Unit 2 Creating Systems to Manage Information

Level 3 National in Information Technology

January 2021

Activity 2
Marking Guidance and Marked Examples

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Activity 2 – Table Structures and Validation (45 mins)

How examiners must approach marking this activity

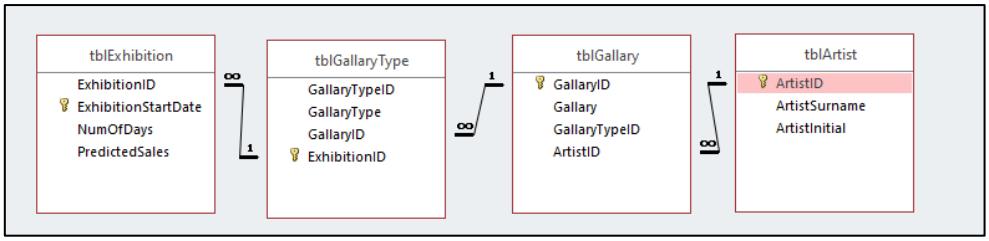
Trait 1	Look for naming conventions and whether fields are sensible • tbl for table • Fields should be consistent either have spaces or do not, camel case etc, so long as consistent. Check ID fields for consistency. ID fields may not match the rest of the fields but must be consistent with each other • If standard naming conventions are used for the tables but the fields are not consistent then cannot get higher than Band 3 for trait 1 • If standard naming conventions are not used for table but fields consistent then cannot get higher than Band 3 for trait 1.
Trait 2	Check against their structure in activity 1. • Primary and foreign keys should match what they had in activity 1. • Band 3 can also be read as "all foreign and most primary". • No activity 1 then check against ERD given in solution.
Trait 3	Look at data types. • NumDays: Number • PredictedSales: Currency • ExhibitionStartDate: Date/Time • Primary keys – any sensible • Foreign keys – much match primary (e.g., AutoNumber primary, Number foreign, Number primary, Number foreign etc.) • **Limited** means **more than two** different datatypes are incorrect.
Trait 4	**Scenario requirements** • Artist's initial must have 1 character and be uppercase • NumDays minimum of 3 and maximum of 10 **Activity/testing requirements** • a record will not save without the artist's surname being present presence check • a record will not save if the artist's initial is not in the correct format format & length check • a record will not save if a gallery is assigned an invalid gallery type table lookup • a record will not save if the exhibition is for an invalid artist table lookup • a record will not save if NumDays below 3 range check • a record will not save if NumDays above 10 range check **Watch out for screenprints that do not show the actual field the validation is applied to.** **Just acceptable for keys** Would need to see name of table and field name (could be written). If you cannot it must only be classed as **Attempted**. **Just acceptable for non-keys** May not see the name of the table but would need to see the name of the field (could be written). If you cannot it must only be classed as **Attempted**.

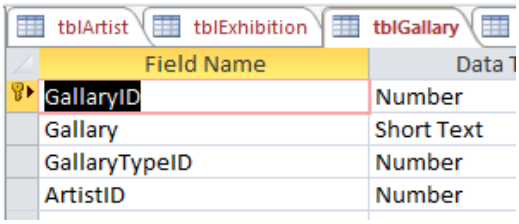
Required - matches scenario, Correct - works but was not asked for in scenario Attempted – had a go but does not work	
Band 1	At least 1 type of validation has been **attempted**
Band 2	All attempted or 2 types of validation are **correct**
Band 3	3 types of validation are **required** checks
Band 4	All are **required** checks

