text poyo_reply
        |COMA PASSWORD COLON TEXT_NOSPACES:text poyo_reply
        |COMA DATE COLON TEXT_NOSPACES:text poyo_reply
/* ENDS USERS*/

form -> OPEN_PARENTHESIS createform formp
    |OPEN_PARENTHESIS CLOSE_PARENTHESIS
    |error createform formp
    |error formp;

formp -> COMA createform formp
      |CLOSE_PARENTHESIS
      |error createform formp
      |error;
/* END INIT */

/* FORM */

createform -> OPEN_CURLY IDFORM COLON TEXT_NOSPACES:text createform_p CLOSE_CURLY
      |error createform_p;

statevisibility -> PUBLIC
      |PRIVATE

createform_p -> COMA FORMTITTLE COLON TEXT_WITHSPACES:text createform_p
      |COMA FORMTITTLE COLON TEXT_NOSPACES:text createform_p
      |COMA NAME COLON TEXT_NOSPACES:text createform_p
      |COMA TOPIC COLON TEXT_NOSPACES:text createform_p
      |COMA USER_CREATOR COLON TEXT_NOSPACES:text createform_p
      |COMA VISIBILITY COLON statevisibility:text createform_p
      |struct;

struct -> STRUCT COLON struct_value
      |error struct_value;

struct_value -> OPEN_PARENTHESIS struct_param CLOSE_PARENTHESIS COMA data
      |error struct_param CLOSE_PARENTHESIS data
      |error data

struct_param -> OPEN_CURLY special_struct
      |e
      |error special_struct

classnames -> TEXT_CAMP:text
      |TEXT_AREA:text
      |CHECKBOX:text
      |RATIO:text
      |FILE:text
      |IMAGE:text
      |COMBO:text
      |BUTTON:text

special_struct -> ID_COMPONENT COLON TEXT_NOSPACES:text struct_data

struct_data -> COMA NAME_C COLON TEXT_WITHSPACES:text struct_data
      |COMA NAME_C COLON TEXT_NOSPACES:text struct_data
      |COMA FORM COLON TEXT_NOSPACES:text struct_data
      |COMA CLASSN COLON classnames:text struct_data
      |COMA OPTIONS COLON TEXT_WITHSPACES:text struct_data
      |COMA OPTIONS COLON TEXT_NOSPACES:text struct_data
      |COMA TEXTV COLON TEXT_WITHSPACES:text struct_data
      |COMA TEXTV COLON TEXT_NOSPACES:text struct_data
      |COMA ALIGNMENT COLON POSALIGNMENT:text struct_data
      |COMA REQUIRED COLON BOOL:text struct_data

|COMA ROWS COLON TEXT_NOSPACES:number struct_data
|COMA COLS COLON TEXT_NOSPACES:number struct_data
|COMA URL COLON TEXT_WITHSPACES:text struct_data
|COMA URL COLON TEXT_NOSPACES:text struct_data
|newstruct_param;

newstruct_param -> CLOSE_CURLY COMA struct_param
        |CLOSE_CURLY

/* END FORM */

/* DATOS_RECOPILADOS */
data -> DATA COLON data_value
     |error data_value

data_value -> OPEN_PARENTHESIS data_param CLOSE_PARENTHESIS
        |error data_param CLOSE_PARENTHESIS

data_param -> OPEN_CURLY data_data
        | e
        |error data_data

data_data ->   NAME_C COLON TEXT_NOSPACES:text data_data
        |COMA IDFORM COLON TEXT_NOSPACES:text data_data
        |COMA TEXT_NOSPACES:id COLON TEXT_WITHSPACES:context data_data
        |COMA TEXT_NOSPACES:id COLON TEXT_NOSPACES:context data_data
        |newdata_param;

newdata_param -> CLOSE_CURLY COMA data_param
         | CLOSE_CURLY
/* END DATOS_RECOPILADOS */

LENGUAJE DE RESPUESTAS SERVIDOR CLIENTESQ
ANALIZADOR LÉXICO

LEXEMA	TOKEN
[^ \"\n\t\ r"{""}""]""[""!""<"">"">=""<=""=",""\'"]+	OUT
"Error"	ERROR
"Text"	TEXT
"File"	FILE
"Warning"	WARNING
"Row"	ROW
"Col"	COL

"<"	LESS
">"	GREATER
":"	COLON
"{"	OPEN_CURLY
"}"	CLOSE_CURLY
"["	OPEN_BRACKET
"]"	CLOSE_BRACKET
","	COMA
"!ini_respuesta"	APERTURE
"fin_respuesta!"	END
"!fin_respuestas"	GREATCLOSE
"!ini_respuestas"	GREATAPERTURE
"bloque_parametros"	BLOCK_PARAMETER

ANALIZADOR SINTÁCTICO: EMPIEZA CON F
great_start -> LESS GREATAPERTURE GREATER;

great_close -> LESS GREATCLOSE GREATER;

option_request -> ERROR
          |OUT
          |WARNING
          |ROW
          |COL

simple_start -> LESS APERTURE COLON TEXT GREATER
simple_close -> LESS END GREATER ;

start_request -> OPEN_CURLY BLOCK_PARAMETER COLON OPEN_BRACKET;

close_request -> CLOSE_BRACKET CLOSE_CURLY;

F -> multiple_start
    |request;

multiple_start -> great_start request_re
        |error request_re great_close;

request -> simple_start init_block_parameter simple_close
    |error init_block_parameter simple_close;

request_re -> simple_start init_block_parameter simple_close request_alpha
        |great_close
        |error request_alpha;

request_alpha -> COMA simple_start init_block_parameter simple_close request_alpha
        |great_close
        |error request_alpha;

init_block_parameter -> start_request parameter_comision close_request
            |error parameter_comision close_request;

parameter_comision -> OPEN_CURLY parameter parameter_re
        |e
        |error parameter parameter_re;

parameter_re -> COMA OPEN_CURLY parameter parameter_re
        |e

parameter -> option_request:result COLON TEXT:text COMA parameter
        |CLOSE_CURLY
        |error parameter;