Detailed Design Document

Control number	
System ID	
System name	Multi-database Search System for Historical Chinese Characters
Logical name	Database for Historical Chinese Characters
Physical name	mojiportal
Revision date	
Revised by	

Detailed Design Document

Logical name	Database for Historical Chinese Characters	System ID	
Physical name	mojiportal	System name	Chinese Characters

No.	Revision date	Revised by	Item	Revision
1				
2				
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Detailed Design Document	Logical name	Database for Historical Chinese Characters	System ID		Revision date	
	Physical name	mojiportal	System name	Multi-database Search System for Historical Chinese Characters	Revised by	

Search screen (top)

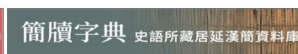**Multi-database Search System for Historical Chinese Characters**

English ▼

About   Help

奈良文化財研究所
Nara National Research Institute for Cultural Properties

Search for [ ] 🔍 Go
Enter a character in the search box.

Data providers:

奈良文化財研究所
Nara National Research Institute for Cultural Properties

東京大学史料編纂所
HISTORIOGRAPHICAL INSTITUTE, The University of Tokyo

大学共同利用機関法人 人間文化研究機構
国文学研究資料館
National Institute of Japanese Literature

大学共同利用機関法人 人間文化研究機構
国立国語研究所
National Institute for Japanese Language and Linguistics

漢字規範史データセット保存会

中央研究院
歴史語言研究所
Institute of History and Philology, Academia Sinica

Digital Cultures

奈良文化財研究所
木簡庫
Wooden Tablet Database

東京大学史料編纂所
電子くずし字字典DB

国文研字形検索β

HNG 単字検索

簡牘字典 史語所藏居延漢簡資料庫

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Screen image

Search screen (Search result list display)

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Physical name	mojiportal	**System name**

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Item

No.	Item name	Classification	Mandatory	No. of column	Format	Table	Field	Remark
1	Search character	Entry field	○	1	-	Variant Chinese character		Specified by a single character only
2	Search character	Display	-	-	-	-		Searched character
	Wooden Tablet Database - Nara National Research Institute for Cultural Properties							
3	Search result	Display	-	-	-			
4	Display all characters/images	Screen transition	-	-	-	-		
5	Image	Display	-	-	jpg			
6	Detail	Screen transition	-	-	-			
7	Manifest	Screen transition	-	-	json			
8	Open with mirador	Screen transition	-	-	json			
	Kuzushi Ji Digital Database – Historiographical Institute The University of Tokyo							
9	Search result	Display	-	-	-			
10	Display all characters/images	Screen transition	-	-	-	-		
11	Image	Display	-	-	bmp			
12	Detail	Screen transition	-	-	-			
13	Manifest	Screen transition	-	-	json			
14	Open with mirador	Screen transition	-	-	json			
	NIJL Character Shape Search β – National Institute of Japanese Literature							
15	Search result	Display	-	-	-			
16	Image	Display	-	-	jpg			
17	Detail	Screen transition	-	-	-			
18	Manifest	Screen transition	-	-	json			
19	Open with mirador	Screen transition	-	-	json			
	Wooden Slips Character Dictionary – Institute of History and Philology, Academia Sinica | Academia Sinica Center for Digital Cultures							
20	Search result	Display	-	-	-			
21	Image	Display	-	-	jpg			
22	Detail	Screen transition	-	-	-			
23	Manifest	Screen transition	-	-	json			
24	Open with mirador	Screen transition	-	-	json			
	HNG Character Search – Hanzi Normative Glyph Data Set							
25	Search result	Display	-	-	-			
26	Image	Display	-	-	jpg			
27	Detail	Screen transition	-	-	-			
28	Manifest	Screen transition	-	-	json			
29	Open with mirador	Screen transition	-	-	json			

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(1) Search preprocessing
    [1] When a search keyword is not set:
        Displays a message indicating no search characters specified on the screen.

    [2] When a search keyword has multiple characters
        Only the first character is specified as a search character.

(2) Specifying institutions to be searched
    This function searches by institution, so the target is to be specified.
    * After each institution is searched, the process transits to (7) described below.

(3) Obtaining the list of variant Chinese characters
    [1] When there is a variant Chinese character:
        Obtains information of variant Chinese characters in the same group.
        All variant Chinese characters including the search keyword are specified as the target.

