Universidad de San Carlos de Guatemala
Facultad de Ingeniería
Organización y Compiladores 1

# Manual Técnico

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# Introducción

En este manual se explica brevemente como se Implementara una aplicación de emulación de un navegador web y para crearlo se ultilizaran 3 archivos diferentes y cada uno con funcionalidades especiales

# Objetivos

OBJETIVO
GENERAL:

- Permitir Interpretar Y Comprender La Estructura básica de la aplicación, como es que esta se manejara, las funciones que se podrán ejecutar en nuestra aplicación

OBJETIVOS ESPECIFICOS:

- Que el estudiante realice una aplicacion interactiva que trabaje conjuntamente con el analizador.
- Que el estudiante sea capaz de crear gramaticas y de recuperarse de errores lexicos y sintacticos.
- Que el estudiante sea capaz de trabajar con variables que trabajen en diferentes ambitos.
- Que el estudiante pueda utilizar diversos archivos de entrada para generar una sola salida.

# ANALISIS

El usuario o el cliente cuando por primera vez ha utilizado un  programa o un software como este lo primero que viene a su  mente seria ¿Qué es? y que sería lo que espera de este software lo cual vendría a ser que este cumpliera cada una de sus expectativas, el cual permita una fácil manipulación de datos, también este tenga una amplia manera de funcionar.

El problema radica en la **creación de un archivo con sintaxis ABAP:** Este archivo contiene  la creación de variables y funciones,  **creación de un archivo con sintaxis Visual basic:** Este archivo contienen el código para la generación del navegador web , **creación de un archivo con sintaxis Xml:**  Este archivo contiene el código para la creación de la interfaz gráfica del navegador

# JLEX ABAP

```
import java.lang.System;
import java_cup.runtime.*;
%%

%eofval{
  { System.exit(0); }
%eofval}
%cup
%line
%char

NUMBER = [1-9][0-9]*
LETRAS = [a-zA-z]+
REAL = {NUMBER}["."]
{NUMBER}
Id= [a-zA-Z][a-zA-Z0-9]*

%%

<YYINITIAL> "Var" {return new
Symbol(sym.var,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "Use" {return new
Symbol(sym.use,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "as" {return new
Symbol(sym.as,yyline,yychar,new
String(yytext()));}

<YYINITIAL> "Int" {return new
Symbol(sym.ints,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "Float" {return new
Symbol(sym.floats,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "String" {return new
Symbol(sym.strings,yyline,yychar
```

```
,new String(yytext()));}
<YYINITIAL> "Bool" {return new
Symbol(sym.bools,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "Char" {return new
Symbol(sym.chars,yyline,yychar,
new String(yytext()));}

<YYINITIAL> "Pasar_Entero"
{return new
Symbol(sym.parsei,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "Pasar_Float"
{return new
Symbol(sym.parsef,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "Pasar_String"
{return new
Symbol(sym.parses,yyline,yychar
,new String(yytext()));}

<YYINITIAL> "If" {return new
Symbol(sym.ifs,yyline,yychar,new
String(yytext()));}
<YYINITIAL> "Else" {return new
Symbol(sym.elses,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "for" {return new
Symbol(sym.fors,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "while" {return new
Symbol(sym.whiles,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "Switch" {return
new
Symbol(sym.switchs,yyline,yycha
r,new String(yytext()));}
<YYINITIAL> "Case" {return new
Symbol(sym.cases,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "Default" {return
```

new Symbol(sym.defaults,yyline,yychar,new String(yytext()));}
<YYINITIAL> "break" {return new Symbol(sym.breaks,yyline,yychar,new String(yytext()));}
<YYINITIAL> "return" {return new Symbol(sym.returns,yyline,yychar,new String(yytext()));}
<YYINITIAL> "Void" {return new Symbol(sym.voids,yyline,yychar,new String(yytext()));}

<YYINITIAL> "CALL" {return new Symbol(sym.call,yyline,yychar,new String(yytext()));}
<YYINITIAL> "Imprimir" {return new Symbol(sym.print,yyline,yychar,new String(yytext()));}
<YYINITIAL> "THIS" {return new Symbol(sym.thiss,yyline,yychar,new String(yytext()));}
<YYINITIAL> "VALUE" {return new Symbol(sym.values,yyline,yychar,new String(yytext()));}
<YYINITIAL> "MINUS" {return new Symbol(sym.min,yyline,yychar,new String(yytext()));}
<YYINITIAL> "MAYUS" {return new Symbol(sym.may,yyline,yychar,new String(yytext()));}


