Data Dictionary

A data dictionary is used to record details about the database. It provides a description of the constraints or rules that apply to each of the attributes of each entity in the system.

A data dictionary is simply a large table that stores metadata - in other words, it stores data about data.

The structures needed to store data in the database are planned using a data dictionary.

- Each row provides details about one attribute in the system
- Each column specifies a rule or restriction that applies to the attributes.

Entity name: Teacher					
Attribute name	**Key**	**Type**	**Size**	**Required**	**Validation**
teacherID	PK	text	7	Y	length = 7
forename		text	20	Y	
surname		text	20	Y	
address		text	50	Y	
subject		text	20	Y	restricted choice: Computing, Art, Business, Science, Music
NumberOfDays		number		N	Range >= 1 and <= 5

Entity name: Pupils					
Attribute name	**Key**	**Type**	**Size**	**Required**	**Validation**
PupilID	PK	number		Y	
forename		text		Y	
surname		text		Y	
DOB		date		Y	
PhoneNumber		text	11	Y	Length = 11
Postcode		text		Y	
FavouriteSubject		text	20	N	restricted choice: Computing, Art, Business, Science, Music
SportsClubs		text	20	Y	Restricted choice: Football, Rugby, Hockey
teacherID	FK	text	7	Y	existing teacherID from Teacher table

Other examples

Entity: Resort					
Attribute Name	**Key**	**Type**	**Size**	**Required**	**Validation**
resortID	PK	Number		yes	
town		Text	20	yes	
resortType		Text	20	yes	Restricted choice: coastal, city, island
trainStation		Boolean		yes	
Entity: Hotel					
Attribute Name	**Key**	**Type**	**Size**	**Required**	**Validation**
hotelRef	PK	Text	4	yes	length=4
hotelName		Text	20	yes	
phoneNumber		Text	11	yes	length=11
resortID	FK	Number		yes	Existing resortID from Resort table
starRating		Number		yes	Range: >=1 and <=5
seasonStartDate		Date		no	
swimmingPool		Boolean		yes	
mealPlan		Text	17	yes	Restricted choice: RO, BB, HB, FB
checkInTime		Time		yes	Range: >=14:00 and <=16:00

Entity name: Amplifier					
Attribute name	**Key**	**Type**	**Size**	**Required**	**Validation**
serialNumber	PK	text	10	Y	length = 10
dateBuilt		date		Y	
timeCompleted		time		Y	
model		text	7	Y	restricted choice: Jazz8, Rock100 and Blues55
testPassed		Boolean		Y	
employeeNumber	FK	number		Y	existing employeeNumber from Employee table

Entity name: Employee					
Attribute name	**Key**	**Type**	**Size**	**Required**	**Validation**
employeeNumber	PK	number		Y	range >=1000 AND <= 9999
firstName		text	15	Y	
surname		text	15	Y	
address		text	50	Y	
contactNumber		text	11	Y	length = 11
drivingLicence		Boolean		Y	
Entity: Amplifier					
Attribute name	**Key**	**Type**	**Size**	**Required**	**Validation**
serialNumber	PK	text	10	Y	length = 10
dateBuilt		date		Y	
timeCompleted		time		Y	
model		text	7	Y	restricted choice: Jazz8, Rock100 and Blues55
testPassed		Boolean		Y	
employeeNumber	FK	number		Y	existing employeeNumber from Employee table

Entity: Club					
Attribute name	**Key**	**Type**	**Size**	**Required**	**Validation**
clubName	PK	text	20	Y	length <= 20
street		text	40	Y	length <= 40
postcode		text	8	Y	length <= 8
formed		date		Y	
league		number		Y	Restricted choice: 1,2,3

Entity: Player					
Attribute name	**Key**	**Type**	**Size**	**Required**	**Validation**
forename		text	20	Y	
surname		text	30	Y	
registration	PK	number		Y	Range: >= 100000 and <= 999999
clubName	FK	text	20	Y	Existing clubName from Club table
mobileNo		text	12	Y	length = 12
dateOfBirth		date		Y	
position		text	10	Y	Restricted choice: Striker, Midfielder, Defender, Goalkeeper
shirtNumber		number		Y	Range: >= 1 and <= 25