

Data dictionary (DDD)

A travel agency uses a relational database to store details on a booking system.

It store details of Scottish holiday resorts, hotels in each resort, customers and their bookings. These details are arranged in four separate entities.

A data dictionary is used to indicate the properties of each attribute needed to define the entities.

Sample data stored in each table of the database are shown below.

Sample data for resort		
Resort ID	Resort name	Resort type
168	Ayr	coastal
347	Portree	island

Sample data for hotel							
Hotel ref	Hotel name	Resort ID	Star rating	Season start date	Meal plan	Check-in time	Price/person/night (£)
AY72	Cliff Top	168	3	2019/04/29	Half Board	14:30:00	85.50
PR04	Sea View	347	5	2019/05/01	Bed and Breakfast	16:00:00	58.99
AY19	Glee	168	2		Full Board	15:00:00	179.00

Sample data for customer					
Customer No	Firstname	Surname	Address	Town	Postcode
315	Edwina	Jones	121 Main Street	Greenock	PA16 1JK
426	Omar	Shakir	26a High Bridge	Perth	PH42 6QW

Sample data for booking				
Hotel ref	Customer No	Start date	Number of nights	Number in party
PR04	315	2018/06/01	3	2
AY19	315	2018/07/12	4	4
PR04	315	2019/06/02	2	2

In the Advanced Higher course, data dictionary attribute types are expressed as SQL data types.

The completed data dictionary for the travel agency database is shown below.

Entity: Resort					
Attribute name	Key	Type	Size	Required	Validation
resortID	PK	integer		yes	
resortName		varchar	20	yes	
resortType		varchar	20	yes	Restricted choice: coastal, city, island, country

Entity: Hotel					
Attribute name	Key	Type	Size	Required	Validation
hotelRef	PK	varchar	4	yes	Length=4
hotelName		varchar	20	yes	
resortID	FK	integer		Yes	Existing resortID from Resort table
starRating		integer		yes	Range: >=1 and <=5
seasonStartDate		date		no	
mealPlan		varchar	17	yes	Restricted choice: see list below*
checkInTime		time		yes	
pricePersonNight		float		yes	Range: >=50 and <=250

* Restricted choice for mealPlan: Room Only, Bed and Breakfast, Half Board, Full Board

Entity: Customer					
Attribute name	Key	Type	Size	Required	Validation
customerNo	PK	integer		yes	Auto increment
firstname		varchar	20	yes	
surname		varchar	20	yes	
address		varchar	40	yes	
town		varchar	20	yes	
postcode		varchar	8	yes	Length<=8

Entity: Booking					
Attribute name	Key	Type	Size	Required	Validation
hotelRef	PK FK	varchar	4	yes	Existing hotelRef from Hotel table
customerNo	PK FK	integer		yes	Existing customer# from Customer table
startDate	PK	date		yes	
numberNights		integer		yes	Range: >=1
numberInParty		integer		yes	Range: >=1