APPLIED INFORMATION & COMMUNICATION TECHNOLOGY   **9713/02**

Paper 2 Practical Test A   **March 2017**

MARK SCHEME

Maximum Mark: 120

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the March 2017 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

Evidence document

Calculated date

=DATE function used	1 mark
Correct syntax (Year,Month,Day)	1 mark

Dive Table created

Correct table name	1 mark
Dive_No	1 mark
Alphanumeric	1 mark
Set as Primary key	1 mark
Date as a Date field	1 mark
Day, Month and Year fields not imported	1 mark
Site_ID as alphanumeric/text	1 mark
Boat as Alphanumeric/Text	1 mark
Lead_Diver as Alphanumeric/Text	1 mark
Cust, Customers, Customer, No_Clients	1 mark
Numeric / Integer	1 mark

`
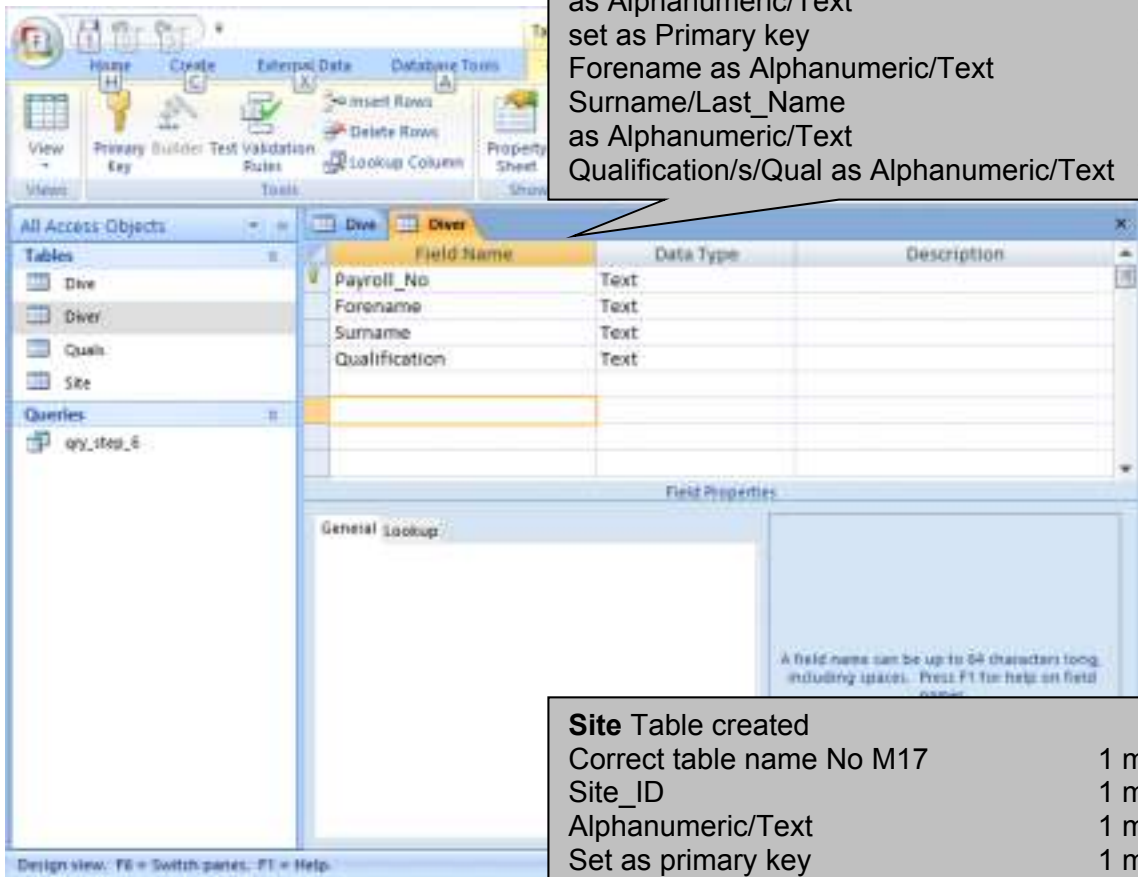
Diver Table created	
Diver Table created	1 mark
Payroll_No	1 mark
as Alphanumeric/Text	1 mark
set as Primary key	1 mark
Forename as Alphanumeric/Text	1 mark