<YYINITIAL> "+" {return new Symbol(sym.mas,yyline,yychar,new String(yytext()));}

```
<YYINITIAL> "-" {return new
Symbol(sym.resta,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "*" {return new
Symbol(sym.multi,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "/" {return new
Symbol(sym.div,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "&" {return new
Symbol(sym.add,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "(" {return new
Symbol(sym.pa,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> ")" {return new
Symbol(sym.pc,yyline,yychar,ne
w String(yytext()));}

<YYINITIAL> "=" {return new
Symbol(sym.igual,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "||" {return new
Symbol(sym.ou,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "&&" {return new
Symbol(sym.e,yyline,yychar,new
String(yytext()));}
<YYINITIAL> "!" {return new
Symbol(sym.adm,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> ">" {return new
Symbol(sym.men,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "<" {return new
Symbol(sym.ma,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> ">=" {return new
Symbol(sym.mayig,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "<=" {return new
```

```
Symbol(sym.menig,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "==" {return new
Symbol(sym.digu,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "!=" {return new
Symbol(sym.dif,yyline,yychar,ne
w String(yytext()));}


<YYINITIAL> "[" {return new
Symbol(sym.corA,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "]" {return new
Symbol(sym.corC,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> ";" {return new
Symbol(sym.semi,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "," {return new
Symbol(sym.coma,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "\"" {return new
Symbol(sym.comi,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "'" {return new
Symbol(sym.apo,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> ":" {return new
Symbol(sym.ddot,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "{" {return new
Symbol(sym.ya,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "}" {return new
Symbol(sym.yc,yyline,yychar,new
String(yytext()));}
<YYINITIAL> {Id} {return new
Symbol(sym.id,yyline,yychar,new
String(yytext()));}
```

```
<YYINITIAL>  {NUMBER} {return
new
Symbol(sym.numerito,yyline,yych
ar,new String(yytext()));}
<YYINITIAL> {LETRAS} {return
new
Symbol(sym.let,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> {REAL} {return new
Symbol(sym.real,yyline,yychar,ne
w String(yytext()));}

<YYINITIAL> [\n]
     {yychar=0;}
<YYINITIAL>  (" "|\r|\t)+       { }


.
  {
   System.out.println("error
lexico en "  + yyline + "," +
yychar + " No se reconoce " +
yytext());
   yychar=0;
  }
```