    [2] When there are no variant Chinese characters:
        Only the search keyword is specified as the target.

(4) Setting basic authentication
    Sets basic authentication for Nara National Research Institute for Cultural Properties.

(5) Obtaining the list of characters
    Only search keywords containing variant Chinese characters are repeatedly searched in [1] to [3] below.

    [1] URL encodes the search keyword or variant Chinese characters.

    [2] Sets URL for API of the institution to be searched (such as Historiographical Institute The University of Tokyo).

    [3] Makes inquiry on API of institution to be searched, and decodes the returned JSON string.
        Internal processing for API and the configuration (array) of decoded JSON strings are described in later pages.

(6) In case of API of Historiographical Institute The University of Tokyo
    Resets search result and URL to be set as the detail button to correspond to variant Chinese characters.
    URL after the reset is shown below:

> http://clioapi.hi.u-tokyo.ac.jp/ships/ZClient/W34/z_detail.php?title=**character**&mgno=**ID**&count=1&countAll=1

* Goes back to (2) above.

(7) Displays the list of search results on the screen.

Processes made by pressing the search button (continued)

Internal processing of API

(1) Specifying search condition
    [1] Specify characters to be searched in the table.

    [2] If the delegate flag (delegate) is valid, specify the delegate.

(2) Obtaining table data
    After obtaining data conforming to the search condition in SQL, create a JISON string of the returned value.
    In this case, the database name and creator are set as below:

    Example:

Item	Value
Database name	Historical Chinese Character Database@ja
Creator	Nabunken@ja

Configuration (array) of decoded JSON strings

Array					Description
{					
status_code					Processing result
search_results					Number of search results
list	[				Information of the list of search results * Arrays continue as [0], [1], [2]....
	{				
		identifier			https://mojiportal.nabunken.go.jp/manifest/6AAB/6AABUS48/6AABUS480010641/6AABUS480010641-3/list/6AABUS480010641-3-C1ano.json
		id			Control number
		title			Character
		delegate			Delegate flag
		unicode			Unicode
		source	{		Historical material group information
				date	Japanese calendar date
				value	Historical material group name
			}		
		thumbnail_url			URL for clipping image
		manifest_url			URL for the IIIF manifest file for clipping image
		subject			Database name
		creator			Creator
		rights			Right holder
		rights_url			URL for Acceptable Use Policy
		}			
	]				
}					

Variant Chinese character extraction
Items to be extracted

When executing SQL, columns shown below are extracted:

Logical table name	Variant Chinese character table
Physical table name	char_group_tbl

Logical column name	Physical column name
Group ID	group_id
Variant Chinese character	char

* Columns shown above are extracted from the table.

Extraction target

Columns to be extracted are shown below:

Logical column name	Physical column name
Variant Chinese character	char

Extraction condition

The flow and conditions for extraction are shown below:

(1) Set the search keyword as the WHERE clause of the SQL query, and obtain the value of the group ID corresponding to the condition among the variant Chinese character table.

(2) Set the obtained ID group value as the WHERE clause of the SQL query, and obtain the value of variant Chinese character corresponding to the condition among the variant Chinese character table.

Data extraction in API internal processing

Items to be extracted

When executing SQL, items (columns) shown below are extracted:

Logical table name	For IIIF search API table
Physical table name	iiif_api_tbl

Logical table name	Physical table name
Control Number	identifier
ID	id
Character	title
Delegate flag	delegate
Unicode	unicode
Historical material group information, Japanese calendar d	source_date
Historical material group information, historical material gr	source_value
URL for clipping image	thumbnail_url
URL for the IIIF manifest file for clipping image	manifest_url
URL for Wooden Tablet Database	mokkanko_url

* Columns shown above are extracted from the table.

Extraction target

Columns to be extracted are the same as the items to be extracted shown above.

Extraction condition

As shown below, set the condition to be specified as the WHERE clause and obtain data corresponding to the condition among the IIIF Search API table.

Column	Condition for WHERE clause	Remark
Character	Variant Chinese character or search keyword	
Delegate flag	1	1: Valid, 0: Invalid. * Condition is set only when it is valid.

The sort order is set as below:

Logical column name	Physical column name	Sort order
Priority	priority_level	Ascending order (ASC)