Unit 2 Creating Systems to Manage Information

Level 3 National in Information Technology

January 2021

Example Solution

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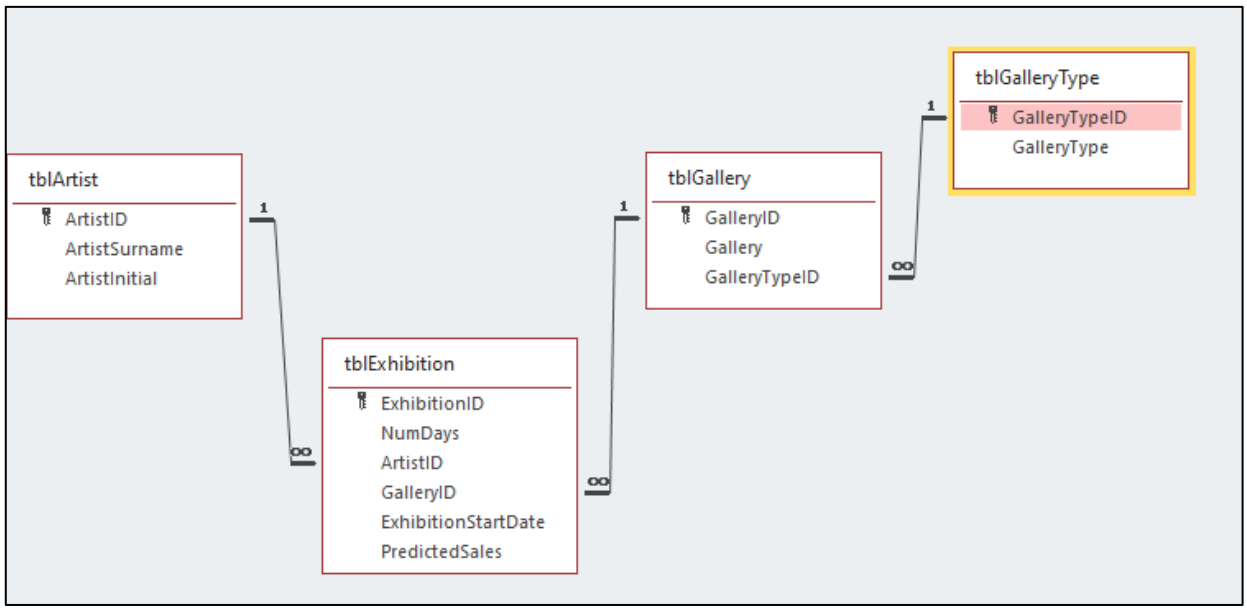
Introduction

The solution must be used alongside the Lead Examiner's report, and the marking guidance document, which contains the guidance the examiners follow the mark the scripts and examples of marked candidate work for each activity. Very few comments/explanations will appear in this document so to fully understand the approach and how to mark the other documents must be considered too.

Part A

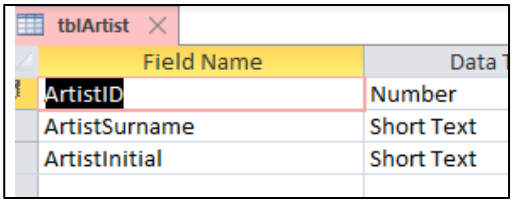
Activity 1 – Database relationships screenprint

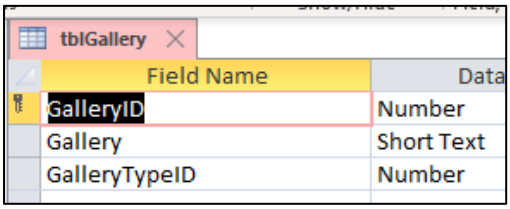
Full marks were achieved.

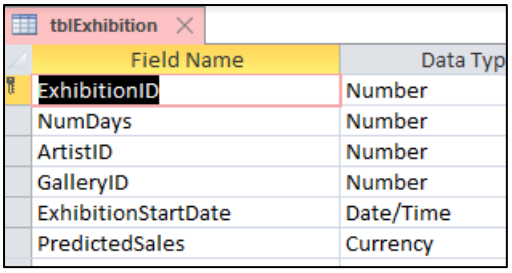


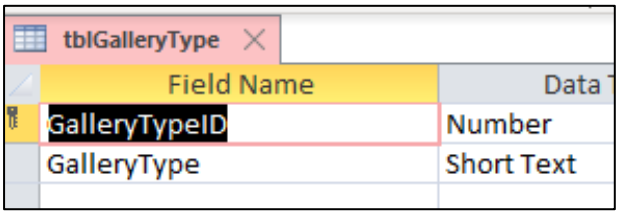
Activity 2 – Table structures

Full marks were achieved.

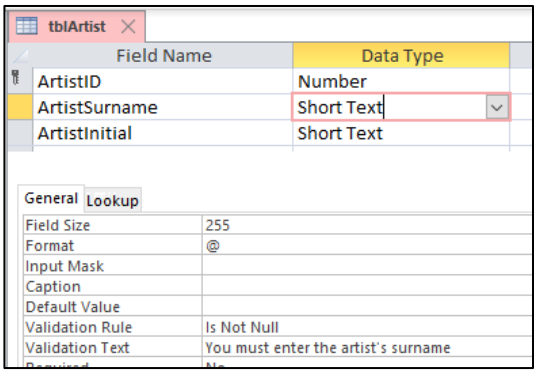




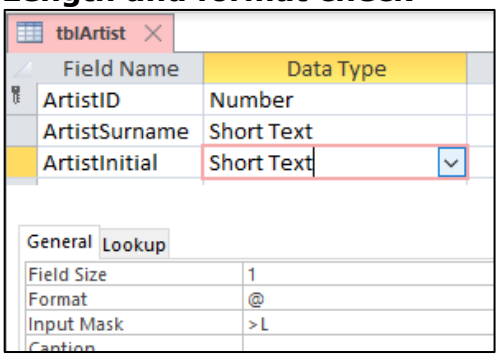




Presence check



Length and format check



Value lookup

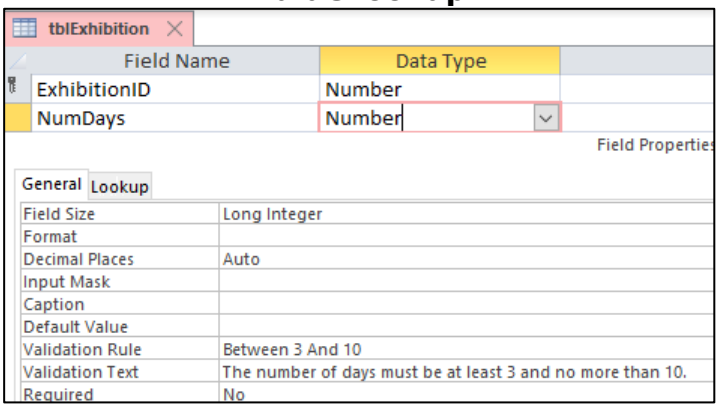
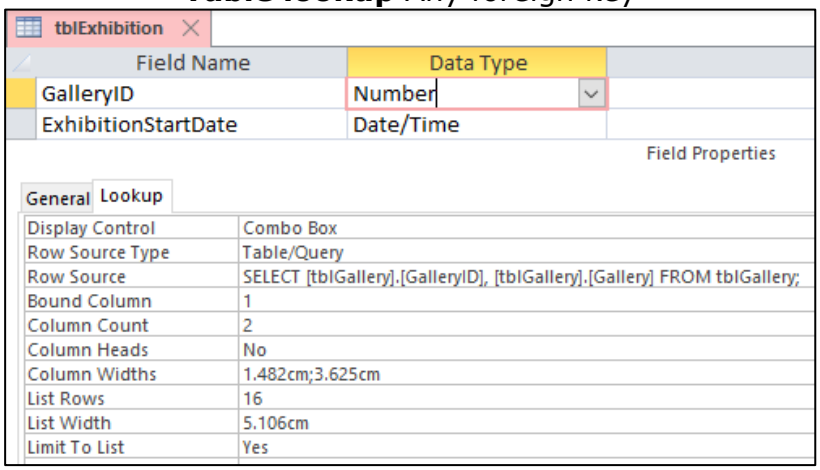