Surname/Last_Name	1 mark
as Alphanumeric/Text	1 mark
Qualification/s/Qual as Alphanumeric/Text	1 mark
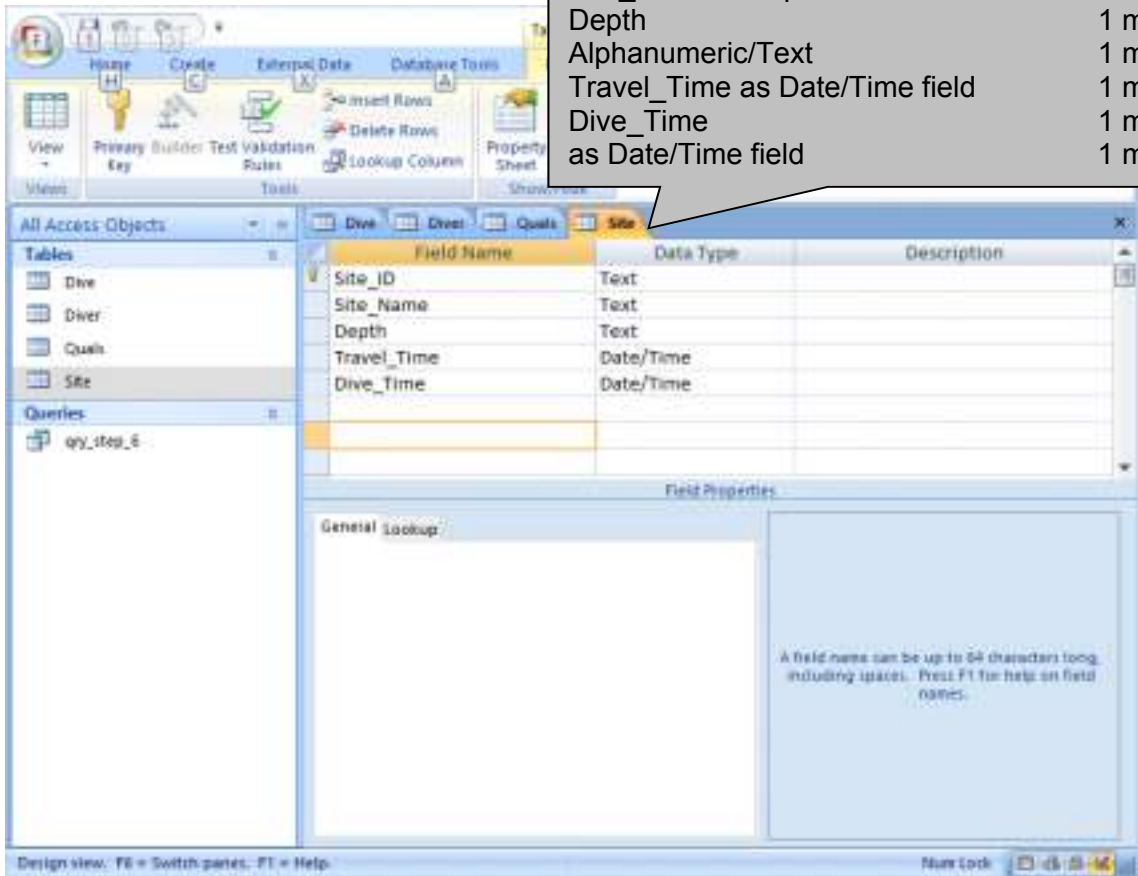
Site Table created	
Site Table created	
Correct table name No M17	1 mark
Site_ID	1 mark
Alphanumeric/Text	1 mark
Set as primary key	1 mark
Site_Name as alphanumeric/Text	1 mark
Depth	1 mark
Alphanumeric/Text	1 mark
Travel_Time as Date/Time field	1 mark
Dive_Time	1 mark
as Date/Time field	1 mark

Quals Table created

Correct table name No J7	1 mark
Q_Code or other appropriate fieldname	1 mark
Alphanumeric/Text	1 mark
Set as primary key	1 mark
Qualification or other appropriate fieldname	1 mark
Alphanumeric/Text	1 mark
Pay_Rate or other appropriate fieldname	1 mark
Numeric / Integer / Currency	1 mark

Correct fields	2 marks
…One-to-many	1 mark

Edit Relationships

Table/Query:	Related Table/Query:	
Diver	Dive	OK
Payroll_No	Lead_Diver	Cancel
		Join Type..