# JLEX Cabecera

```
import java.lang.System;
import java_cup.runtime.*;
import java.util.ArrayList;
import java.io.*;
import java.awt.Desktop;
%%
```

```
%cup
%line
%char
%ignorecase
NUMBER = [1-9][0-9]*
LETRAS = [a-zA-z]+
dot = "."
ima = {LETRAS}{dot}"jpg"|"png"
TF= "Negrita"|"Cursiva"|"Normal"
tb = "1"|"2"|"3"|"4"|"5"|"6"|"7"
tr= "0"|"1"
tt ="h1"|"h2"|"h3"
XA= "<""XML"">"
XC= "<""/""XML"">"
InA= "<""Inicio"">"
InC= "<""/""Inicio"">"
LA = "<""Logo"">"
LC = "<""/""Logo"">"
PA = "<""Parrafo"">"
PC = "<""/""Parrafo"">"
BA= "<""Barra_Inicio"">"
BC= "<""/""Barra_Inicio"">"
VA= "<""Vinieta"" ">"
VC= "<""/""Vinieta"">"
Vins= "<""L"">"

%{
static ArrayList Linea= new
ArrayList();
static ArrayList columna= new
ArrayList();
static ArrayList caracter= new
ArrayList();
%}

%{

public static void mistakes2()
{
String Reporte= "Lexy2.html";
FileWriter fw = null;
```

```java
try {
fw = new FileWriter(Reporte);
BufferedWriter bw = new
BufferedWriter(fw);
PrintWriter salArch = new
PrintWriter(bw);
salArch.println();

//aqui empezas a escribir el html
salArch.print("<html>");
salArch.print("<head>Errores</h
ead>");
salArch.print("<body>");
//definis tu tabla con cada una de
las columnas
salArch.print("<table width='200'
border='1'><tr><th
scope='col'>Numero</th><th
scope='col'>Linea</th><th
scope='col'>Columna</th><th
scope='col'>Error</th></tr>");
int n=0;
//errores,alinea,posicion  son un
arrayList del mismo tamano
        for (int i = 0; i<Linea.size();
i++)
        {

salArch.print("<tr><td>"+
(n+1)+"</td><td>"+Linea.get(i)
+"</td><td>"+columna.get(i)
+"</td><td>"+caracter.get(i)
+"</td></tr>");
n= n+1;

        }

salArch.println("</table><p>&nb
sp;</p><p> </p></body
></html>");
salArch.close();
```

```java
        }
            catch (IOException ex)
{
}


try {

        File path = new
File("Lexy2.html");

Desktop.getDesktop().open(path)
;
    } catch (IOException ex) {
     //
Logger.getLogger(Proyecto1_Co
mpi1View.class.getName()).log(L
evel.SEVERE, null, ex);
    }

}



%}


%%

<YYINITIAL> {tr} {return new
Symbol(sym.typered,yyline,yycha
r,new String(yytext()));}
<YYINITIAL> {XA} {return new
Symbol(sym.xmla,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {XC} {return new
Symbol(sym.xmlc,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {InA} {return new
Symbol(sym.ina,yyline,yychar,ne
w String(yytext()));}
```

```
<YYINITIAL> {InC} {return new
Symbol(sym.inc,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> {LA} {return new
Symbol(sym.loga,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {LC} {return new
Symbol(sym.logc,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {PA} {return new
Symbol(sym.para,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {PC} {return new
Symbol(sym.parc,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {BA} {return new
Symbol(sym.bia,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> {BC} {return new
Symbol(sym.bic,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> {VA} {return new
Symbol(sym.vina,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {VC} {return new
Symbol(sym.vinc,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {Vins} {return new
Symbol(sym.vine,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {TF} {return new
Symbol(sym.typef,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> {tt} {return new
Symbol(sym.typetxt,yyline,yycha
r,new String(yytext()));}
<YYINITIAL> {ima} {return new
Symbol(sym.path,yyline,yychar,n
ew String(yytext()));}

<YYINITIAL> "fondo" {return new
```

```
Symbol(sym.fondo,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "fuente" {return
new
Symbol(sym.fuente,yyline,yychar
,new String(yytext()));}
<YYINITIAL> "tam_fuente"
{return new
Symbol(sym.tamf,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "color_fuente"
{return new
Symbol(sym.colf,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "Bode" {return new
Symbol(sym.bord,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "color_borde"
{return new
Symbol(sym.colbord,yyline,yycha
r,new String(yytext()));}
<YYINITIAL> "imagen" {return
new
Symbol(sym.image,yyline,yychar,
new String(yytext()));}
<YYINITIAL>
"redondear_esquinas" {return
new
Symbol(sym.redo,yyline,yychar,n
ew String(yytext()));}

<YYINITIAL> "Rojo" {return new
Symbol(sym.rojo,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "Azul" {return new
Symbol(sym.azul,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "Verde" {return new