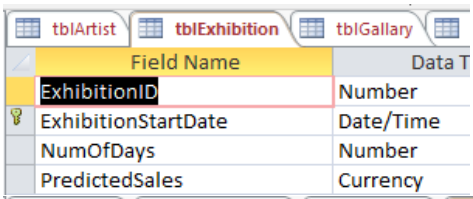
Presence	**Required check -** ArtistSurname - validation rule and suitable validation text
	Correct check - Any other field. Uses either a validation rule (with or without validation text) or Required set to Yes
	Attempted - Validation rule is incorrect
Length	**Required check -** Any field that has a suitable length check
	Attempted - Field size not left at default of 255 but not good
Value lookup or Range	**Required check** • NumDays minimum of 3 and maximum of 10 • Combo box (does not need to have limit to list set to Yes) • Validation rule e.g., Between 3 and 10, with validation text
	Correct check • NumDays minimum of 3 and maximum of 10 • Validation rule with no validation text • May show you in datasheet view rather than design view. If so, need to see ALL the items in it.
	Attempted • NumDays with incorrect range • Combo box in datasheet view but cannot see ALL the items • Any other value lookup – accept "Combo" or "Commercial"
Table lookup Must be from design view	**Required check** • A lookup from any of their foreign keys to their primary keys • Limit to list set to Yes • Row source may be truncated but you should still see the name of the table in the select statement e.g. [tblArtist] • Must be design view
	Correct check • A lookup from any of their foreign keys to their primary keys • Limit to list is No
	Attempted • Table lookup that is invalid e.g., looking up to the key in its own table • Datasheet view where you cannot see enough to be sure it is the right table
Format	**Required check -** Artist's initial e.g., input mask >L or >L;; with a field size of 1
	Correct check - Artist's initial with input mask of >L or >L;;
	Attempted - Format check on any other **TEXT** field

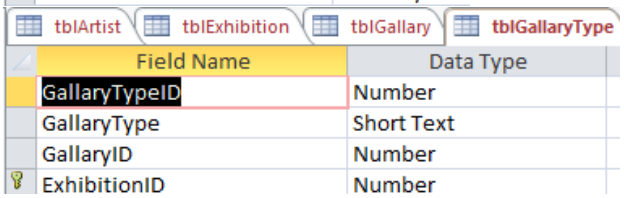
Example A

ERD from activity 1









Trait 1 – Naming conventions

Tables	All tables use the standard tbl and are consistent • Uppercase letter follows tbl. tblGallaryType is using camel case so if this candidate had other tables like that, they would need to be consistent with that.
Fields	All are consistent • All non-key fields are consistent • All key fields are consistent
Band	4

Trait 2 – Primary and foreign keys

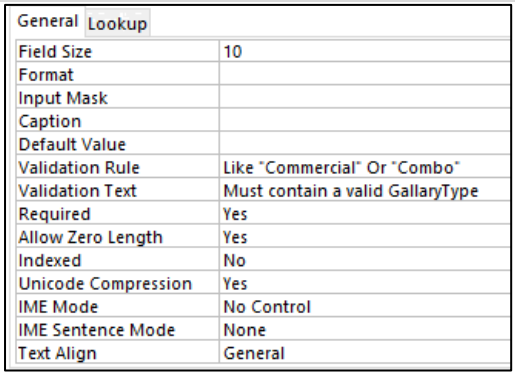
Primary	Primary keys in activity 2 match their primary keys in activity 1
Foreign	Foreign keys in activity 2 match their foreign keys in activity 1
Band	4

Trait 3 – Data types

Keys	Their foreign keys are GallaryTypeID – both Number, GallaryID – both Number, ArtistID – both Number, ExhibitionID – both Number All correct
Date/Time	ExhibitionStartDate is the only field to have Date/Time
Number	NumOfDays is the only field to have number
Currency	Predicted sales is the only currency field
Text	The rest are text
Band	4 All correct

Trait 4 – Validation

Presence check

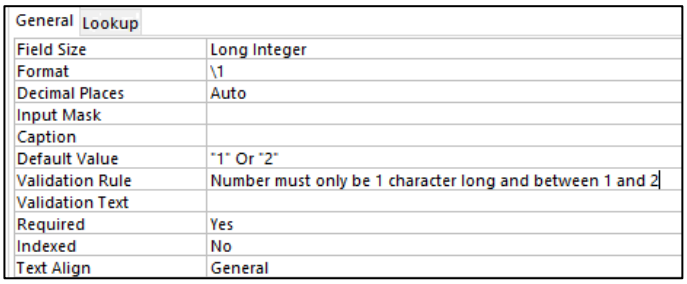


General	Lookup
Field Size	10
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	Like "Commercial" Or "Combo"
Validation Text	Must contain a valid GallaryType
Required	Yes
Allow Zero Length	Yes
Indexed	No
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None
Text Align	General

Cannot see the field name so this must be classed as **Attempted** only. Non key fields you must be able to see the name of the field either in the screenprint or written.

