

OPENJADE

Creación de back-end para el modelo de página



Proyecto final de carrera

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Creación de back-end para el modelo de página

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- Conceptos previos
- Presentación del problema
- Desarrollo
- Resultados
 - Back-end Fot
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- Conclusión

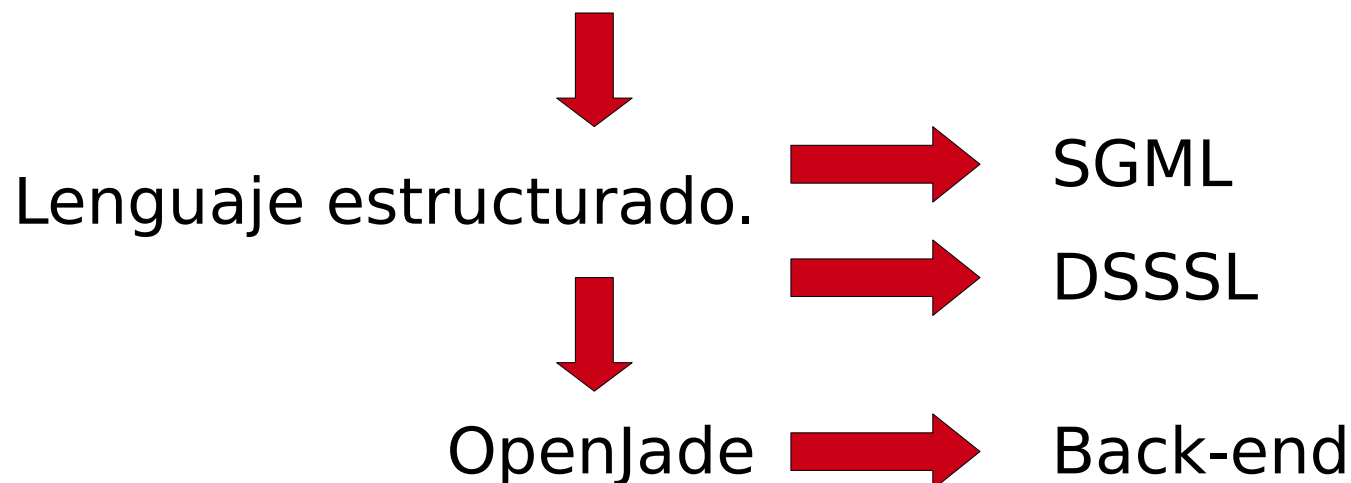


Introducción

Toda documentación formal se puede dividir en tres conceptos los cuales dependen del tema en cuestión :

- Estructura
- Contenido
- **Estilo**

↓
Crear independencia entre estilo del resto.



Introducción

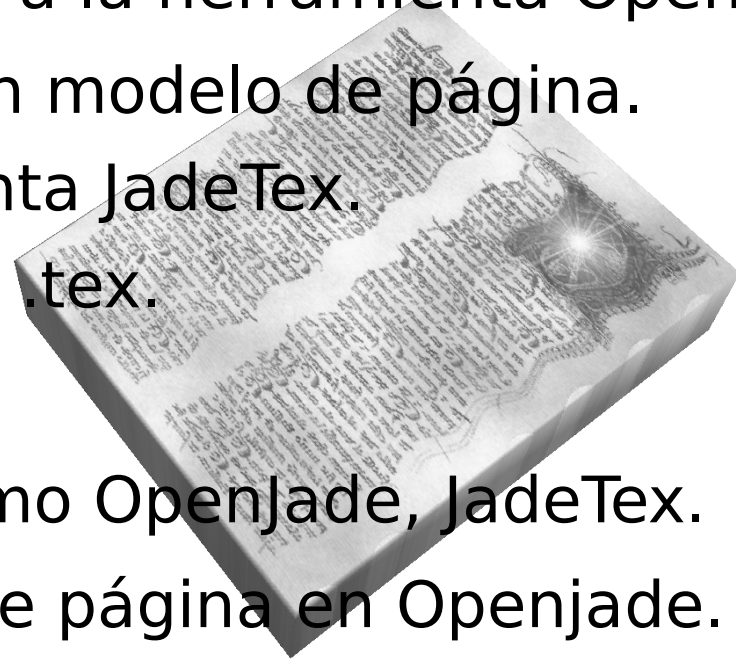
Proyecto enfocado a :

Añadir nuevas funcionalidades a la herramienta OpenJade.

- Desarrollo / Implementación modelo de página.
- Eliminación de la herramienta JadeTex.
- Formateo de backend .fot y .tex.

Para esto :

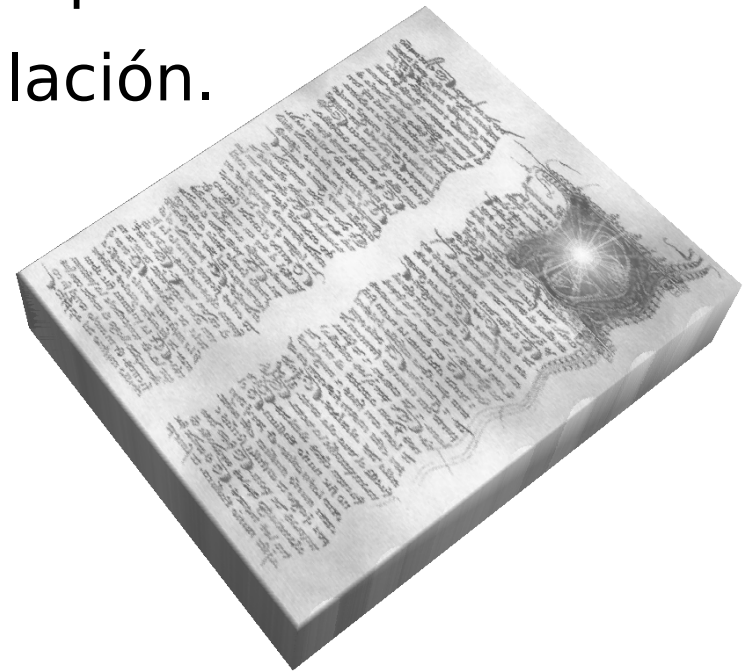
- Estudio de la herramientas como OpenJade, JadeTex.
- Crear un objeto para modelo de página en OpenJade.
- Asociar el objeto al Arbol de flujo.
- Crear los backends correspondientes.



Conceptos Previos

Documentación Estructurada:

- El autor se puede centrar en la escritura y creación del documento.
- El documento es independiente a la plataforma.
- Facilidad para su edición y manipulación.
- Mejor calidad final del documento.