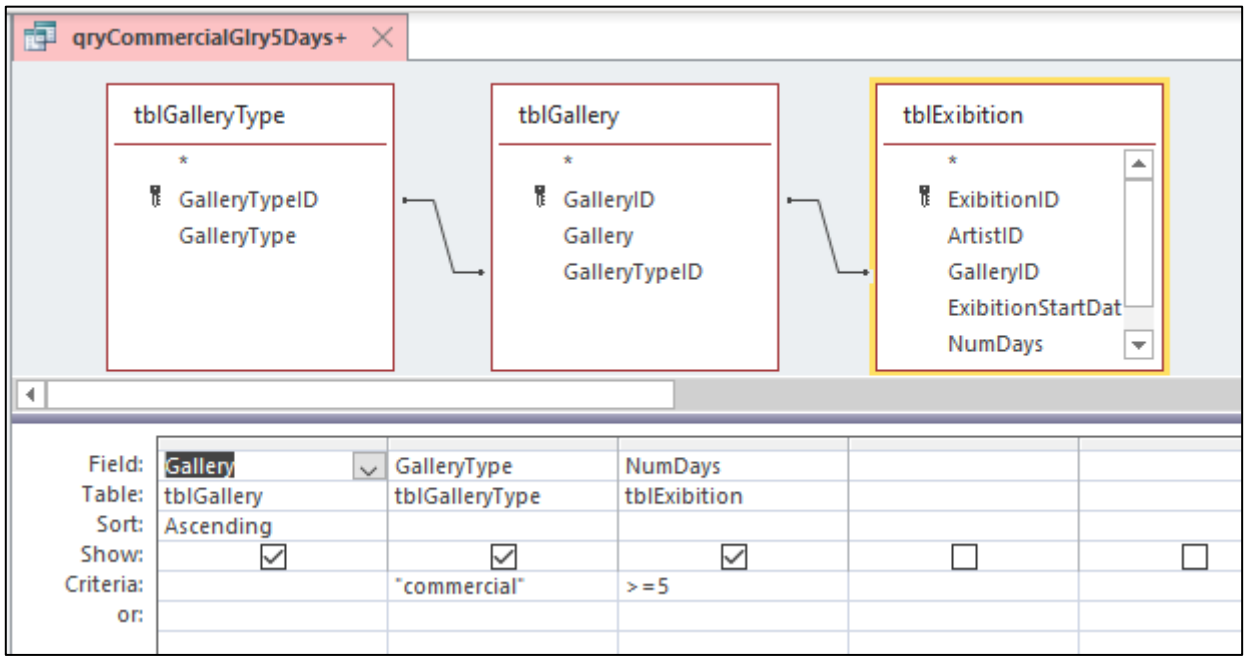
Table lookup Any foreign key

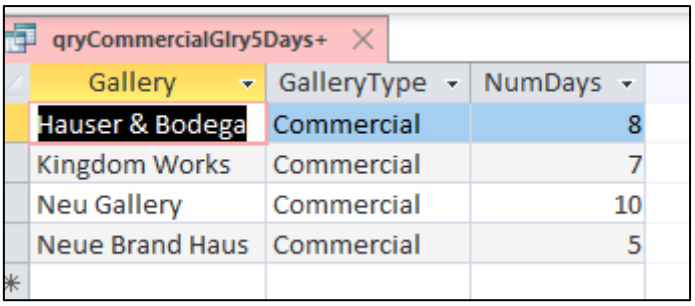


Activity 3 – Queries and report

Full marks were achieved

(a) Create a query to display an alphabetically sorted list of commercial galleries that have exhibitions running for at least five days. It must show the gallery name, gallery type and number of days only.





(b) The gallery earns commission for every piece of art sold:

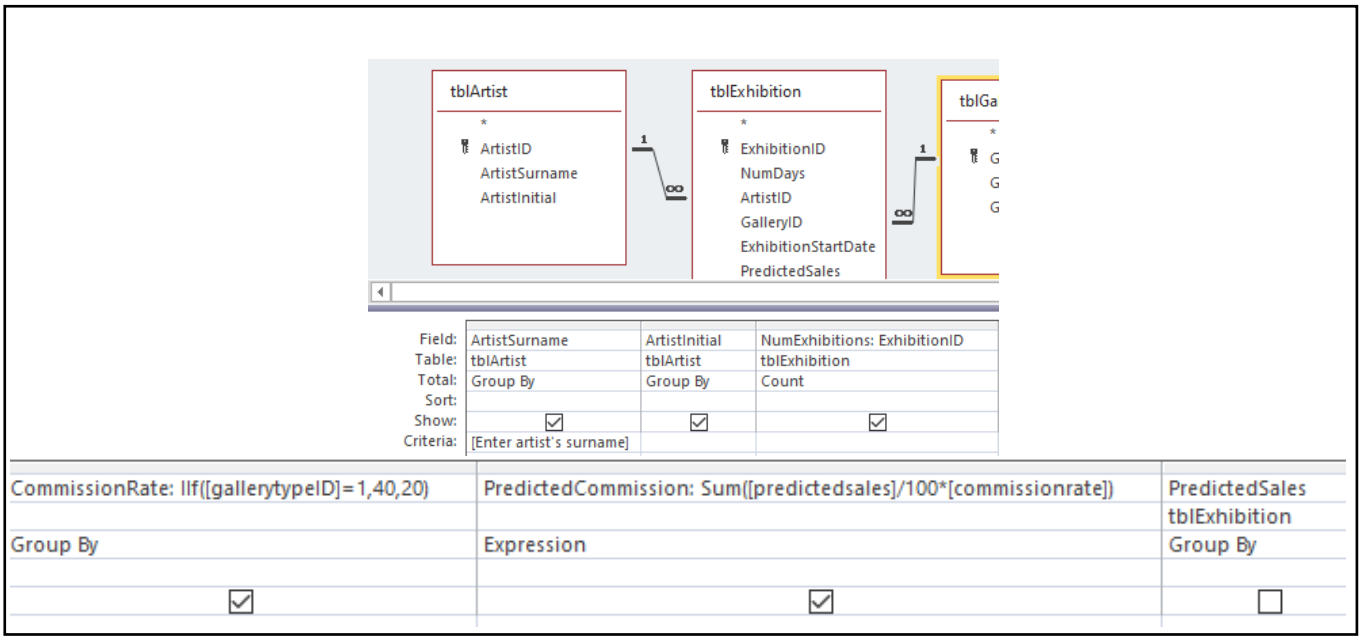
- the basic commercial commission rate is 40%
- the basic combo rate is 20%

Create a query that will allow the user to enter a parameter value for an artist's surname when run. Calculate the:

- number of exhibitions
- predicted commission Smart Art will receive.