Attempted

Length check



General	Lookup
Field Size	Long Integer
Format	\1
Decimal Places	Auto
Input Mask	
Caption	
Default Value	"1" Or "2"
Validation Rule	Number must only be 1 character long and between 1 and 2
Validation Text	
Required	Yes
Indexed	No
Text Align	General

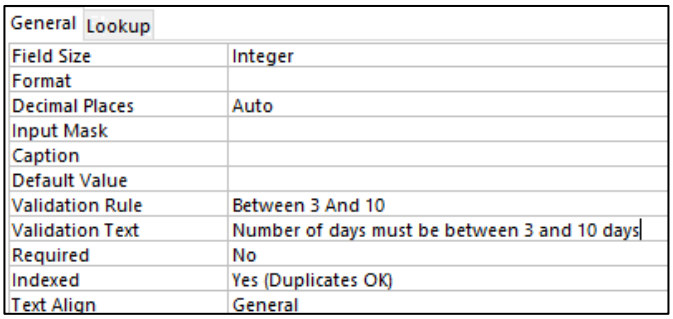
This is not acceptable (not even for attempted).

It is not showing a length check and you cannot see the field it belongs too.

However, a length check can be seen in the presence check above and the ArtistInitial field (next page) so they could have had the Required check. However, they will only achieve **Attempted** as the field name cannot be seen in any of those.

Attempted

Value lookup or range check

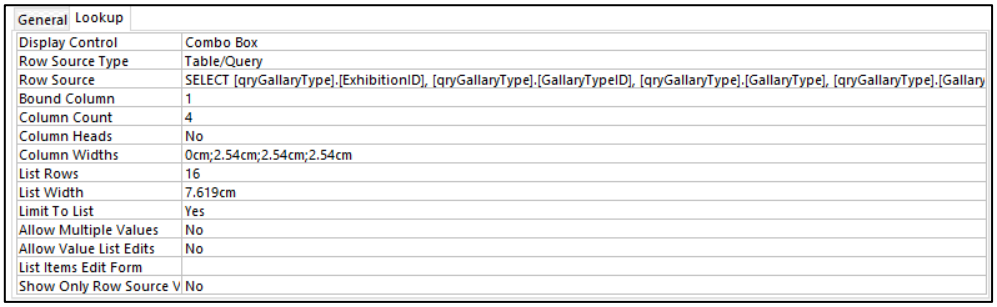


General	Lookup
Field Size	Integer
Format	
Decimal Places	Auto
Input Mask	
Caption	
Default Value	
Validation Rule	Between 3 And 10
Validation Text	Number of days must be between 3 and 10 days
Required	No
Indexed	Yes (Duplicates OK)
Text Align	General

This is showing the correct range and it does have sensible validation text. However, you cannot see the field it belongs to so can only be classed as **Attempted**

Attempted

Table lookup

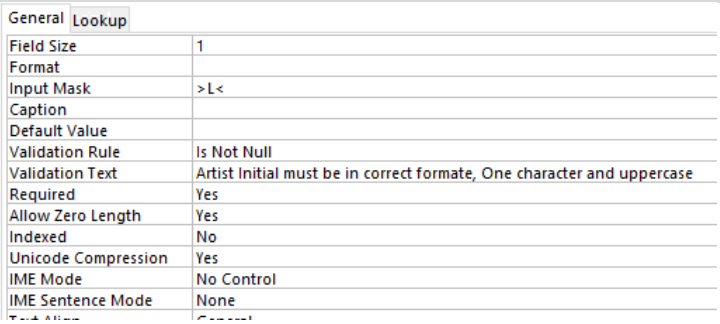


General	Lookup
Display Control	Combo Box
Row Source Type	Table/Query
Row Source	SELECT [qryGallaryType].[ExhibitionID], [qryGallaryType].[GallaryTypeID], [qryGallaryType].[GallaryType], [qryGallaryType].[Gallary
Bound Column	1
Column Count	4
Column Heads	No
Column Widths	0cm;2.54cm;2.54cm;2.54cm
List Rows	16
List Width	7.619cm
Limit To List	Yes
Allow Multiple Values	No
Allow Value List Edits	No
List Items Edit Form	
Show Only Row Source V	No

Attempted

This is not a table lookup – it is looking up to qryGallaryType. Limit to List has been set to Yes but that does not help the situation. Also, you cannot see the **table** nor the **field** it belongs to. For a table lookup you must be able to see both, either in the screenprint or written. This can only be classed as **Attempted**.