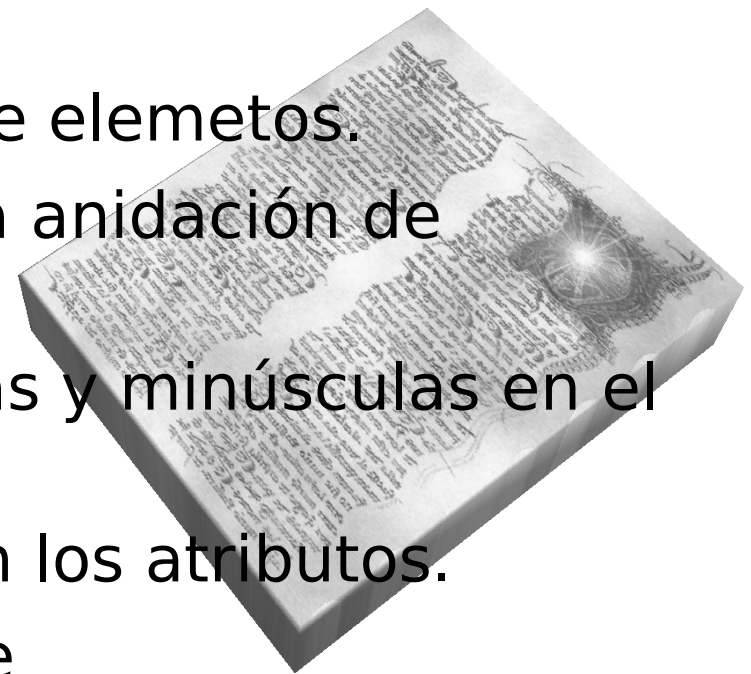


Conceptos Previos

SGML vs XML :

Standard Generalised Markup Language – ISO 8879/1986

- XML más sencillo.
- XML menos potente :
 - No permite la minimización de elementos.
 - No permite restricciones en la anidación de elementos.
 - No distingue entre mayúsculas y minúsculas en el nombre de los elementos
 - Uso obligatorio de comillas en los atributos.
- XML extendida internacionalmente



Conceptos Previos

DSSSL :

*Document Style Semantics Specification Language –
ISO/IEC 10179/1995*

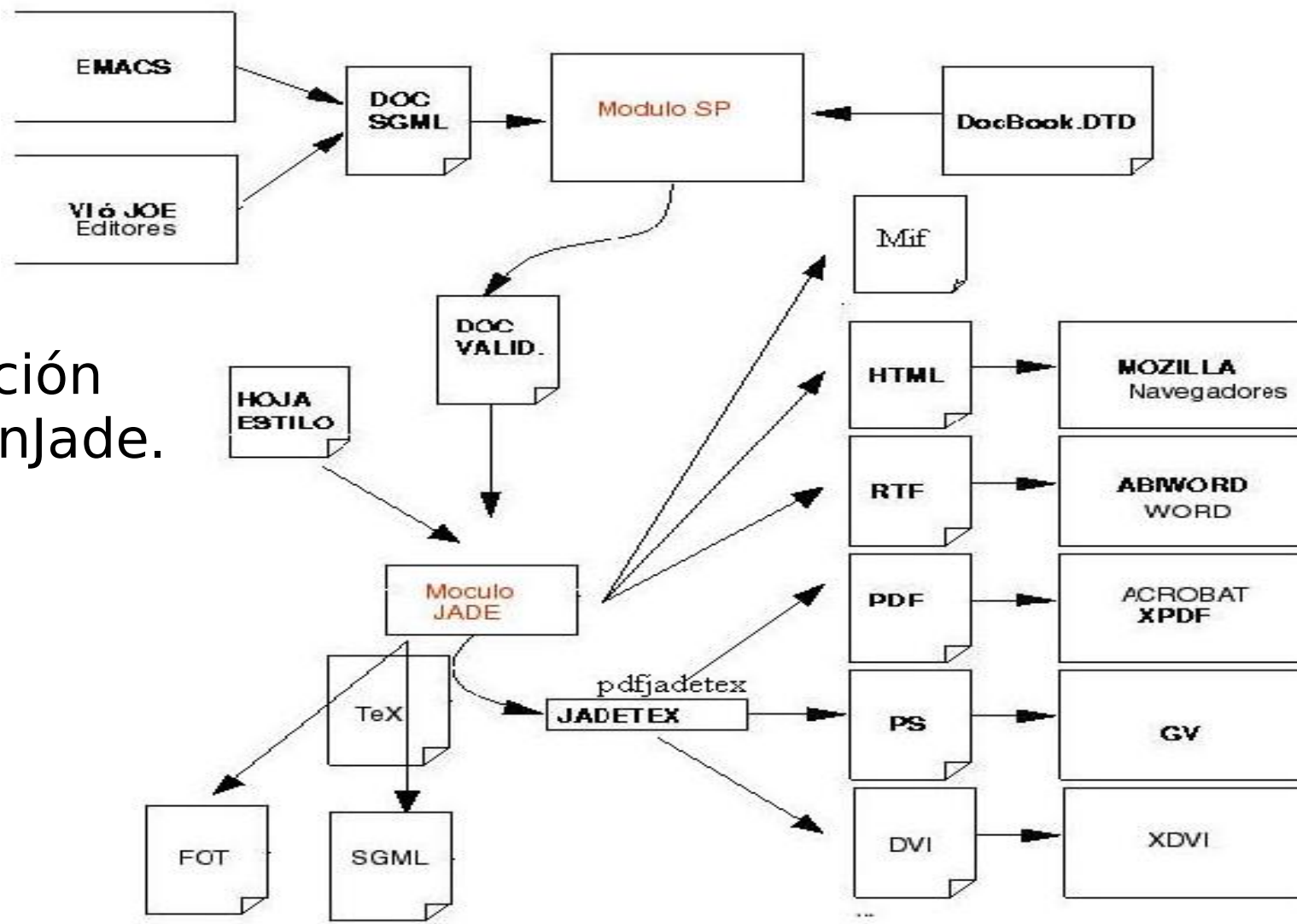
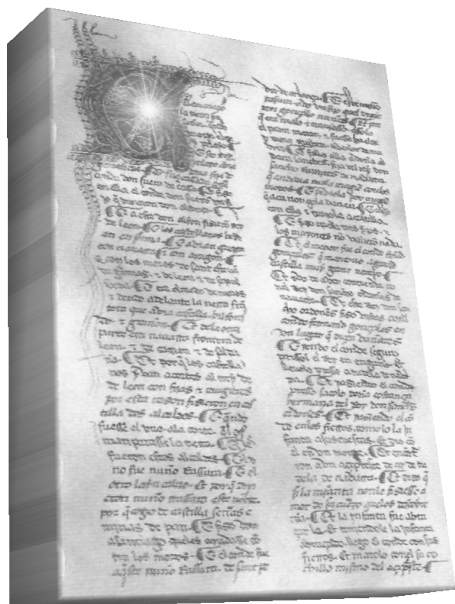


- Entorno uniforme de manejo y modificación.
- Entorno de creación de filtros.
- Entorno de programación uniforme.

Conceptos Previos

Openjade (OJ)

Proceso de creación
mediante Openjade.



Presentación del problema

Añadir modelo de pagina y su formateo a la herramienta OpenJade.