Display:

- the artist's surname
- the artist's initial
- the commission rate
- the predicted commission



qry(b)

ArtistSurname	ArtistInitial	CommissionRate	PredictedCommission
Andreasson	Q	40	£444.80

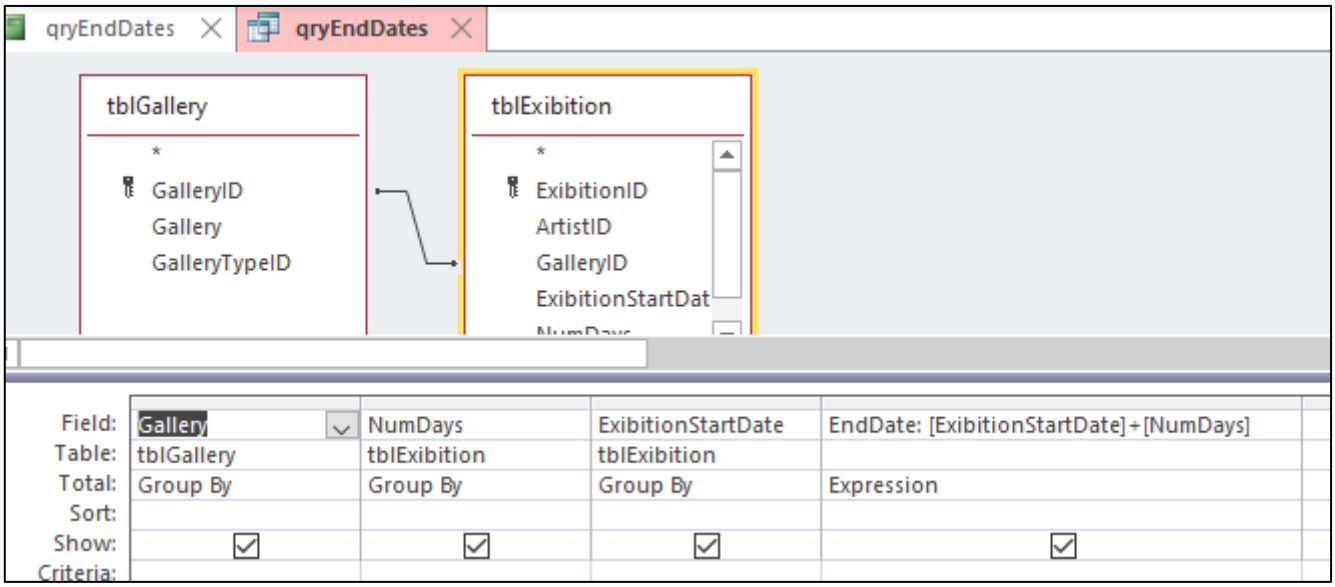
(c)Report – Create a report that shows a list of galleries and their exhibitions.

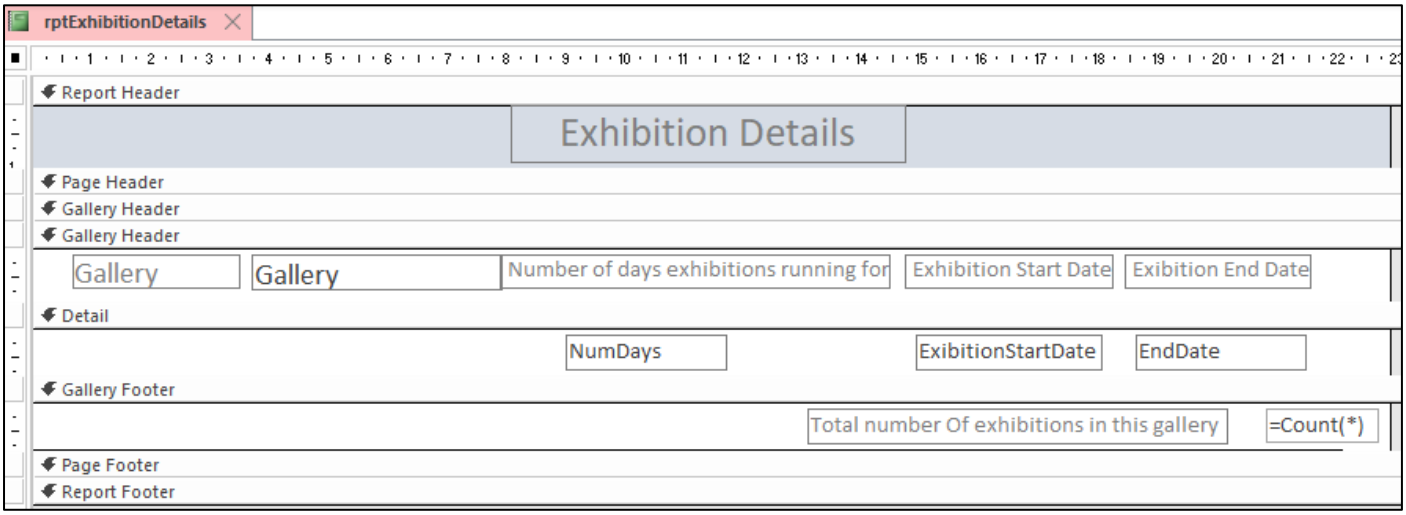
For each gallery calculate:

- the end date for each exhibition
- the total number of exhibitions
- the total number of days that exhibitions will run

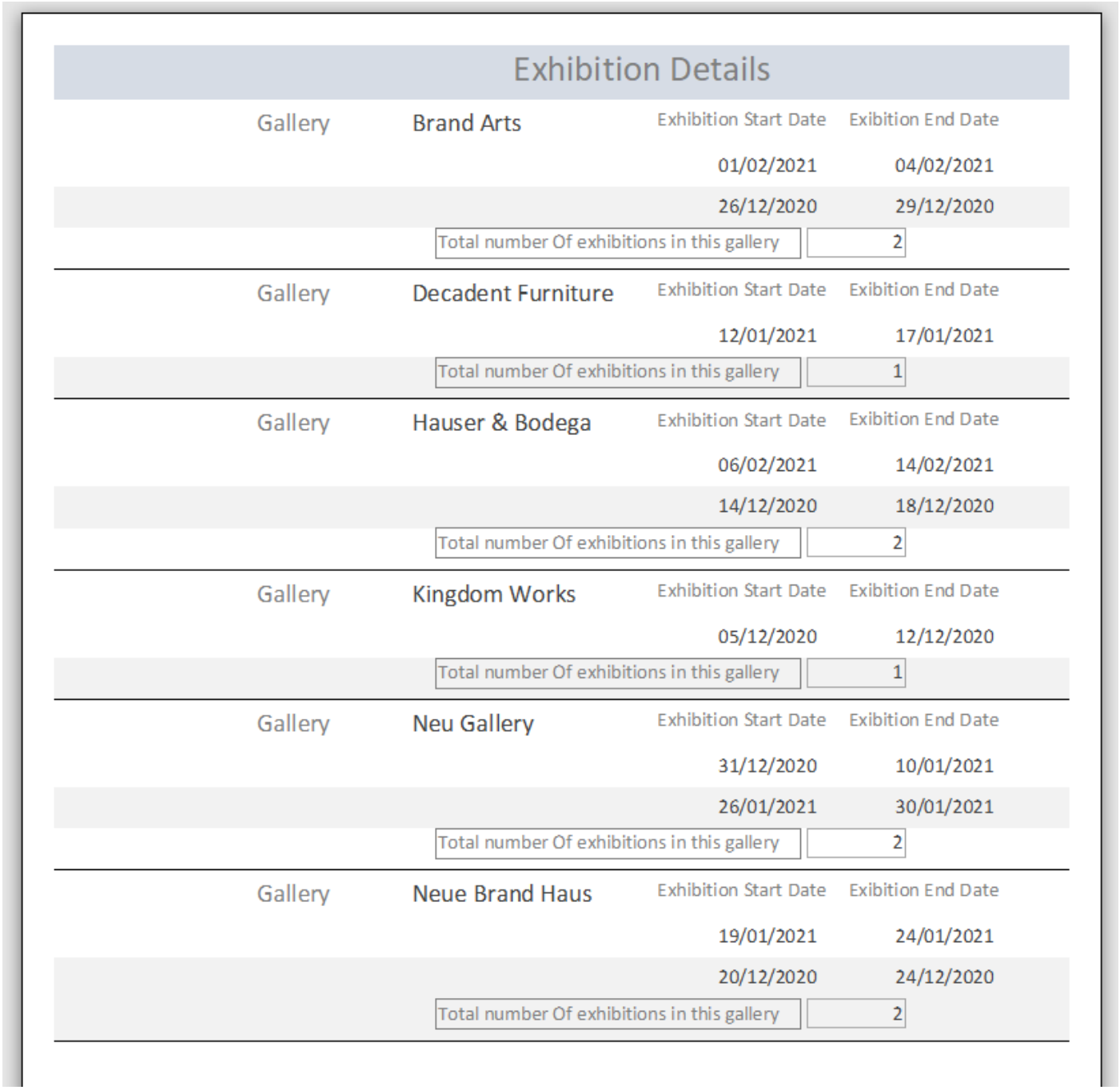
Display:

- a suitable report title
- the start date for each exhibition
- the end date for each exhibition
- the total number of exhibitions for each gallery
- the total number of days that exhibitions will run in each gallery





NOTE: The report is for illustration purposes only. There needs to be a pdf copy of the database report.

