

Universidad de San Carlos de Guatemala

Centro Universitario de Occidente

División de Ciencias de la Ingeniería

Manual Tecnico

Manejador de contenidos

Organización de Lenguajes y Compiladores 1
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Descripción general del sistema

El sistema trata de simular un creador de contenidos liviano en el que se pueden crear páginas web a base de componentes, para ello un editor se comunica con el servidor desde una aplicación cliente en la que construye paso a paso los sitios y páginas web describiendo los procesos que deben realizarse a modo de "acciones", el servidor recibe esta información, la analiza, verificando su estructura y que cumpla con las condiciones esperadas, para después ejecutar y devolver una respuesta al cliente, además el servidor tiene la tarea de desplegar los sitios para que puedan ser vistas las páginas desde un navegador.

En este manual técnico, se describe el funcionamiento del manejador de archivos y la forma en que fue construido, tanto el servidor como la aplicación cliente, ambos se comunican por medio de solicitudes http y se puede acceder a los sitios web y sus páginas desde su navegador.

Servidor

FilesController

Diagrama de clases:

cr user: String cr date: LocalDate tags: List<String> mod_user: String mod_date: LocalDate title: String - subPageIds: List<String> - components: List<Component> id: String + getTitle(): String + readExternal(ObjectInput): void + getCr_user(): String getCr_date(): LocalDate + setTitle(String): void + setMod_user(String): void + setId(String): void + setSubPageIds(List<String>): void + setComponents(List<Component>): void + writeExternal(ObjectOutput): void + setCr_date(LocalDate): void + setParentId(String): void + getId(): String + builder(): PageBuilder toString(): String + getSubPageIds(): List<String> + getMod_user(): String + setMod_date(LocalDate): void + getParentId(): String + getMod_date(): LocalDate + setCr_user(String): void + getTags(): List<String> getComponents(): List<Component> setTags(List<String>): void



setType(ComponentType): void setParent(String): void

getParent(): String setAlignment(Alignment): void

builder(): ComponentBuilder

readExternal(ObjectInput): void

toString(): String setHeight(int): void

pages tags; Map<String, List<String>> siteIds: List<String> page_siteIds: Map<String, String> readExternal(ObjectInput): void rewritePage(Page): void getVisits(String): int + addPage(Page, String): void + addSite(Site, Page): void + getPage(String): Page readSerialized(String): Object savelds(): void getPopularPages(String): Map<String, Integer> getSubPagesR(String, List<String>): void aetSite(Strina): Site getSiteIds(): List<String> deletePage(String): void getSubPages(String): List<String> addVisit(String, String): void getPageIdsWithTag(String): List<String> pageIdExists(String): boolean writeExternal(ObjectOutput): void writeSerialized(Object, String): void deleteSite(String): void siteIdExists(String): boolear getVisits(String, String): int builder(): FilesControllerBuilder

+ main(String[]): void - tryTestXML(FilesController): void





	CompController	
	- files: FilesController	
Ì	+ executeDELETE(Action): void	
	 validateADD_MODIFY(Action): void 	
	 validateGetCompI(List<component>, String): int</component> 	
	validateVIDEO(List<attr>): void</attr>	
	+ executeMODIFY(Action): void	
	validateIMG(List<attr>): void</attr>	
	- validateTITLE_PARRAGRAPH(List <attr>): void</attr>	
	- validateIMG_VIDEO(int, int, int): void	
	- validateMENU(List <attr>): void</attr>	
	- createComponent(Action, String, String): Component	
	- replaceId(String): String	
	+ executeADD(Action): void	
	- validateDELETE(Action): void	
П		

HTMLWriter	
url: String	
files: FilesController	
formHtml(String, String, String): String	
addIMG(Component, StringBuilder, StringBuilder): void	
addVideo(Component, StringBuilder, StringBuilder): void	
addMenu(Component, String, String, StringBuilder): void	
addTitle(Component, StringBuilder, StringBuilder): void	
link(String, String): String	
getSiteList(): String	
parsePage(String, String): String	
addParagraphTitleStyle(Component, StringBuilder): void	
addParagraph(Component, StringBuilder, StringBuilder): ve	oid