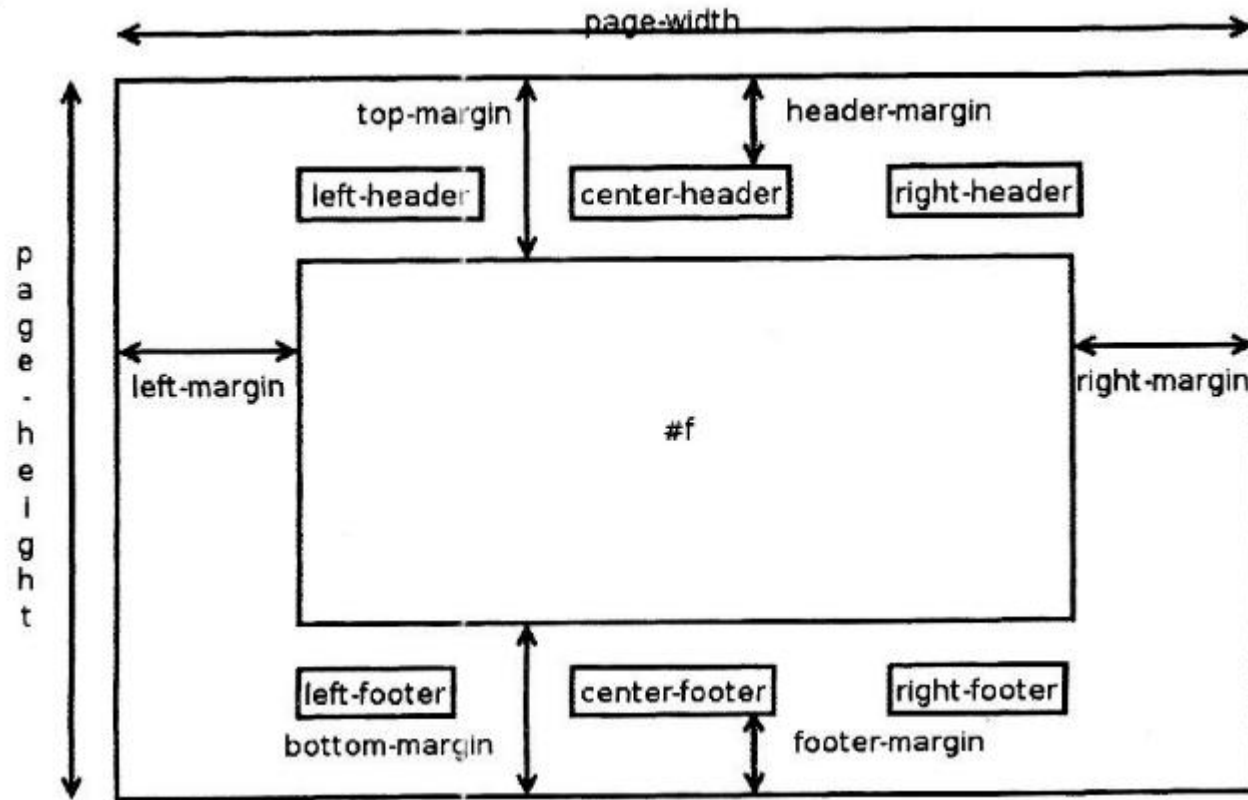
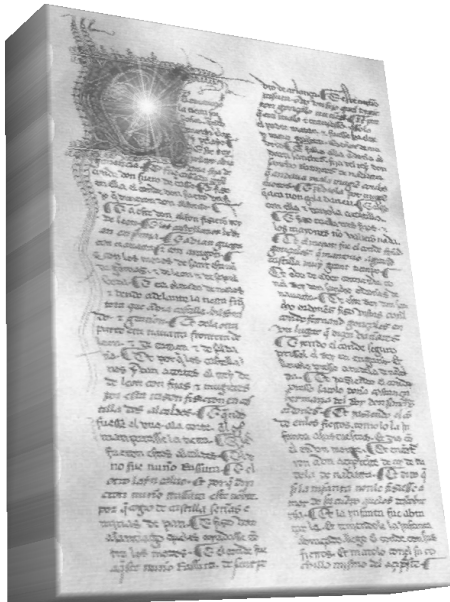
Analisis previo:

- No existe documentación previa.
- Desconocimiento del esquema interno.
- Desconocimiento de la estructura y organización
- Código poco o nada documentado.
- Gran cantidad de clases y lineas de código.
- Sintaxis especifica, bibliotecas propias.

Presentación del problema

Simple Page Sequence

Una clase de referencia

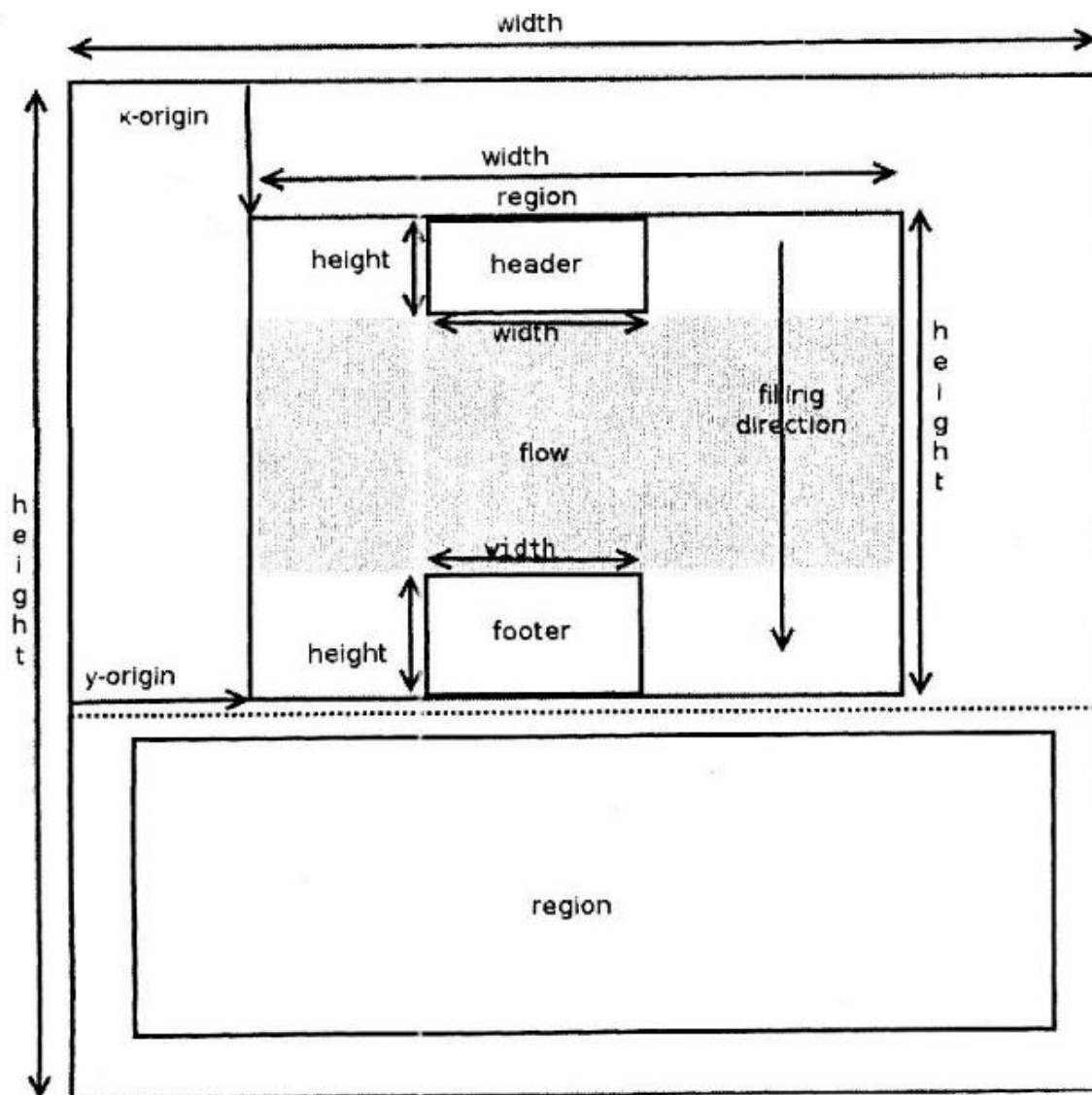
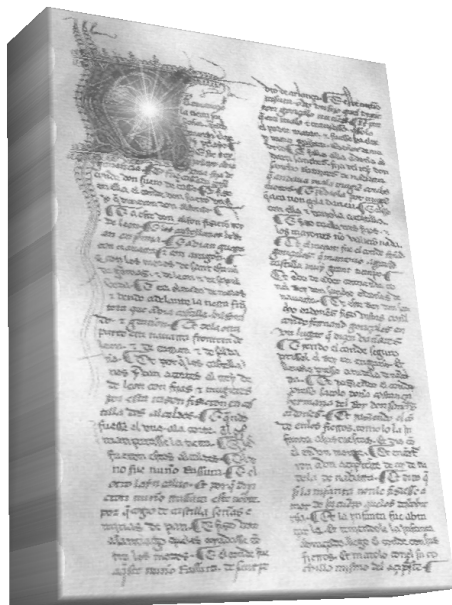