Symbol(sym.verde,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "Morado" {return
```

```
new
Symbol(sym.morado,yyline,yycha
r,new String(yytext()));}
<YYINITIAL> "Rosado" {return
new
Symbol(sym.rosa,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "Blanco" {return
new
Symbol(sym.branco,yyline,yychar
,new String(yytext()));}
<YYINITIAL> "Negro" {return
new
Symbol(sym.nero,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "Gris" {return new
Symbol(sym.gris,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "Anaranjado"
{return new
Symbol(sym.laranja,yyline,yychar
,new String(yytext()));}
<YYINITIAL> "Celeste" {return
new
Symbol(sym.celeste,yyline,yycha
r,new String(yytext()));}

<YYINITIAL> "Tamaño_Titulo"
{return new
Symbol(sym.tamtit,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "Texto_Titulo"
{return new
Symbol(sym.textti,yyline,yychar,
new String(yytext()));}
<YYINITIAL> "Tipo_Fuente"
{return new
Symbol(sym.typefont,yyline,yych
ar,new String(yytext()));}
```

```
<YYINITIAL> "Trebuchet" {return
new
Symbol(sym.tre,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "Arial" {return new
Symbol(sym.arial,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "Georgia" {return
new
Symbol(sym.geor,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "Verdana" {return
new
Symbol(sym.verdana,yyline,yych
ar,new String(yytext()));}
<YYINITIAL> "Courier" {return
new
Symbol(sym.courier,yyline,yychar
,new String(yytext()));}


<YYINITIAL> {tb} {return new
Symbol(sym.typeb,yyline,yychar,
new String(yytext()));}
<YYINITIAL> {LETRAS} {return
new
Symbol(sym.let,yyline,yychar,ne
w String(yytext()));}

<YYINITIAL> "=" {return new
Symbol(sym.igual,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> ":" {return new
Symbol(sym.dosp,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL> "\"" {return new
Symbol(sym.comi,yyline,yychar,n
ew String(yytext()));}
<YYINITIAL>";" {return new
Symbol(sym.semi,yyline,yychar,n
ew String(yytext()));}
```

```
<YYINITIAL>"@" {return new
Symbol(sym.s1,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>"#" {return new
Symbol(sym.s2,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>"$" {return new
Symbol(sym.s3,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>"%" {return new
Symbol(sym.s4,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL> "^" {return new
Symbol(sym.s5,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>"&" {return new
Symbol(sym.s6,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>"*" {return new
Symbol(sym.s7,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>"(" {return new
Symbol(sym.s8,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>")" {return new
Symbol(sym.s9,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>"||" {return new
Symbol(sym.s10,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>"/" {return new
Symbol(sym.s11,yyline,yychar,ne
w String(yytext()));}
<YYINITIAL>"," {return new
Symbol(sym.com,yyline,yychar,n
ew String(yytext()));}

<YYINITIAL>  {NUMBER} {return
new
Symbol(sym.numerito,yyline,yych
```
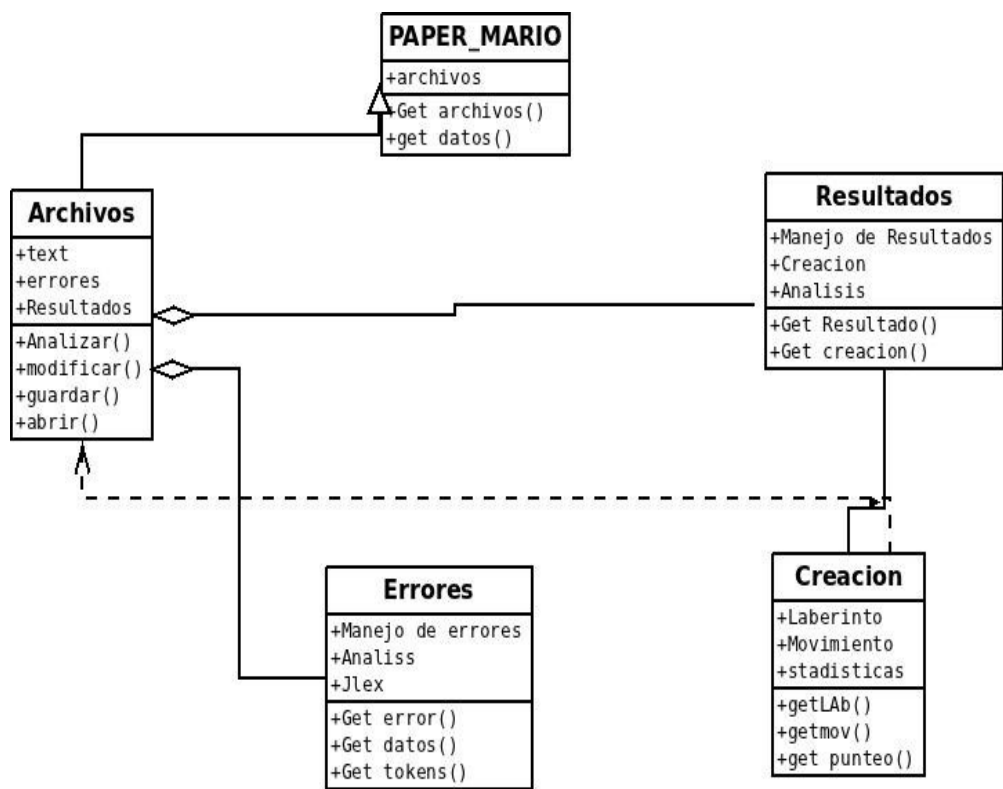
```
ar,new String(yytext()));}
<YYINITIAL> [\n]
       {yychar=0;}
<YYINITIAL>  [" "\t\r]+  {}


.
  {
   Linea.add(yyline);
   columna.add(yychar);
   caracter.add(yytext());

   System.out.println("error
lexico en "  + (yyline) + "," +
yychar + " No se reconoce " +
yytext());
   yychar=0;
  }
```

# DIAGRAMA

**PAPER_MARIO**

+archivos

+Get archivos()
+get datos()

**Archivos**

+text
+errores
+Resultados

+Analizar()
+modificar()
+guardar()
+abrir()

**Resultados**

+Manejo de Resultados
+Creacion
+Analisis

+Get Resultado()
+Get creacion()

**Errores**

+Manejo de errores
+Analiss
+Jlex

+Get error()
+Get datos()
+Get tokens()

**Creacion**

+Laberinto
+Movimiento
+stadisticas

+getLAb()
+getmov()
+get punteo()

# CONCLUSION

En el paso de los años la ciencia de la tecnología e informática va evolucionando, para eso uno como profesional deberá crear nuevas implementaciones o software, que cumplan las expectativas de cada Usuario. Y por esto se ha tomado de apoyo de cómo realizar uml (clases) y se ha concluido que se puede comprender de una manera más sencilla, la forma de cómo funcionara este software, de cómo trabajara y que es lo que cada proceso efectuara y de cómo se puede relacionar las matemáticas y el funciona de cada método realizado en dicho programa con la tecnología computacional de nuestra era.