Format check



General | Lookup

Field Size	1
Format	
Input Mask	>L<
Caption	
Default Value	
Validation Rule	Is Not Null
Validation Text	Artist Initial must be in correct formate, One character and uppercase
Required	Yes
Allow Zero Length	Yes
Indexed	No
Unicode Compression	Yes
IME Mode	No Control
IME Sentence Mode	None

The name of the field cannot be seen so you cannot determine whether it has been applied to a text field.

Therefore this cannot even be classed as attempted.

Validation check	Attempted	Correct	Required
Presence	✓		
Length	✓		
Value/Range	✓		
Table lookup	✓		
Format			

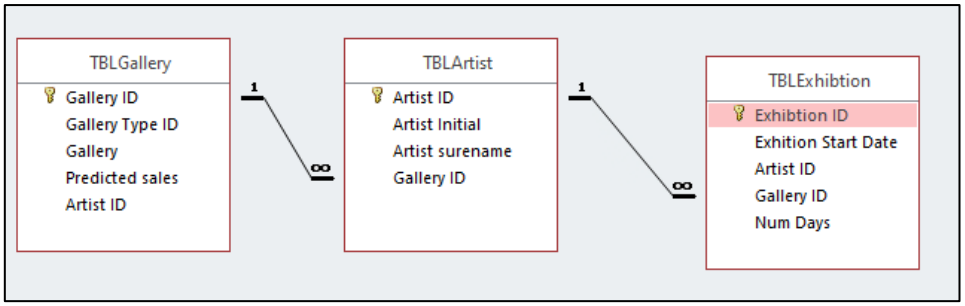
Band: 1

At least one type of validation has been attempted.

Final outcomes											
Trait 1		**Trait 2**		**Trait 3**		**Trait 4**		**Overall**			
Band	4	Band	4	Band	4	Band	1	Band	3	Mark	5

Example B

ERD from Activity 1



Relationships | TBLGallery | TBLExhibtion | TBLArtist

Field Name	Data Type
Gallery ID	Number
Gallery Type ID	Number
Gallery	Short Text
Artist ID	Number
Gallery type	Short Text

Relationships | TBLGallery | TBLExhibtion

Field Name	Data Typ
Artist ID	Number
Artist Initial	Short Text
Artist surename	Short Text
Gallery ID	Number

Relationships | TBLGallery | TBLExhibtion | TBLArtist

Field Name	Data Type
Exhibtion ID	Number
Exhition Start Date	Short Text
Artist ID	Number
Gallery ID	Number
Num Days	Number
Predicted Sales	Currency

Trait 1 – Naming conventions

Tables	All tables use the standard tbl and are consistent • Uppercase TBL followed by consistent Uppercase first initial
Fields	Mix of formats e.g., Gallery type, Artist surename, Artist Initial, Exhibition Start Date.
Band	3

Trait 2 – Primary and foreign keys

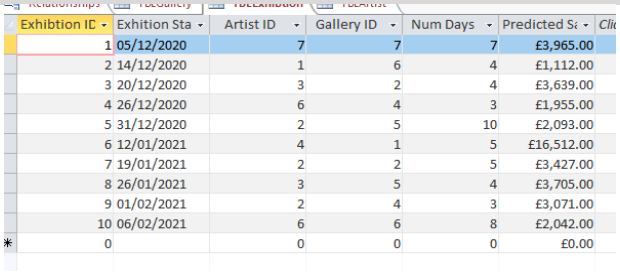
Primary	Primary keys in activity 2 match their primary keys in activity 1
Foreign	Foreign keys in activity 2 match their foreign keys in activity 1
Band	4