Presentación del problema

Modelo de página

El después.

Para la clase Secuencia de Página Compleja



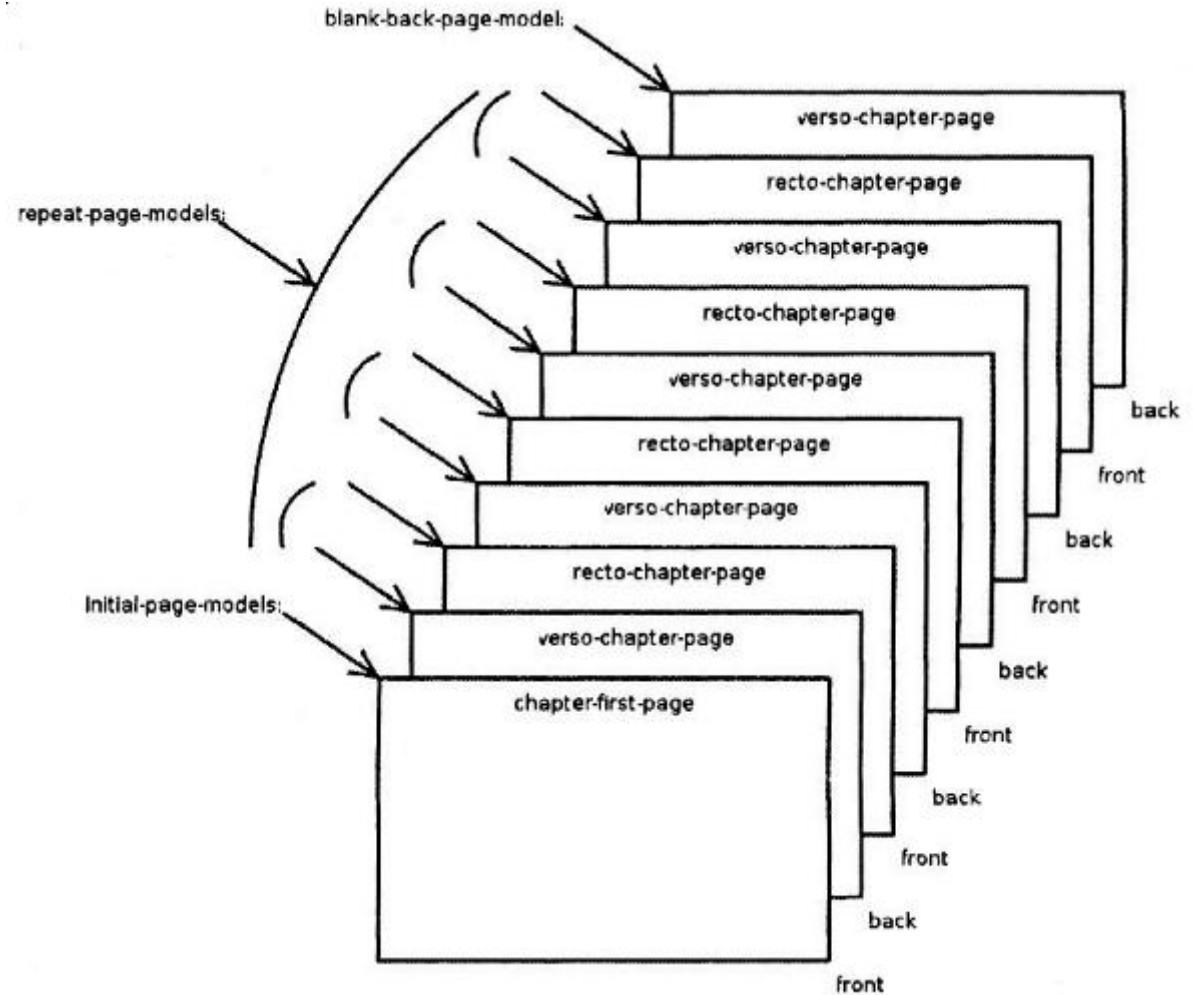
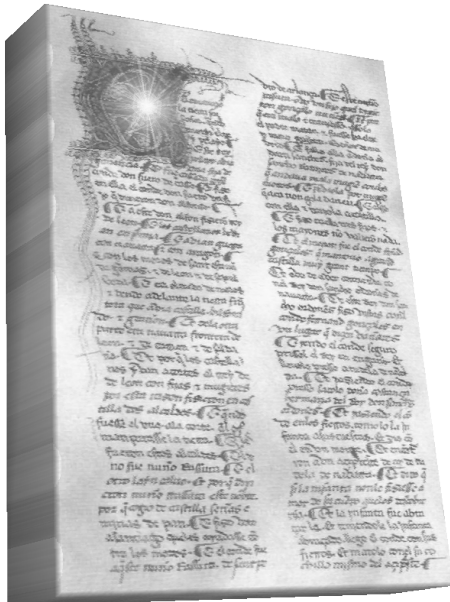
Presentación del problema

Secuencia de página

Diferentes características



Diferentes modelos de página en el mismo documento.