☑ Enforce Referential Integrity

☐ Cascade Update Related Fields

☐ Cascade Delete Related Records

Relationship Type: One-To-Many

Create New..

> Correct fields   2 marks
> …One-to-many   1 mark

Edit Relationships

Table/Query:	Related Table/Query:	
Quals	Diver	OK
Q_Code	Qualification	Cancel
		Join Type..

☐ Enforce Referential Integrity

☐ Cascade Update Related Fields

☐ Cascade Delete Related Records

Relationship Type: One-To-Many

Create New..
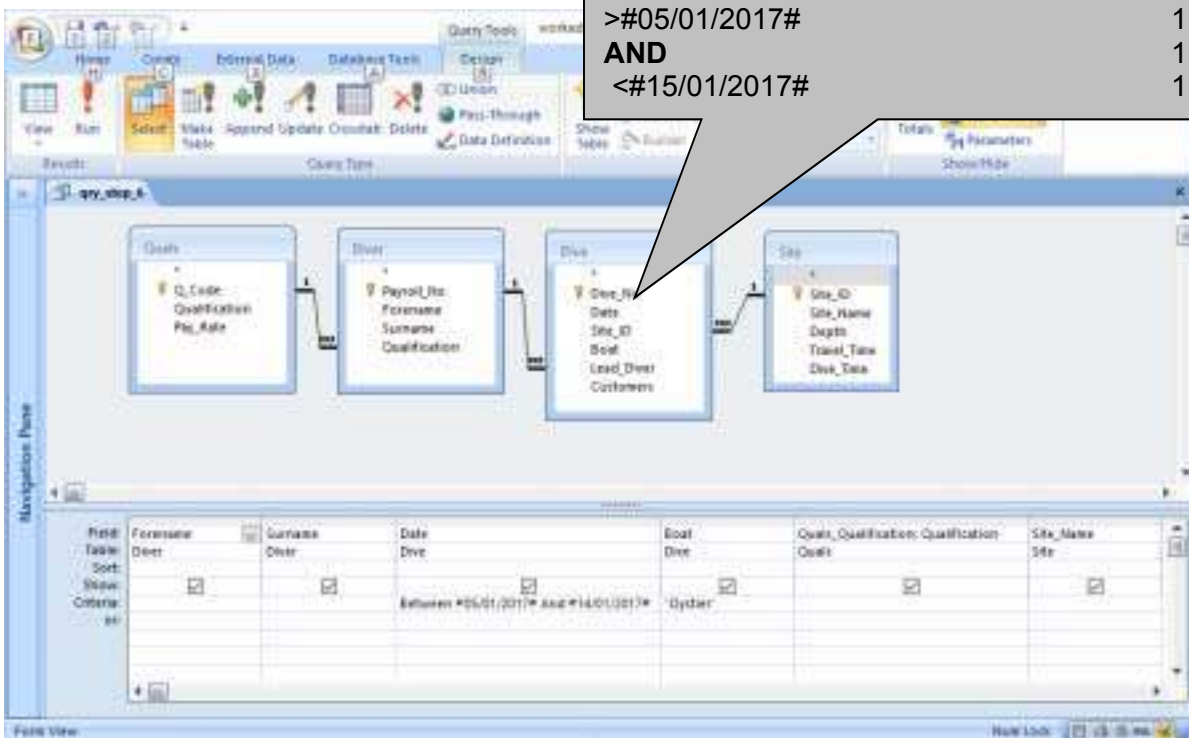
> Correct fields   2 marks
> …One-to-many   1 mark

> Search:
>   Boat = Oystier   1 mark
>   **AND**   1 mark
> \>#05/01/2017#   1 mark
> **AND**   1 mark
>   <#15/01/2017#   1 mark