Trait 3 – Data types

Keys	All correct
Date/Time	ExhibitionStartDate is not Date/Time – 1 data type error
Number	NumOfDays is the only field to have number
Currency	Predicted sales is the only currency field
Text	The rest are text
Band	One error 3

Trait 4 – Validation

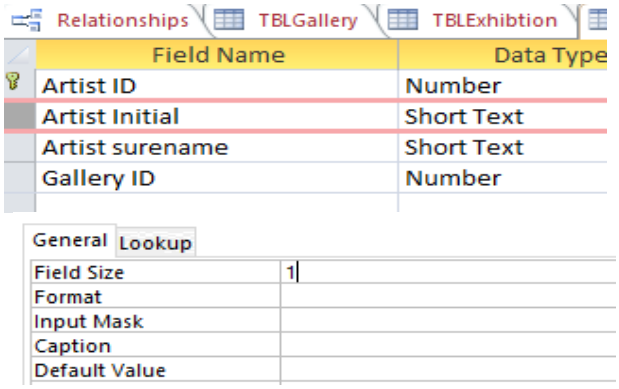
Presence check



Exhibtion ID	Exhition Sta	Artist ID	Gallery ID	Num Days	Predicted Si
1	05/12/2020	7	7	7	£3,965.00
2	14/12/2020	1	6	4	£1,112.00
3	20/12/2020	3	2	4	£3,639.00
4	26/12/2020	6	4	3	£1,955.00
5	31/12/2020	2	5	10	£2,093.00
6	12/01/2021	4	1	5	£16,512.00
7	19/01/2021	2	2	5	£3,427.00
8	26/01/2021	3	5	4	£3,705.00
9	01/02/2021	2	4	3	£3,071.00
10	06/02/2021	6	6	8	£2,042.00
0		0	0	0	£0.00

This is of no relevance
Cannot say attempted

Length check



Relationships | TBLGallery | TBLExhibtion

Field Name	Data Type
Artist ID	Number
Artist Initial	Short Text
Artist surename	Short Text
Gallery ID	Number

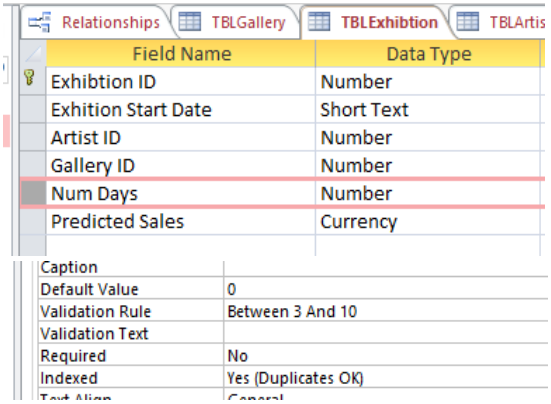
General | Lookup

Field Size	1
Format	
Input Mask	
Caption	
Default Value	

Required

The field size of 1 is suitable for the artist's initial. It is the field specified in the scenario, but any sensible field length can be said to be **Required**.

Value lookup or range check



Relationships | TBLGallery | TBLExhibtion | TBLArtis

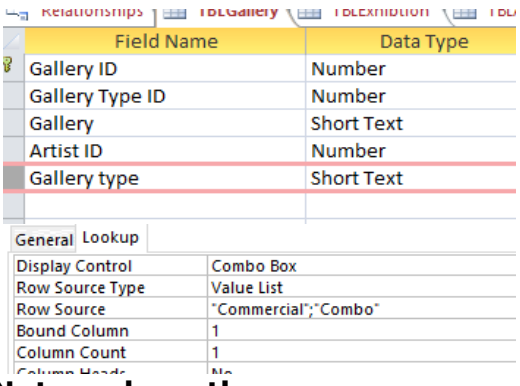
Field Name	Data Type
Exhibtion ID	Number
Exhition Start Date	Short Text
Artist ID	Number
Gallery ID	Number
Num Days	Number
Predicted Sales	Currency

Caption	
Default Value	0
Validation Rule	Between 3 And 10
Validation Text	
Required	No
Indexed	Yes (Duplicates OK)

Correct

This is on the field given in the scenario and it is the correct range. However, there is no validation text. Therefore, it is not fully Required and should be classed as **Correct**.