Presentación del problema

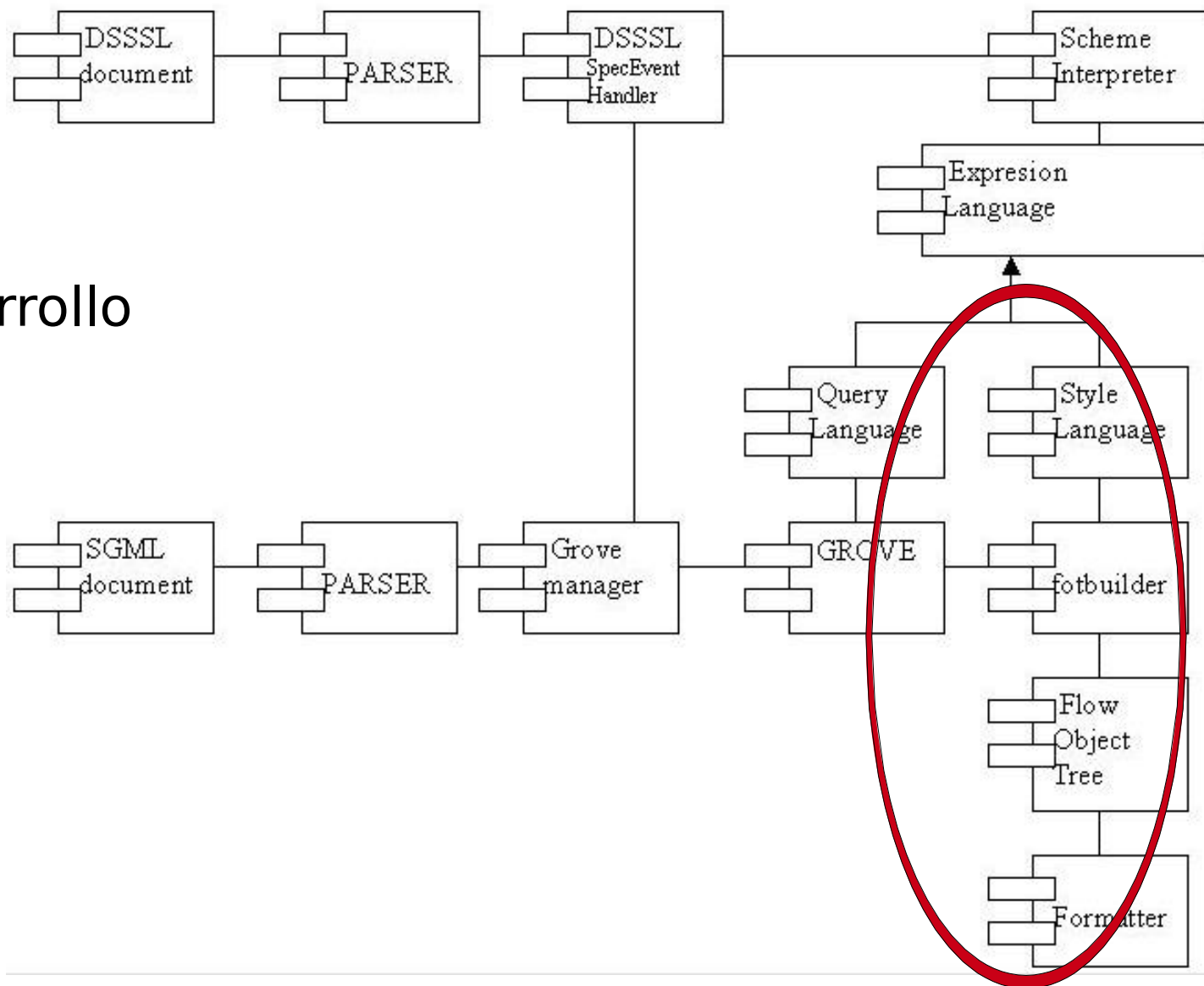
Añadir modelo de pagina y su formateo a la herramienta OpenJade.

Analisis previo:

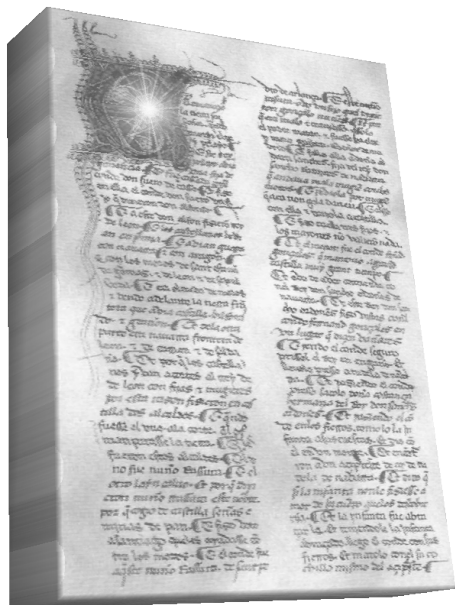
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- Gran cantidad de clases y lineas de código.
- Sintaxis especifica, bibliotecas propias.

Presentación del problema

Esquema interno



Situación del desarrollo



Implementación

Añadir modelo de pagina y su formateo a la herramienta OpenJade.

Analisis previo:

- No existe documentación previa.
- Desconocimiento del esquema interno.
- Desconocimiento de la estructura y organización
- Código poco o nada documentado.
- Gran cantidad de clases y lineas de código.
- Sintaxis especifica, bibliotecas propias.

Implementación

- Construcción de diagramas de clases UML :
 - 250 clases interrelacionadas.
 - Gran cantidad de métodos Friends y multiherencia.
 - Gran cantidad de estructuras locales.
- Separación de clases por funcionalidad.
- Acotación por el esquema interno y la estructura/organización
- Interpretación del significado de clases por nombre.



Motor de estilo

Pertenece al lenguaje de Expresión

Es un nuevo objeto del lenguaje de Expresión

Implementación

Es un nuevo objeto del lenguaje de Expresión



ELObj – Expresion Language Object



Comprobar su significado con otras clases
Crear la clase PageModelObj hereda de ELObj



Crear el Parser para la definición del modelo de paginas la cual viene de la hoja de estilo.



Interpretar los valores y asociarlos como característica al objeto de secuencia de paginas compleja.

Implementación

Interpretar los valores y asociarlos como característica al objeto de secuencia de paginas compleja.



Crear la estructura necesaria para que el constructor de árbol pueda manejar y gestionar los valores del modelo de página.