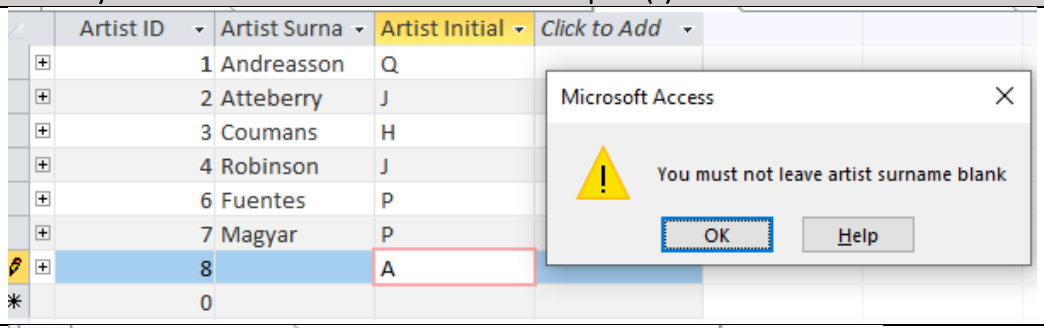
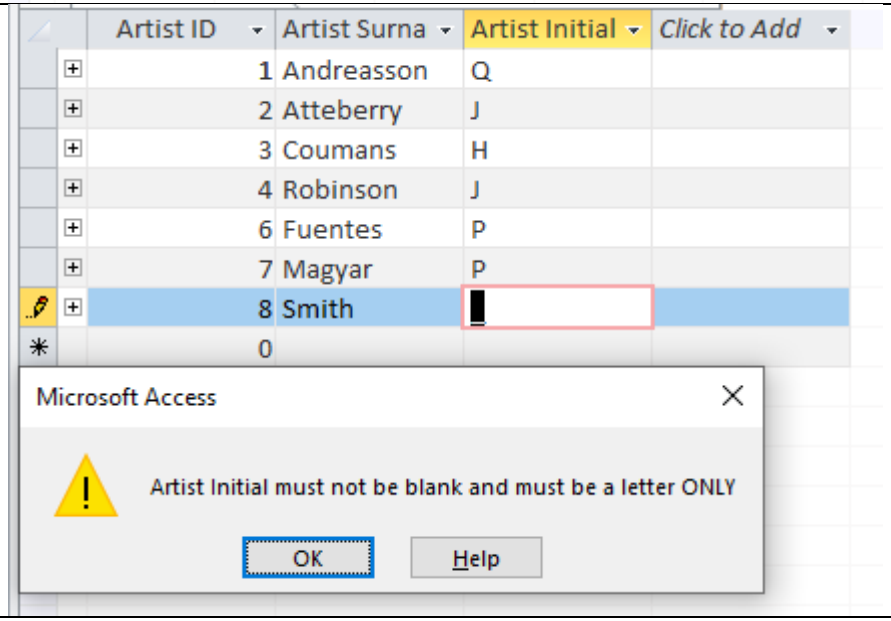


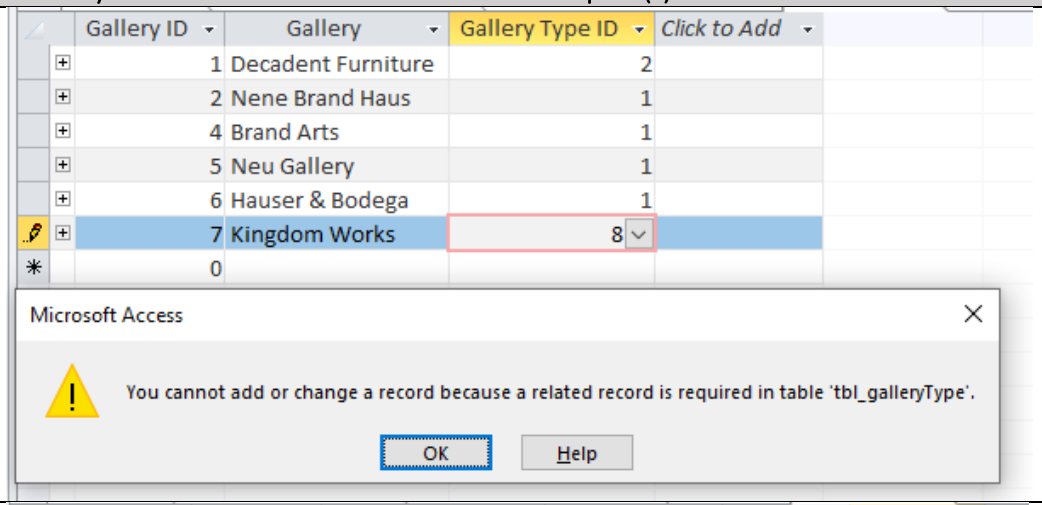
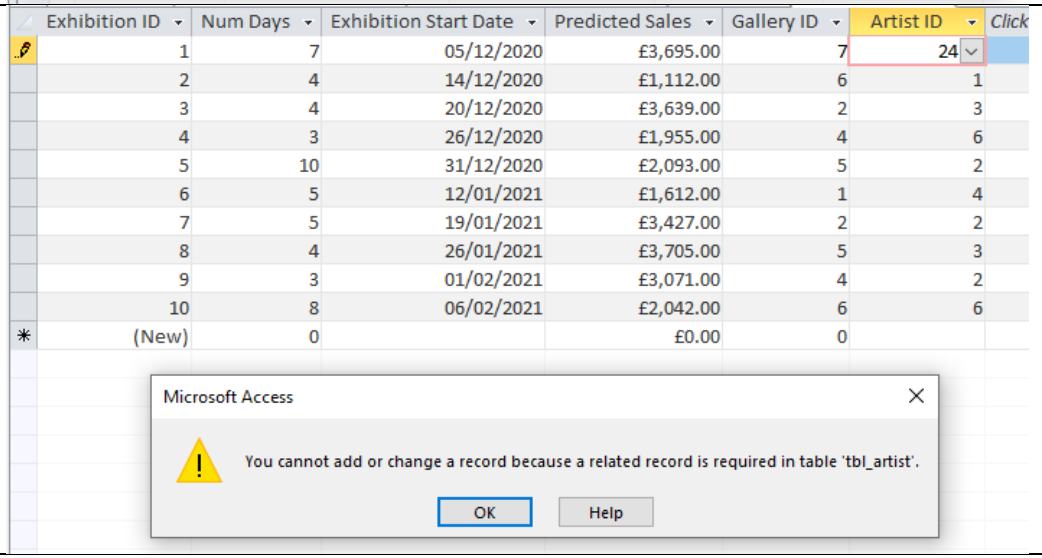
Exhibition Details