Table lookup



Field Name	Data Type
Gallery ID	Number
Gallery Type ID	Number
Gallery	Short Text
Artist ID	Number
Gallery type	Short Text

General | Lookup

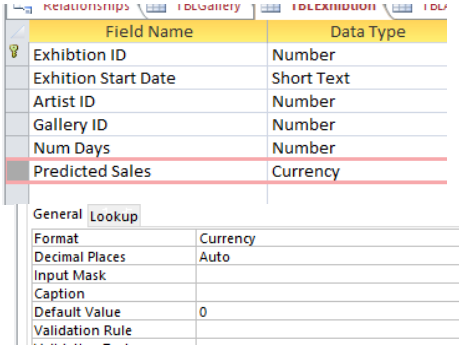
Display Control	Combo Box
Row Source Type	Value List
Row Source	"Commercial";"Combo"
Bound Column	1
Column Count	1

Not markworthy

This is not a table lookup it is a value lookup. If this had been put forward as a value lookup then it could have been said to have been **Attempted**.

As a table lookup it is not markworthy.

Format check



This is not the format check required and is not markworthy.

Validation check	Attempted	Correct	Required
Presence			
Length			✓
Value/Range		✓	
Table lookup			
Format			

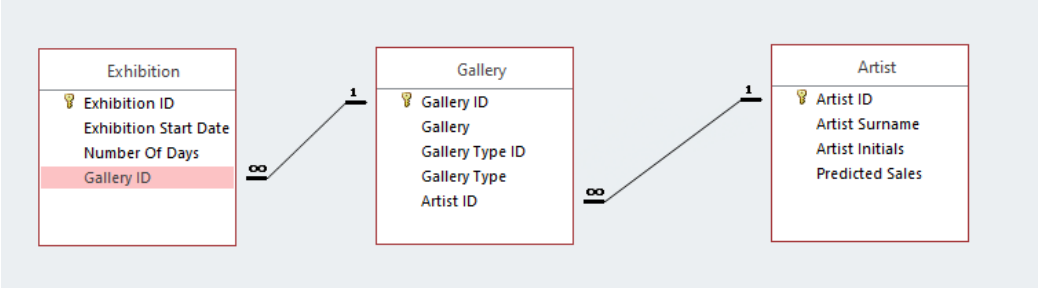
Band: 2

Not enough for band 3 as needs to be 3 Required checks. Need 5 Attempted or 2 Correct for band 2 so meets band 2.

Final outcomes											
Trait 1		**Trait 2**		**Trait 3**		**Trait 4**		**Overall**			
Band	3	Band	4	Band	3	Band	2	Band	3	Mark	6

Example C

ERD from Activity 1



Artist

Field Name	Data Type
Artist ID	Number
Artist Surname	Short Text
Artist Initials	Short Text
Predicted Sales	Currency

Exhibition

Field Name	Data Type
Exhibition ID	Number
Exhibition Start Date	Date/Time
Number Of Days	Number
Gallery ID	Number

Gallery

Field Name	Data Type
Gallery ID	Number
Gallery	Short Text
Gallery Type ID	Number
Gallery Type	Short Text
Artist ID	Number

Trait 1 – Naming conventions

Tables	No standard naming convention has been used for the tables. This will limit trait 1 to a maximum of band 3.
Fields	All are consistent • All non-key fields are consistent • All key fields are consistent
Band	3

Trait 2 – Primary and foreign keys

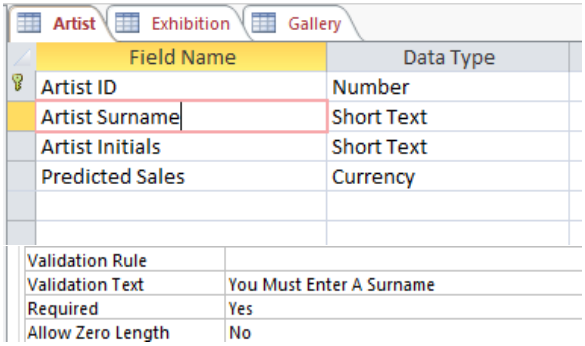
Primary	Primary keys in activity 2 match their primary keys in activity 1
Foreign	Foreign keys in activity 2 match their foreign keys in activity 1
Band	4