Asociar el modelo de página a esta estructura y crear los métodos necesarios para su manipulación en el FOTBuilder

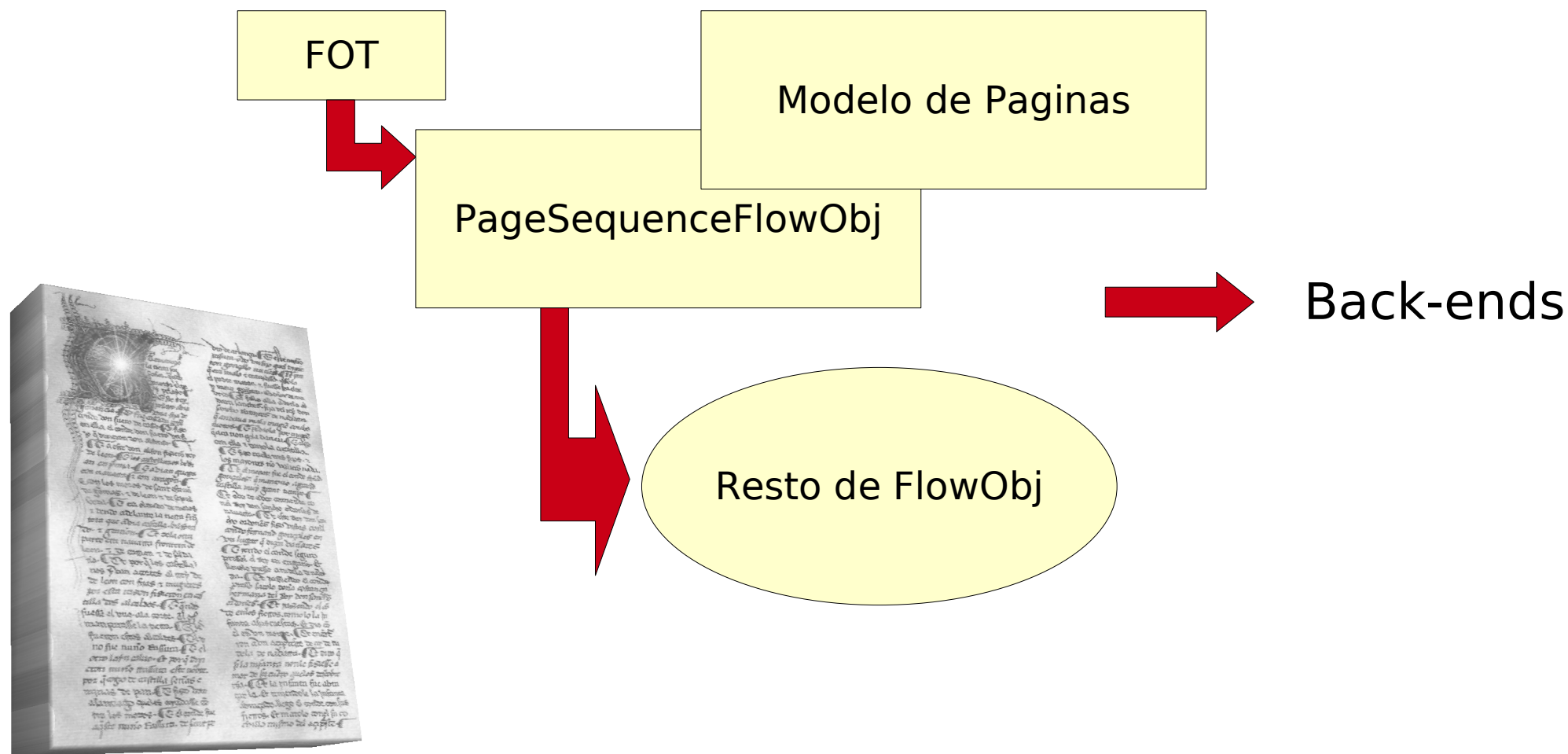


A partir del FOTBuilder construir backend fot

A partir del FOTBuilder construir backend tex

Implementación

Constructor de árbol de Objetos de Flujo - FOTBuilder



Resultados

Prueba I – backend Fot :

```
<!doctype style-sheet PUBLIC "-//James Clark//DTD DSSSL Style Sheet//EN">
```

```
<style-sheet>
<style-specification>
<style-specification-body>

(define-page-model *cap_one*
  (width 21)
  (height 54)
  (filling-direction 1))

(define-page-model *cap_two*
  (width 12)
  (height 42)
  (filling-direction 2))

(define-page-model *cap_end*
  (width 12)
  (height 57)
  (filling-direction 3))

(element prova
  (make page-sequence
    force-last-page: 'front
    force-first-page: 'back
    justify-spread?: #t
    binding-edge: 'right
    blank-back-page-model: *cap_end*
    repeat-page-models: '(*cap_end* *cap_one* *cap_two*).
    initial-page-model: '(*cap_end* *cap_one*).
    blank-front-page-model: *cap_end*
    (make included-container-area
      span: 2)))

</style-specification-body>
</style-specification>
</style-sheet>
```



```
<?xml version="1.0"?>
<fot>
  <define-page-model id=cap_one width="21" height="54" filling-direction="false">
    <region x-origin="0" y-origin="0" width="0" height="0" filling-direction="false">
      <header height="0" width="0" filling-direction="false" contents-alignment="false"/>
      <footer height="0" width="0" filling-direction="false" contents-alignment="false"/>
    </region>
  </define-page-model>
  <define-page-model id=cap_end width="12" height="57" filling-direction="false">
    <region x-origin="0" y-origin="0" width="0" height="0" filling-direction="false">
      <header height="0" width="0" filling-direction="false" contents-alignment="false"/>
      <footer height="0" width="0" filling-direction="false" contents-alignment="false"/>
    </region>
  </define-page-model>
  <page-sequence force-last-page="front" force-first-page="back" justify-spread="true"
    blank-back-page-model="cap_one" initial-page-model="cap_one cap_end cap_end" repeat-
    <included-container-area scale="max-uniform" span="2">
    <a name="0"/>
    <a name="1"/>
    <text>Hola això es una prova.</text>
    </included-container-area>
  </page-sequence>
</fot>
```