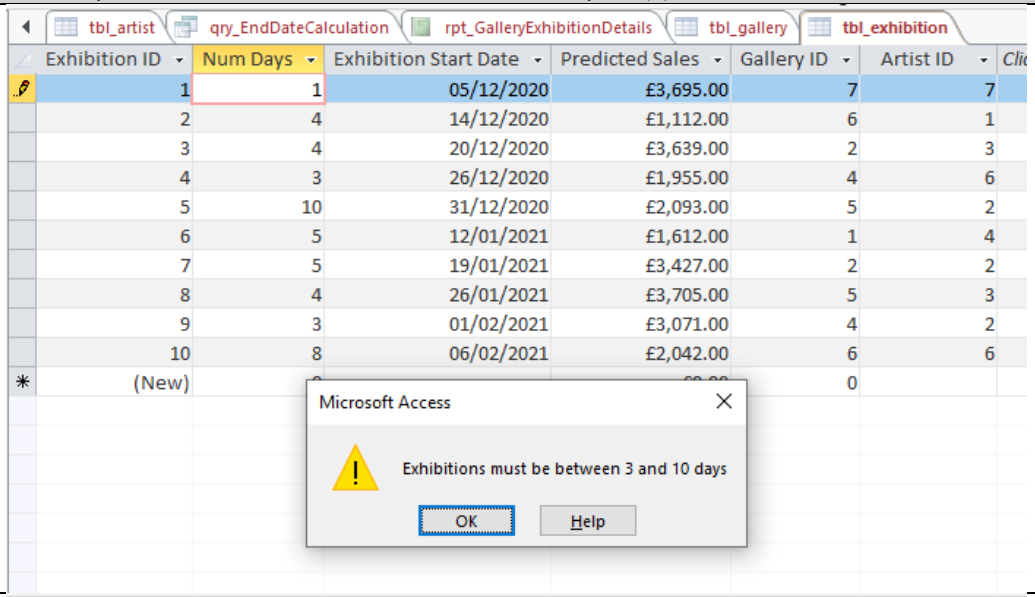
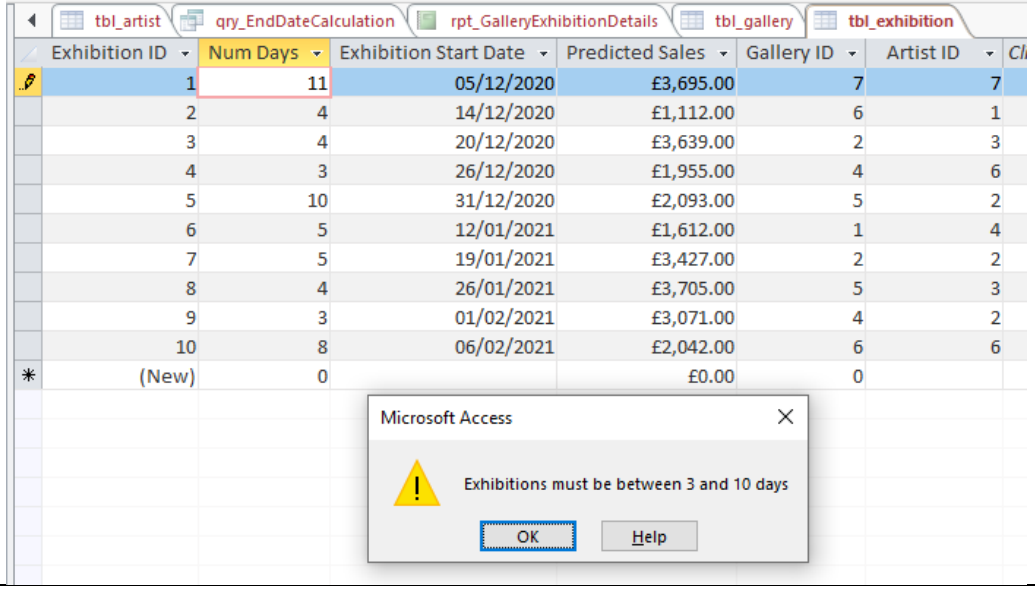
Gallery	Exhibition Start Date	Exibition End Date
Brand Arts	01/02/2021	04/02/2021
	26/12/2020	29/12/2020
Total number Of exhibitions in this gallery	2	
Gallery	Exhibition Start Date	Exibition End Date
Decadent Furniture	12/01/2021	17/01/2021
Total number Of exhibitions in this gallery	1	
Gallery	Exhibition Start Date	Exibition End Date
Hauser & Bodega	06/02/2021	14/02/2021
	14/12/2020	18/12/2020
Total number Of exhibitions in this gallery	2	
Gallery	Exhibition Start Date	Exibition End Date
Kingdom Works	05/12/2020	12/12/2020
Total number Of exhibitions in this gallery	1	
Gallery	Exhibition Start Date	Exibition End Date
Neu Gallery	31/12/2020	10/01/2021
	26/01/2021	30/01/2021
Total number Of exhibitions in this gallery	2	
Gallery	Exhibition Start Date	Exibition End Date
Neue Brand Haus	19/01/2021	24/01/2021
	20/12/2020	24/12/2020
Total number Of exhibitions in this gallery	2	

Activity 4 – Structure testing

NOTE: The type of test and error column have been removed so that the contents fit better on the screen. NOTE there are slight weaknesses in tests 2, 3 and 4 in that the candidate has not said what the error messages will be. There was still enough evidence for full marks.

Test No	Test data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)
1	Artist ID:8 Artist Surname: Artist Initial: A	An error should pop up informing the use that they must not leave the artist surname blank	
2	Artist ID:8 Artist Surname: Smith Artist Initial:	If the user presses anything other than a letter than it should not allow the user to enter any data, it should also not allow the user to write in any more than two letters. If the user attempts to enter the data without having a put a letter in, an error message will appear. The field will also automatically make any lower-case letters capital letters	

Test No	Test data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)
3	Gallery ID: 7 Gallery: Kingdom Works Gallery Type ID: 8	When the user presses enter, an error message will appear, and they will not be able to save their record as there is no gallery type with the ID 8	
4	Exhibition ID: 1 Num Days: 7 Exhibition Start Date: 05/12/2020 Predicted Sales: £3695 Gallery ID: 7 Artist ID: 24	When the user presses enter, an error message will appear, and they will not be able to save their record as there is no artist with the ID 24	

Test No	Test data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)
5	Exhibition ID: 1 Num Days: 1 Exhibition Start Date: 05/12/2020 Predicted Sales: £3695 Gallery ID: 7 Artist ID: 7	An error message will appear, informing the user that their number must be between 3 and 10	
6	Exhibition ID: 1 Num Days: 11 Exhibition Start Date: 05/12/2020 Predicted Sales: £3695 Gallery ID: 7 Artist ID: 7	An error message will appear, informing the user that their number must be between 3 and 10	

Part B

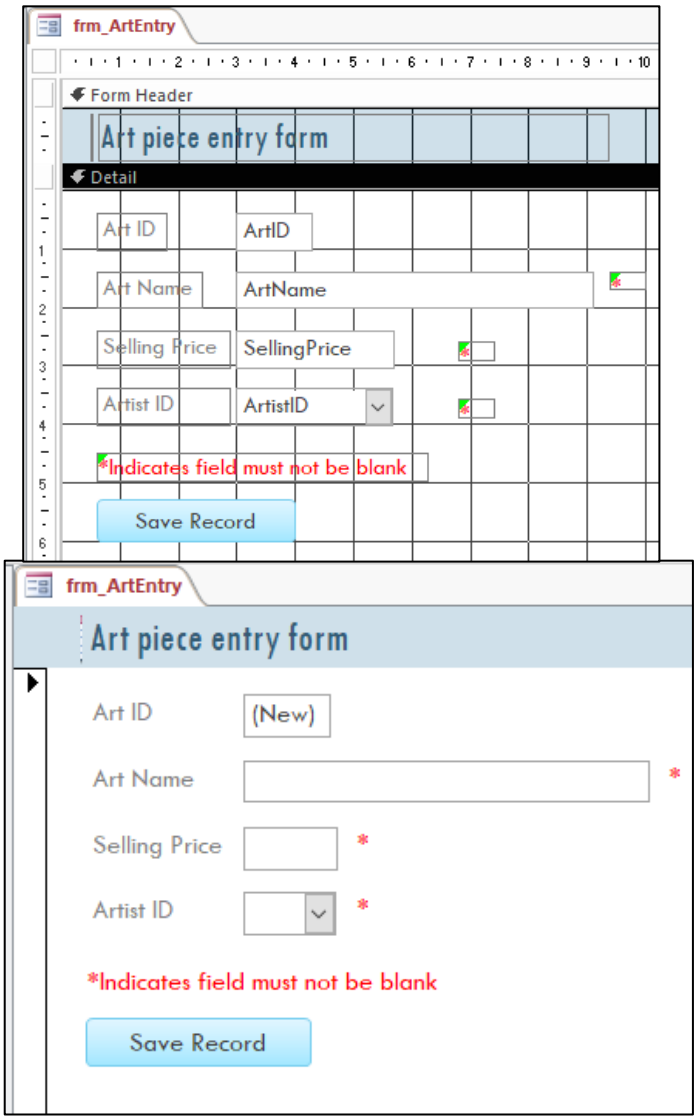
Activity 6 – Interface and functionality

