

Design: Data Dictionary

Definition

Data dictionaries is the detailed design for one or more entities, and defines the structure of the database. A data dictionary contains metadata, which is **data about data**.

A data dictionary is laid out as a table containing the definition of each attribute and entity:

- entity names
- attribute names
- primary and foreign
- data types
- attribute size
- validation

Data Dictionary Example

The next slide shows the data dictionary for these entities.

hairdresser

hairdresserid	firstname	lastname	contactnumber	salon
2210	Huda	Quhshi	07700 900477	West Style
2019	Sharon	Watt	07700 900582	On The Corner
1928	Phillip	Christie	07700 900142	Cuts & Co

client

hairdresserid	clientid	clientfirstname	clientlastname	phonenummer
1928	10290	Wen	Qiu	0141 496 0536
1928	11766	Michael	Waters	07700 900556
1928	12654	Faseeha	al-Allam	07700 900569
2019	10291	Peta	Mulisdottir	0151 496 0838
2019	20533	Egisto	Mario	0131 496 0294
2210	36172	Phillip	Roach	0131 496 0734
2210	32100	Emily	Sieff	0207 946 0126

Data Dictionary Example

Entity name: hairdresser					
Attribute name	Key	Type	Size	Required	Validation
hairdresserid	PK	Number	4	Y	range ≥ 1000 AND ≤ 9999
firstname		Text		Y	
lastname		Text		Y	
contactnumber		Text		Y	
salon		Text		Y	restricted choice: West Style, On The Corner and Cuts & Co

Entity name: client					
Attribute name	Key	Type	Size	Required	Validation
hairdresserid	FK	Number	4	Y	existing hairdresserid from hairdresser table
clientid	PK	Number	5	Y	
clientfirstname		Text		Y	length > 3
clientlastname		Text		Y	
phonenumber		Text		Y	

Data Dictionary Example

Entity name: hairdresser					
Attribute name	Key	Type	Size	Required	Validation
hairdresserid	PK	Number	4	Y	range ≥ 1000 AND ≤ 9999
firstname		Text		Y	
lastname		Text		Y	
contactnumber		Text		Y	
salon		Text		Y	restricted choice: West Style, On The Corner and Cuts & Co

Range check validation

Restricted choice validation

Presence check validation

Entity name: client					
Attribute name	Key	Type	Size	Required	Validation
hairdresserid	FK	Number	4	Y	existing hairdresserid from hairdresser table
clientid	PK	Number	5	Y	
clientfirstname		Text		Y	length > 3
clientlastname		Text		Y	
phonenumber		Text		Y	

Referential integrity

Length check validation