> **Header:**
>   Appropriate title   1 mark

All dives from the Oystier between the 5th and 15th January

Site_Name	Boat	Date	Forename	Surname	Qualification
Cassablanca	Oystier	11/01/2017	Alberto	Acosta	Instructor
La Francesca	Oystier	14/01/2017	Christopher	Scott	Master Instructor
Palancar Bricks	Oystier	10/01/2017	Juan	Gutierrez	Instructor
Palancar Gardens	Oystier	06/01/2017	Christopher	Scott	Master Instructor
Palancar Gardens	Oystier	06/01/2017	Christopher	Scott	Master Instructor
Palancar Gardens	Oystier	11/01/2017	Gustavo	Pulido	Master Instructor
Palancar Gardens	Oystier	11/01/2017	Gustavo	Pulido	Master Instructor
Quervonnes	Oystier	10/01/2017	Juan	Gutierrez	Instructor
Santa Rosa Wall	Oystier	06/01/2017	Pingo	Ake	Instructor
Whitehouse	Oystier	06/01/2017	Pingo	Ake	Instructor
Yucab	Oystier	14/01/2017	Christopher	Scott	Master Instructor

> **Format:**
>   Date field dd/mm/yyyy   1 mark

> **Search:**
>   Correct 11 results   1 mark
> Fields as shown and sorted by Site   1 mark
> Name & Candidate details in the footer   1 mark

Report by A Candidate, XX999, 9999

Search:
Depth = D   1 mark

Calculated field
Appropriate field name   1 mark
Named using naming conventions   1 mark
Correct syntax for calculation   1 mark
[Dive Time]   1 mark
+   1 mark
2*[Travel Time]   1 mark

Calculation:
=AVG   1 mark
([Total_Time])   1 mark

Time taken for deep dive trips

Site_Name	Travel_Time	Dive_Time	Total_Time
Maracaibo	00:40	00:35	01:55
Columbia Deep	00:36	00:40	01:52
Columbia Pinnacles	00:35	00:40	01:50
Punta Sur	00:35	00:40	01:50
Devils Throat	00:34	00:30	01:38
Jorges Reef	00:21	00:45	01:27
Palancar Caves	00:22	00:40	01:24
Quervonnes	00:21	00:40	01:22
Palancar Bricks	00:19	00:40	01:18
Palancar Gardens	00:18	00:40	01:16
San Fransisco Wall	00:10	00:40	01:00
Cedral Wall	00:07	00:45	00:59
Santa Rosa Wall	00:03	00:40	00:46
Average trip time			01:25

A Candidate, ZZ999, 9999   Page 1 of 1

Calculations:
  Correct calcs for calc field   1 mark
  Correct calc for calc control   1 mark
Format:
  All 3 Time fields hh:mm   3 marks
  Calculated control hh mm   1 mark
  Positioning of calculated control   1 mark
  Appropriate label for calc control   1 mark
Candidate details in footer   1 mark

Header:
  Appropriate title   1 mark
  and contains candidate details   1 mark

Number of dives by each lead diver from each boat
Report created by A Candidate, ZZ999, 9999

Name	Dive Express	Oyster	Triton I
Alberto Acosta	1	1	4
Carlos Heredia	2		2
Christopher Scott		4	20
Edwin Heredia			1
Gustavo Alamilla	1		
Gustavo Pulido		13	
Ismael Cardenas		2	
Jesus Euan	2		
Jesus Zapata	3		
Jorge Burgos		2	33
Juan Gutierrez		6	9
Lobo Cohuo			1
Michelle Scott			4
Pingo Ake		2	
Rita Grajales	1		

Format:
Single portrait page and **all** fully visible 1 mark
Gridlines visible   1 mark

Crosstab/Pivot table:
Name as row headings   1 mark
Boat name as column headings   1 mark
Count as mathematical operation   1 mark
Correct values   1 mark

> Header:
> Appropriate title   1 mark
> **Report created by:** and candidate details   1 mark