Artist form

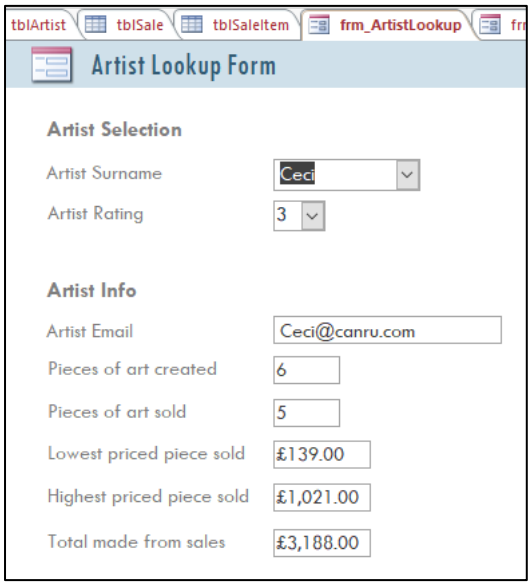
Slight weakness in that the Art ID has not been disabled. This did not stop the candidate achieving full marks in this activity.

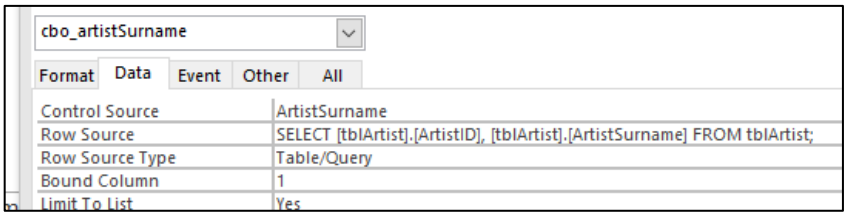
frm_ArtEntry | frm_ArtEntry : btn_save : On Click

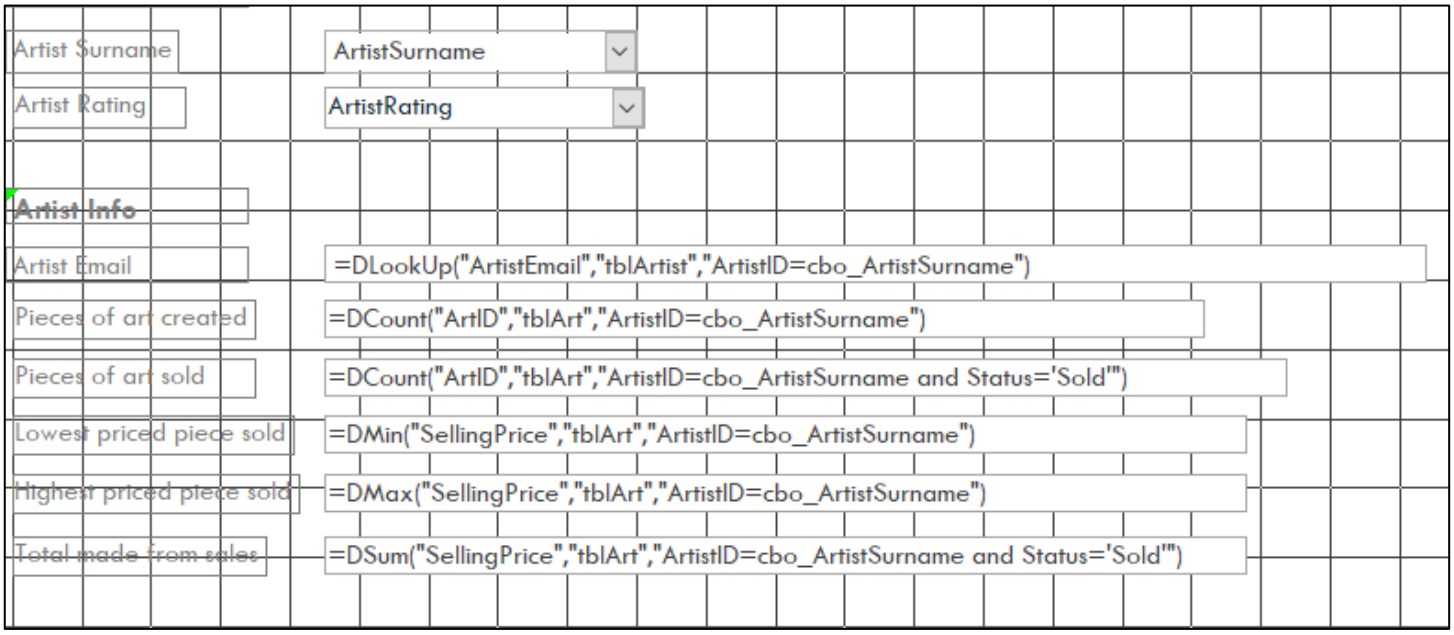
```
If [txt_ArtName] Is Null Then
    MessageBox
        Message  Art name must not be blank
        Beep  Yes
        Type  Critical
        Title  Error
Else If [txt_SellingPrice] Not Between 100 And 2000 Then
    MessageBox
        Message  Selling price must be between £100 and £2000
        Beep  Yes
        Type  Critical
        Title  Error!
Else If [txt_SellingPrice] Is Null Then
    MessageBox
        Message  Selling price must not be left blank
        Beep  Yes
        Type  Critical
        Title  Error!
Else If [cbo_ArtistID] Is Null Then
    MessageBox
        Message  You must select a valid artist from the list
        Beep  Yes
        Type  Critical
        Title  Error!
Else
    RunMenuCommand
        Command  SaveRecord
    MessageBox
        Message  Your data has been saved
        Beep  Yes
        Type  Information
        Title  Success
    Requery
        Control Name
End If
```