< <enumeration>> ActionType</enumeration>
+ MODIFY_PAGE:
+ ADD_COMPONENT:
+ MODIFY_COMPONENT:
+ NEW_SITE:
+ DELETE_SITE:
+ DELETE_PAGE:
+ DELETE_COMPONENT:
+ NEW_PAGE:
+ valueOf(String): ActionTyp

ReportsController

files: FilesController

+ of(Report): String

tion>> rpe	Action
	- type: ActionType
	- attributes: List <attr></attr>
ENT:	- tags: List <string></string>
PONENT:	- params: List <param/>
	+ getType(): ActionType
	+ toString(): String
ONENT:	+ getAttributes(): List <attr></attr>
	+ builder(): ActionBuilder
	+ getTags(): List <string></string>
ActionType	+ getParams(): List <param/>

Report
- type: ReportType
- path: String
- paths: List <string></string>
- compType: ComponentType
+ getType(): ReportType + builder(): ReportBuilder + getPaths(): List <string> + getCompType(): ComponentType + getPath(): String</string>

value: String type: ParamType	
setType(ParamType): void	
getValue(): String	
getType(): ParamType	
builder(): ParamBuilder	
setValue(String): void	
to Ctring () Etring	

	Attr
- value:	String
- type: A	ttrType
	oe(): AttrType
+ setTyp	e(AttrType): void
+ setVal	ue(String): void
+ builde	r(): AttrBuilder
+ toStrir	ng(): String
+ getVal	lue(): String

	< <enumeration>> ComponentType</enumeration>
+ TITLE:	
+ MENU	:
+ PARA	GRAPH:
+ IMG:	
+ VIDEO);

ServerController
- htmlCtr: HTMLWriter
- actionsCtr: ActionsController
- files: FilesController
- handleGET(String, PrintWriter): void
+ start(): void
- handlePOST(String, String, PrintWriter): void

SiteController
- files: FilesController
+ executeDELETE(Action): void
+ processDate(String): LocalDate
+ executeNEW(Action): void
- validateNEW(Action): void
+ validateNoTagsAndAttrs(Action): void

PageController
- files: FilesController
- validateMODIFY(Action): void
- validateNEW(Action): void
+ executeMODIFY(Action): void
+ executeNEW(Action): void
+ executeDELETE(Action): void

ActionsController
- sites: SiteController
- pages: PageController
- comps: CompController
+ execute(Action): void
- validateID(Action): void
+ validateRegexId(String): void

< <enumeration>> ReportType</enumeration>	
+ PAGE_VISITS:	
+ POPULAR_PAGES:	
+ SITE_VISITS:	
+ COMPONENT:	
+ values(): ReportType[]	_

< <enumeration>> Alignment</enumeration>	
+ RIGH	n:
+ JUSTI	FY:
+ CENT	ER:
+ LEFT:	
+ values	s(): Alignment[]

Aplicación cliente

Diagrama de clases:

TextLineNumber

- + RIGHT: float
- digitAlignment: float
- lastLine: int
- minimumDisplayDigits: int
- borderGap: int
- fonts: HashMap<String, FontMetrics>
- HEIGHT: int
- + CENTER: float
- OUTER: Border
- updateFont: boolean
- lastHeight: int
- currentLineForeground: Color
- + LEFT: float
- component: JTextComponent
- lastDigits: int
- + getMinimumDisplayDigits(): int
- + setBorderGap(int): void
- + insertUpdate(DocumentEvent): void
- + paintComponent(Graphics): void
- + getDigitAlignment(): float
- + propertyChange(PropertyChangeEvent): void
- + getUpdateFont(): boolean
- + setUpdateFont(boolean): void
- + getCurrentLineForeground(): Color
- setPreferredWidth(): void
- getOffsetX(int, int): int
- + setDigitAlignment(float): void
- + removeUpdate(DocumentEvent): void
- + setMinimumDisplayDigits(int): void
- + caretUpdate(CaretEvent): void
- isCurrentLine(int): boolean
- + setCurrentLineForeground(Color): void
- + getBorderGap(): int
- documentChanged(): void
- # getTextLineNumber(int): String
- getOffsetY(int, FontMetrics): int
- + changedUpdate(DocumentEvent): void