Trait 3 – Data types

Keys	All correct
Date/Time	ExhibitionStartDate is the only field to have Date/Time
Number	NumOfDays is the only field to have number
Currency	Predicted sales is the only currency field
Text	The rest are text
Band	4 All correct

Trait 4 – Validation

Presence check

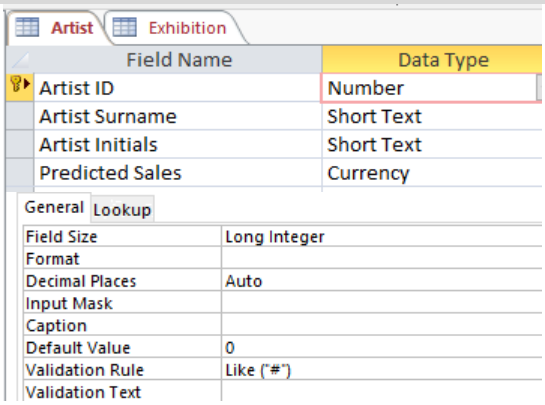


The ArtistSurname is what is given in the scenario. However, the presence check has been achieved by setting Required to Yes. This will not trigger the validation text.

Using Required set to Yes means the check can be classed as **Correct** but not Required.

Correct

Length check

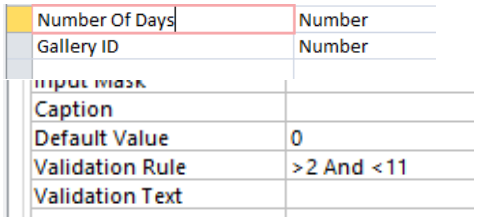


This is not suitable as a length check. It should be on a **text** field only.

None of the other screenprints show any length checks.

This cannot be classed as Attempted.

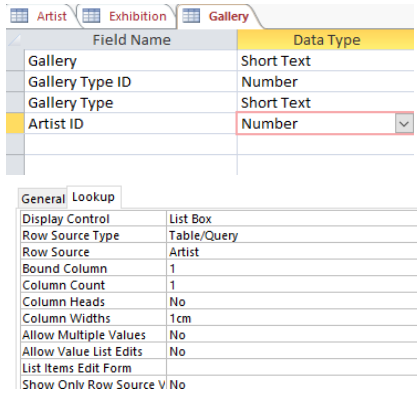
Value lookup or range check



This is on the field given in the scenario and it is the correct range. However, there is no validation text. Therefore, it is not fully Required and should be classed as **Correct**.

Correct

Table lookup



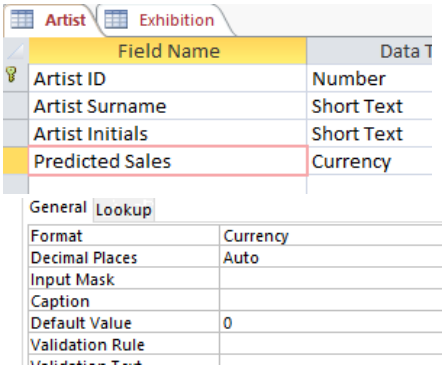
This is a table lookup, and it is looking up from a foreign key to a primary key. Gallery -> Artist.

Accept a list box as being the equivalent of a combo box and there is no need to check for Limit to List.

Therefore, this can be classed as **Required**.

Required

Format check



This is not the format check required and is not markworthy.

Validation check	Attempted	Correct	Required
Presence		✓	
Length			
Value/Range		✓	
Table lookup			✓
Format			

Band: 2

Not enough for band 3 as needs to be 3 Required checks. Need 5 Attempted or 2 Correct for band 2 so meets band 2.

Final outcomes											
Trait 1		**Trait 2**		**Trait 3**		**Trait 4**		**Overall**			
Band	3	Band	4	Band	4	Band	2	Band	3	Mark	6