Sales analysis and artist rating form

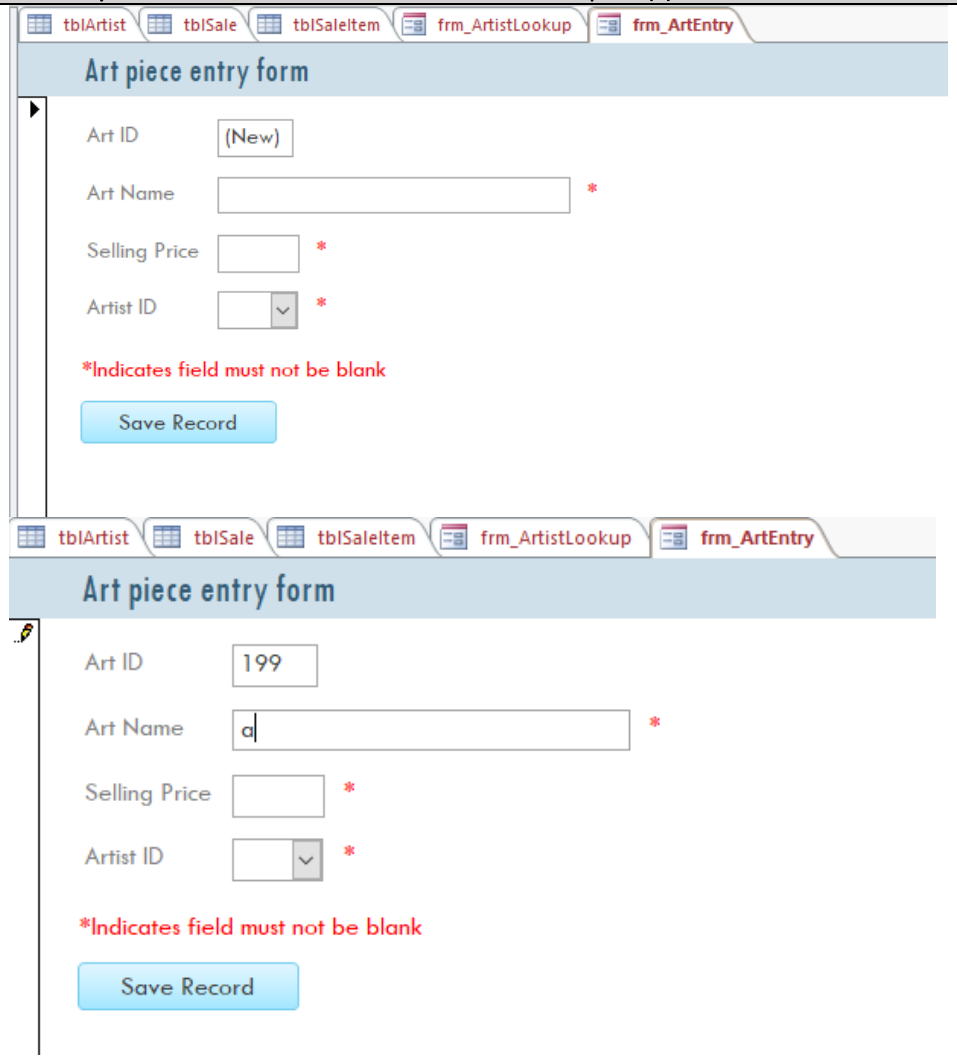


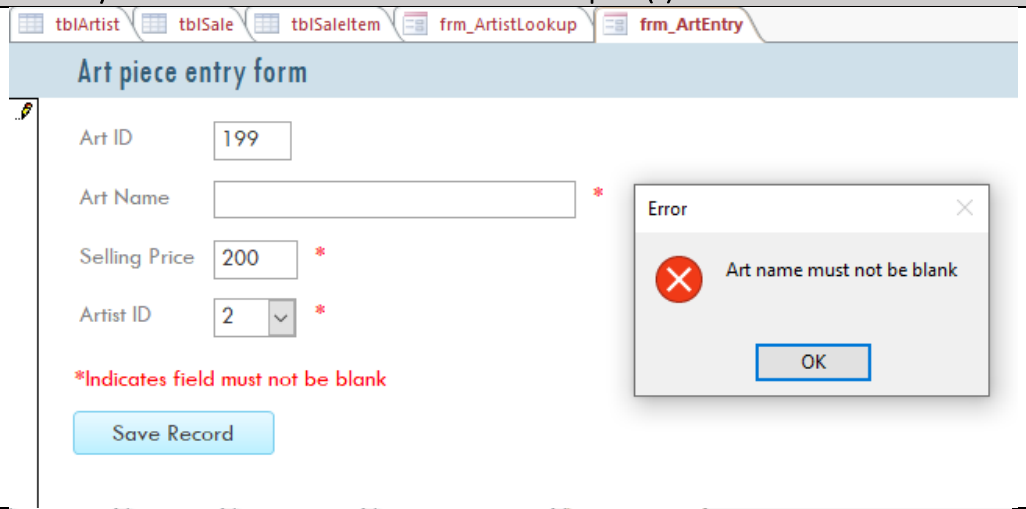
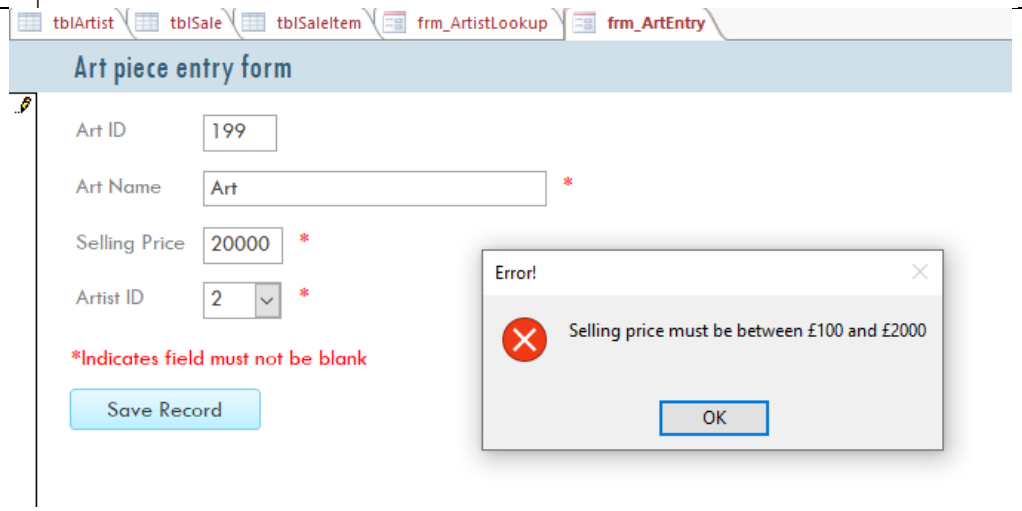


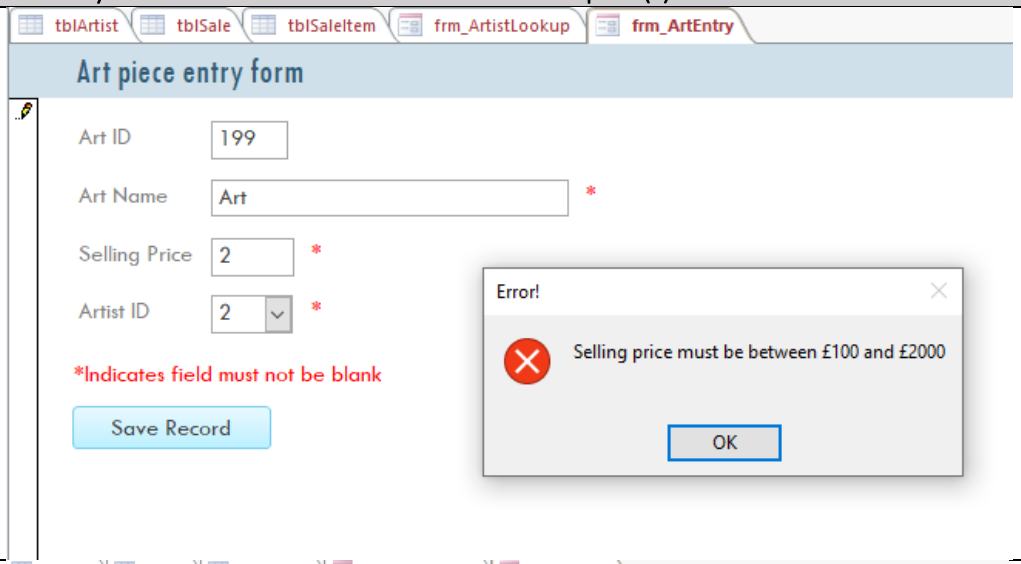
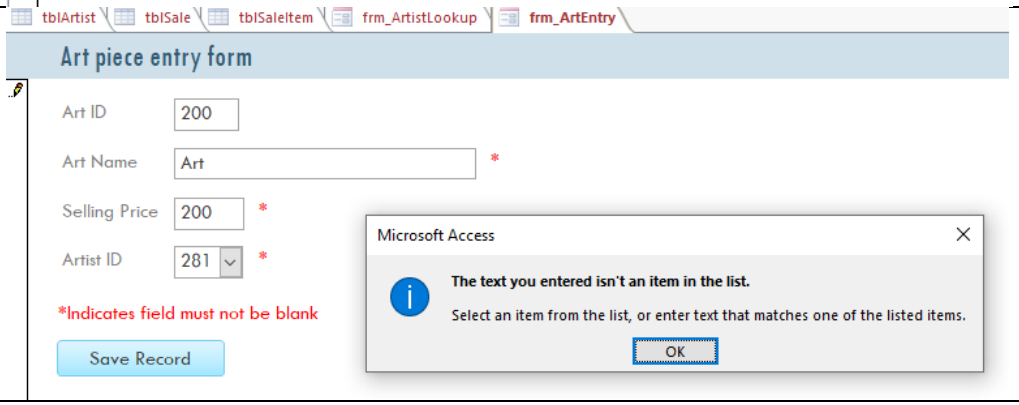