WindowPnl

- bgColor: Color
- editColor: Color
- textAreaList: ArrayList<JTextPane>
- filesList: ArrayList<File>
- tabExists: boolean
- listManager: ArrayList<UndoManager>
- menuColor: Color
- tPane: JTabbedPane
- resultArea: JTextArea
- tabCounter: int
- undo: JMenuItem
- server: ServerController
- font: Font
- redo: JMenuItem
- querysColor: Color
- textAreaMenu: JPopupMenu
- scrollPnList: ArrayList<JScrollPane>
- save: JMenuItem
- buttonColor: Color
- append(String, JTextPane): void
- saveFile(): void
- + createTab(): void
- editRedo(): void
- openFile(): void
- editUndo(): void
- closeTab(): voidrunXML(): void
- disableItems(): void
- enableItems(): void

ServerController

- clientSocket: Socket
- out: DataOutputStream
- in: DataInputStream
- parseXML(String): Node
- readActionsResponse(String): String
- startConnection(): void
- stopConnection(): void
- + executeQuery(String): String
- makeRequest(String, String): String
- readReportsResponse(String): String
- + executeActions(String): String

Main

+ main(String[]): void

Gramáticas

Acciones:

```
actions ::= ACTIONS_OP one_action _ actions ACTIONS CL
  one action;
_actions ::= one_action _actions
one action ::= LESS THAN ACTION NAME EQUALS action name:n MORE THAN
params:p attributes:a tags:t LESS THAN SLASH ACTION MORE THAN
action name ::= NEW SITE
 | DELETE_SITE
 | NEW PAGE
 | MODIFY PAGE
 | DELETE PAGE
 | ADD COMPONENT
 | DELETE_COMPONENT
 | MODIFY COMPONENT
params ::= PARAMS_OP param _params PARAMS_CL
_params ::= param _params
param ::= LESS THAN PARAM NAME EQUALS param name MORE THAN
BRACKET_VALUE LESS_THAN SLASH PARAM MORE_THAN
param_name ::= ID
  | CREATION USER
 | CREATION DATE
 | MODIFICATION_DATE
 | MODIFICATION USER
 | PARAM_TITLE
 | SITE
  | PARENT
```

```
| PARAM_PAGE
 | CLASS
attributes ::= ATTRIBUTES_OP attribute _attributes ATTRIBUTES_CL
_attributes ::= attribute _attributes
attribute ::= LESS THAN ATTRIBUTE NAME EQUALS attr name MORE THAN
BRACKET_VALUE LESS_THAN SLASH ATTRIBUTE MORE_THAN
attr_name ::= TEXT
 | ALIGNMENT
 | COLOR
 | SOURCE
 | HEIGHT
 | WIDTH
 | PARENT
 COMP_TAGS
tags ::= TAGS_OP tag _tags TAGS_CL
_tags ::= tag _tags
tag ::= LESS_THAN TAG VALUE EQUALS QUOTE_VALUE:v SLASH MORE_THAN
```

Consultas / Estatísticas:

```
consult ::= CONSULT report: SEMICOLON
report ::= sites
  pages
  popular
  components
sites ::= SITE_VISITS paths
pages ::= PAGE_VISITS paths
popular ::= POPULAR_PAGES PATH:
popular ::= COMPONENT comp types PATH
paths ::= PATH:p _paths:
paths ::= COMMA PATH:p paths
comp types ::= TITLE
  | PARAGRAPH
  | IMG
  | VID
  | MENU
```