Resultados

Prueba II – backend Fot :

```

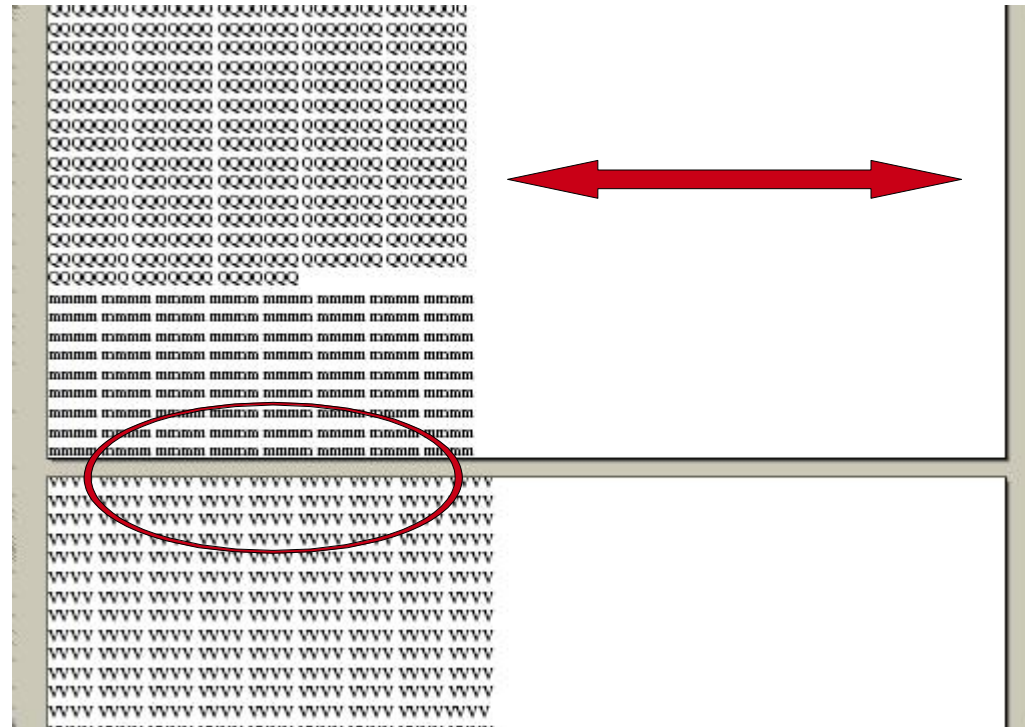
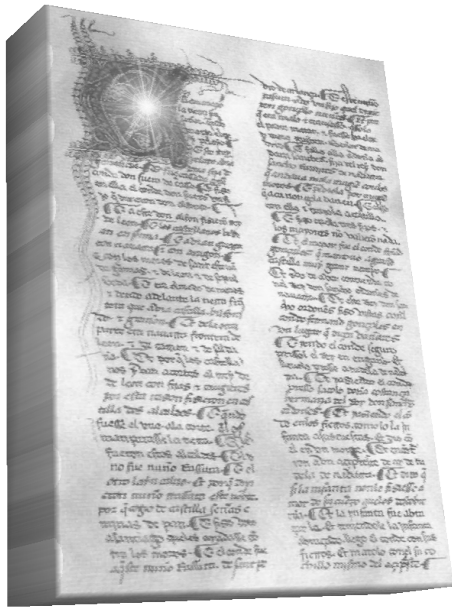
<?xml version="1.0" ?>
<fot>
<sequence font-size="12pt" font-weight="medium" font-posture="upright" font-family-name="Ti
writing-mode="left-to-right" left-margin="72pt" right-margin="72pt" top-margin="72pt" botto
footer-margin="48pt" page-width="612pt" page-height="792pt" quadding="start">
<page-sequence start-indent="0pt" input-whitespace-treatment="collapse" left-margin="56.692
top-margin="56.692pt">
<sequence>
<paragraph space-before="54pt" space-after="12pt">
<sequence>
<a name="0"/>
<a name="1"/>
<a name="2"/>
<line-field field-width="54pt" font-family-name="Arial">
<text>Date:</text>
</line-field>
<text>January 26, 1998</text>
</sequence>
</paragraph>
<paragraph>
<sequence>
<a name="3"/>
<line-field field-width="54pt" font-family-name="Arial">
<text>To:</text>
</line-field>
<text>The Honorable William J. Clinton President of the United States Washington, DC</text>
</sequence>
</paragraph>
<paragraph space-after="24pt">
<sequence>
<a name="4"/>
<line-field field-width="54pt" font-family-name="Arial">
<text>Subject:</text>
</line-field>
<text>Project for the new American Century</text>
</sequence>
</paragraph>
<paragraph space-after="12pt">
<text>Dear </text>
<text>The Honorable William J. Clinton President of the United States Washington, DC</text>
<text>:</text>
</paragraph>
</sequence>
<paragraph space-after="6pt">
<a name="5"/>
<a name="6"/>
<text>Dear Mr. President:</text>
</paragraph>

```



Resultados

Prueba I – Inicios – backend Tex :



Resultados

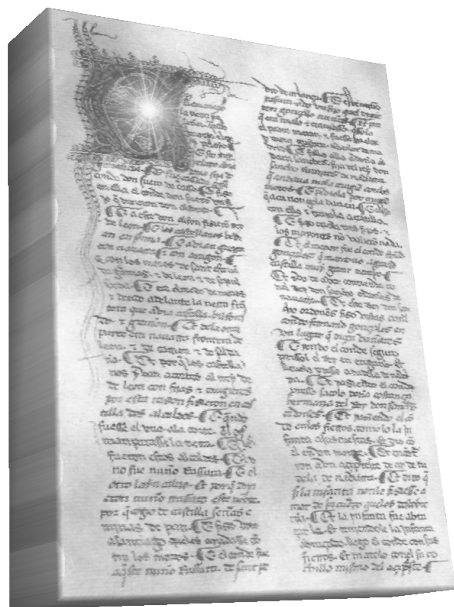
Prueba II – Inicios – backend Tex :

... that opportunity, and to enunciate a new strategy that would secure the interests of the U.S. and our friends and allies around the world. That strategy should aim, above all, at the removal of Saddam Hussein's regime from power. We stand ready to offer our full support in this difficult but necessary endeavor.

The policy of containment of Saddam Hussein has been steadily eroding over the past several months. As recent events have demonstrated, we can no longer depend on our partners in the Gulf War coalition to continue to uphold the sanctions or to punish Saddam when he blocks or evades UN inspections. Our ability to ensure that Saddam Hussein is not producing weapons of mass destruction, therefore, has substantially diminished. Even if full inspections were eventually to resume, which now seems highly unlikely, experience has shown that it is difficult if not impossible to monitor Iraq's chemical and biological weapons production. The lengthy period during which the inspectors will have been unable to enter many Iraqi facilities has made it even less likely that they will be able to uncover all of Saddam's secrets.

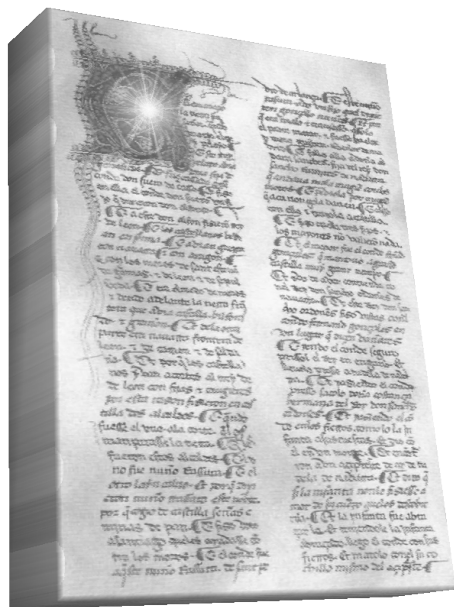
As a result, in the not-too-distant future we will be unable to determine with any reasonable level of confidence whether Iraq does or does not possess such weapons.

Such uncertainty will, by itself, have a seriously destabilizing effect on the entire Middle East. It



Resultados

Prueba II – Inicios – backend Tex :



The policy of containment of Saddam Hussein has been steadily eroding over the past several months. As recent events have demonstrated, we can no longer depend on our partners in the Gulf War coalition to continue to uphold the sanctions or to punish Saddam when he blocks or evades UN inspections.