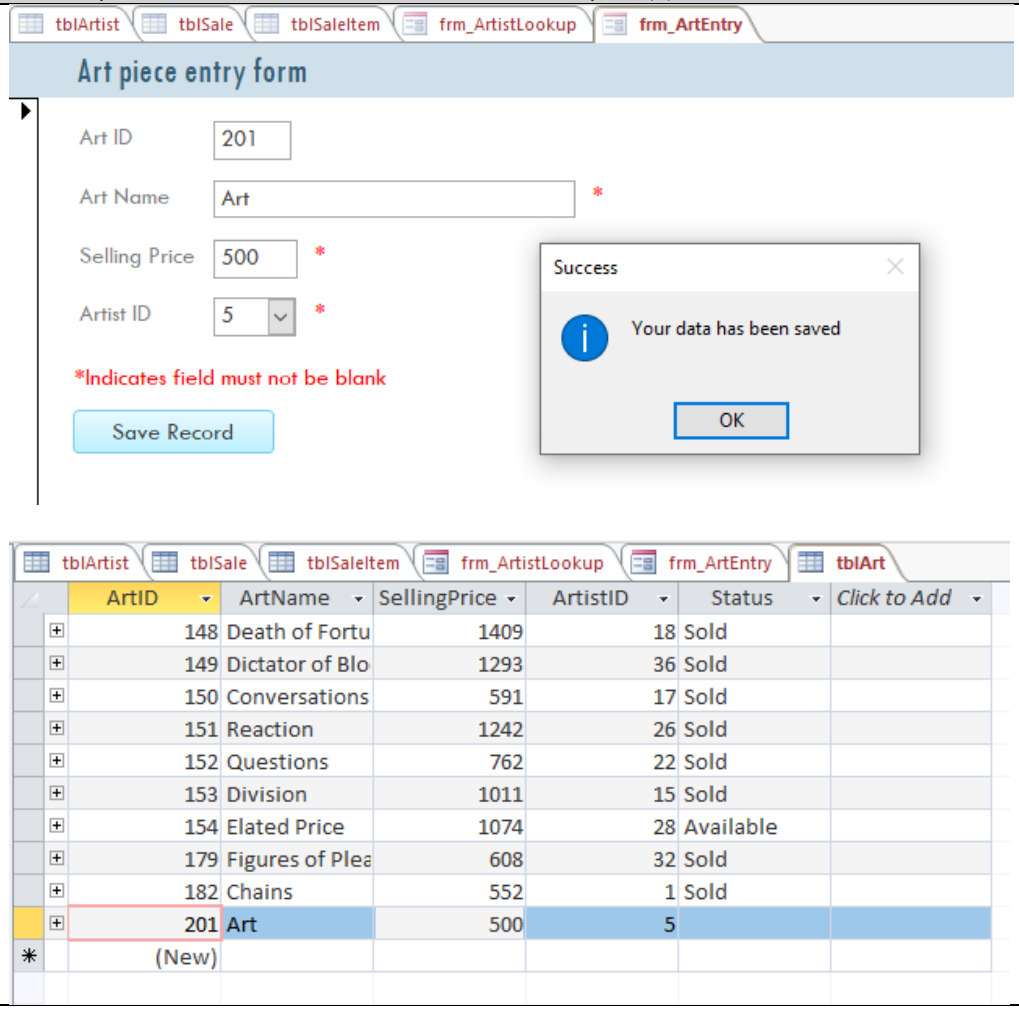
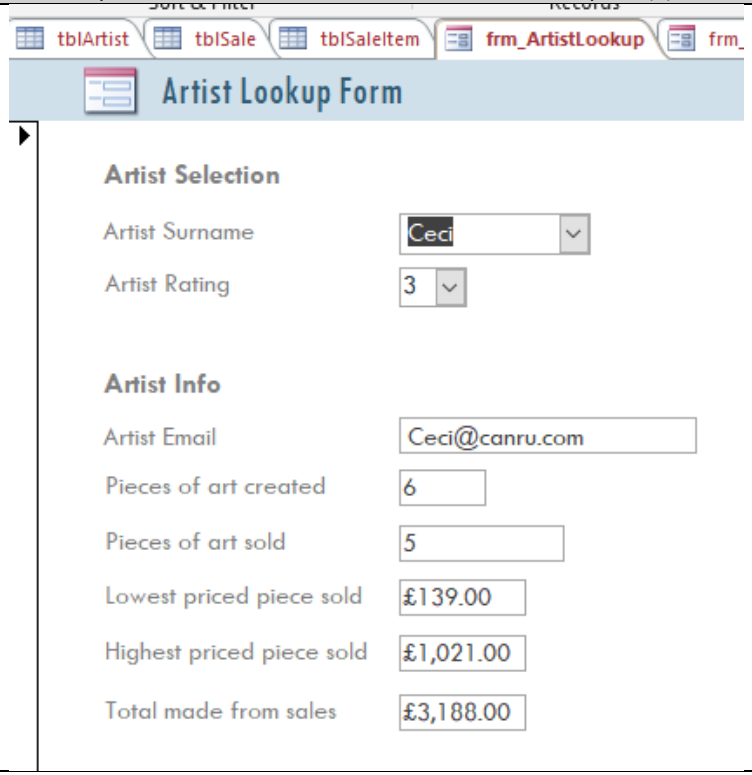
Activity 7 – Interface and functionality testing

NOTE: The type of test and error column have been removed so that the contents fit better on the screen. There is a slight weakness in test 5 in that the candidate has not said what the error message will be and a slight weakness in test 7 in that the candidate has not indicated what values should be in the fields that are automatically generated. There was still enough evidence to award full marks.

Test No	Test data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)
1	Art ID: Art Name: a Selling Price: Artist ID:	As the form has just been opened, it should be blank, and the art ID should have (New) in it to show that it is ready for data entry. When I enter any information in any art name, or selling price, or artist ID, the ART ID should change to a number	

Test No	Test data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)
2	Art ID: 199 Art Name: Selling Price: 200 Artist ID: 2	An error message should display, informing the user that they cannot leave the art name field blank. The record will not save	
3	Art ID: 199 Art Name: Art Selling Price: 20000 Artist ID: 2	An error message should display, informing the user that the selling price will not be accepted as it is higher than the range it's required to fall in. The record will not save	

Test No	Test data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)
4	Art ID: 199 Art Name: Art Selling Price: 2 Artist ID: 2	An error message should display, informing the user that the selling price will not be accepted as it is lower than the range it's required to fall in. The record will not save	
5	Art ID: 200 Art Name: Art Selling Price: 200 Artist ID: 281	There is not artist with the ID 281, therefore an error will be displayed when attempting to select this artist number	

Test No	Test data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)
6	Art ID: 201 Art Name: Art Selling Price: 500 Artist ID: 5	A message should appear informing the user that their data has been saved. An entry will be added to the art table with the corresponding information.	

Test No	Test data	Expected results	Add screenprint(s) of the results of this test (and any retests) Ensure you show the test data used in the screenprint(s)
7	Artist Surname: Ceci Artist Rating: 3	Once the artist surname and artist rating are entered, all of the artist information should be filled in automatically with the correct information.