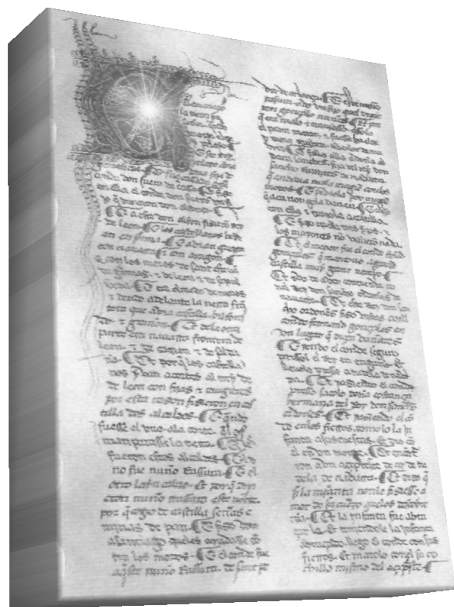
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not-too-distant future we will be unable to determine with any reasonable level of confidence whether Iraq does or does not possess such weapons.

Such uncertainty will, by itself, have a seriously destabilizing effect on the entire Middle East. It hardly needs to be added that if Saddam does acquire the capability to deliver weapons of mass destruction, as he is almost certain to do if we continue along the present course, the safety of American troops in the region, of our friends and allies like Israel and the moderate Arab states,

Resultados

Prueba III – backend Tex :



Dear The Honorable William J. Clinton President of the United States Washington, DC:

Dear Mr. President:

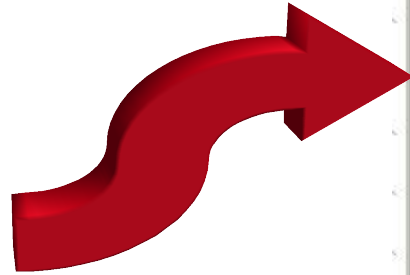
Altura: 457.13359

We urge you to articulate this aim, and to turn your Administration's attention to implementing a strategy for removing Saddam's regime from power. This will require a full complement of diplomatic, political and military efforts. Although we are fully aware of the dangers and difficulties in implementing this policy, we believe the dangers of failing to do so are far greater. We believe the U.S. has the authority under existing UN resolutions to take the necessary steps, including military steps, to protect our vital interests in the Gulf. In any case, American policy cannot continue to be crippled by a misguided insistence on unanimity in the UN Security Council. We urge you to, we believe the dangers of failing to do so are far greater. We believe the U.S. has the authority under existing UN resolutions to take the necessary steps, are far gr the dangers and difficulties in implementing this policy, we believe the dangers of failing to do so are far greater. We believe the U.S. has the authority under existing UN resolutions to take the necessary steps, including military steps, to protect our vital interests in the Gulf. In any case, American policy cannot continue to be crippled by a misguided insistence on unanimity in the UN Security Council. We urge you to articulate this aim, and to turn your Administration's attention to implementing a strategy for removing Saddam's regime from power.

Resultados

Prueba IV – backend Tex :

We thrive in information—thick worlds because of our marvelous and everyday capacity to select, edit, single out, structure, highlight, group, pair, merge, harmonize, synthesize, focus, organize, condense, reduce, boil down, choose, categorize, catalog, classify, list, abstract, scan, look into, idealize, isolate, discriminate, distinguish, screen, pigeonhole, pick over, sort, integrate, blend, inspect, filter, lump, skip, smooth, chunk, average, approximate, cluster, aggregate, outline, summarize, itemize, review, dip into, flip through, browse, glance into, leaf through, skim, refine, enumerate, glean, synopsisize, winnow the wheat from the chaff and separate the sheep from the goats. Thus, I came to the conclusion that the designer of a new system must not only be the implementer and first large—scale user; the designer should also write the first user man-



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The operation of one of these lines now presents would have been significantly. If I had not participated fully in all these activities, I would have been less likely to have thought of them or perceived why they were important.

This system cannot be successful if it is too strongly influenced by a single person. Once the initial design is complete and fairly robust, the real test begins as people with many different viewpoints make their own experiments.

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cluster, aggregate, outline, summarize, itemize, review, dip into, flip through, browse, glance into, leaf through, skim, refine, enumerate, glean, synopsisize, winnow the wheat from the chaff and separate the sheep from the goats.

Conclusión

Mediante un estudio de la herramienta OpenJade de su organización interna, estructura y creación de diagramas de clase UML.



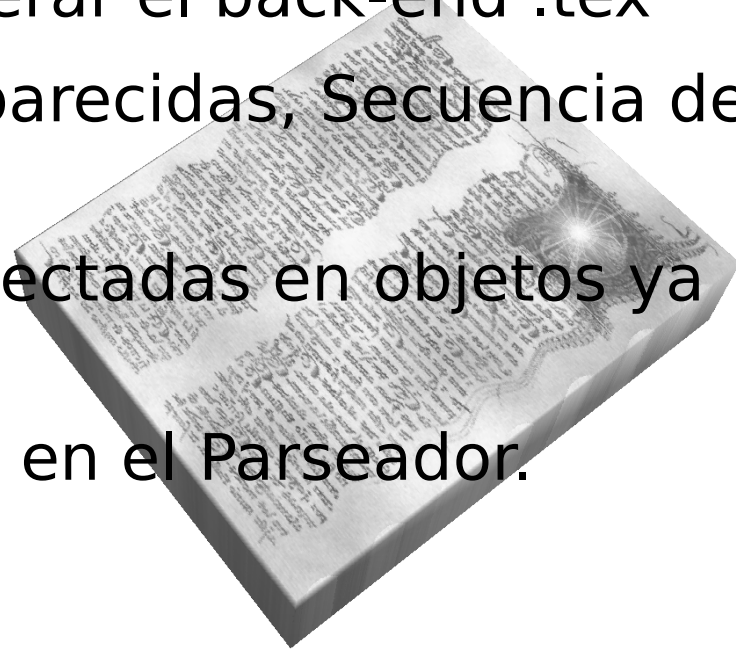
Se ha conseguido **añadir nuevas funcionalidades** a la herramienta OpenJade.

- Desarrollo / Implementación **modelo de página**.
- Eliminación de la herramienta **JadeTex**.
- Formateo de backend **.fot**, junto la comprobación de la buena insercción de los objetos de flujo en el FOTBuilder
- Intento de formateo de backend **.tex**, de diferentes formas con limitaciones obvias.



Conclusión

- Crear una macros en TeX para Latex para soportar modelo de página.
- Limpiar todas las macros al generar el back-end .tex
- Añadir nuevas funcionalidades parecidas, Secuencia de columnas complejas.
- Corregir ciertas ineficiencias detectadas en objetos ya construidos.
- Insertar la validación de puertos en el Parseador.



Nuevas versiones, comunidad OpenSource lo espera, mayor interés por el uso de los estándares.