Dives at Palancar, Columbia or Cedral

Report created by: A Candidate, ZZ999, 9999

Forename	Surname	Qualification	Pay_Rate		Date	Boat
		Site_Name				
Alberto	Acosta	Instructor	32000			
		Palancar Bricks				
					22/01/2017	Triton I
					22/01/2017	Triton I
Carlos	Heredia	Dive Master	24000			
		Columbia Pinnacles				
					23/01/2017	Dive Express
		Columbia Shallows				
					23/01/2017	Dive Express
Christopher	Scott	Master Instructor	46000			
		Palancar Bricks				
					21/01/2017	Triton I
					09/01/2017	Triton I
					21/01/2017	Triton I
					19/01/2017	Triton I
		Palancar Caves				
					09/01/2017	Triton I
					21/01/2017	Triton I
		Palancar Gardens				
					06/01/2017	Oystier
					16/01/2017	Triton I
					08/01/2017	Triton I
					06/01/2017	Oystier
					16/01/2017	Triton I
					08/01/2017	Triton I
Gustavo	Alamilla	Instructor	32000			
		Columbia Pinnacles				
					12/01/2017	Dive Express
		Palancar Bricks				
					26/01/2017	Oystier
					26/01/2017	Oystier
		Palancar Caves				

> Search:
> Palancar, Columbia, or Cedral   3 marks
> Grouping level 1:
> …Forename   1 mark
> …Surname   1 mark
> …Qualification   1 mark
> …Pay_Rate in group header   1 mark

> Grouping level 2:
> …Site_Name   1 mark
>
> Report detail:
> …Date & Boat only   1 mark

Forename	Surname	Qualification	Pay_Rate		
		Site_Name			
				Date	Boat
				20/01/2017	Oystier
				17/01/2017	Oystier
		Palancar Gardens			
				11/01/2017	Oystier
				11/01/2017	Oystier
Ismael	Cardenas	Instructor	32000		
		Palancar Caves			
				21/01/2017	Oystier
Jesus	Euan	Dive Master	24000		
		Columbia Shallows			
				18/01/2017	Dive Express
				04/01/2017	Dive Express
Jorge	Burgos	Instructor	32000		
		Cedral Wall			
				02/01/2017	Triton I
				02/01/2017	Triton I
		Cedral Pass			
				15/01/2017	Triton I
		Columbia Shallows			
				23/01/2017	Triton I
				13/01/2017	Triton I
		Palancar Bricks			
				15/01/2017	Triton I
				02/01/2017	Oystier
				11/01/2017	Triton I
				08/01/2017	Triton I
				04/01/2017	Triton I
				04/01/2017	Triton I
				15/01/2017	Triton I
				11/01/2017	Triton I
		Palancar Caves			
				08/01/2017	Triton I
				03/01/2017	Triton I
				14/01/2017	Triton I
				17/01/2017	Triton I

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Forename	Surname	Qualification	Pay_Rate		
		Site_Name			
				Date	Boat
		Palancar Gardens			
				20/01/2017	Triton I
				23/01/2017	Triton I
				20/01/2017	Triton I
Juan	Gutierrez	Instructor	32000		
		Cedral Wall			
				02/01/2017	Triton I
		Cedral Pass			
				02/01/2017	Triton I
		Palancar Bricks			
				05/01/2017	Triton I
				10/01/2017	Oystier
				16/01/2017	Oystier
		Palancar Gardens			
				13/01/2017	Triton I
				23/01/2017	Oystier
				03/01/2017	Triton I
				23/01/2017	Oystier
				13/01/2017	Triton I
				03/01/2017	Triton I
Lobo	Cohuo	Instructor	32000		
		Palancar Bricks			
				07/01/2017	Triton I
Michelle	Scott	Instructor	32000		
		Palancar Caves			
				10/01/2017	Triton I
Rita	Grajales	Instructor	32000		
		Columbia Shallows			
				12/01/2017	Dive Express

All fields present and fully visible	1 mark
Orientation portrait	1 mark
Printed single page wide	1 mark

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Step 10

Initial query to extract dates:

Correct fields extracted	1 mark
Search:	
Initial query to extract correct dates	1 mark
Find duplicates to remove single dive using previous query as data set	1 mark
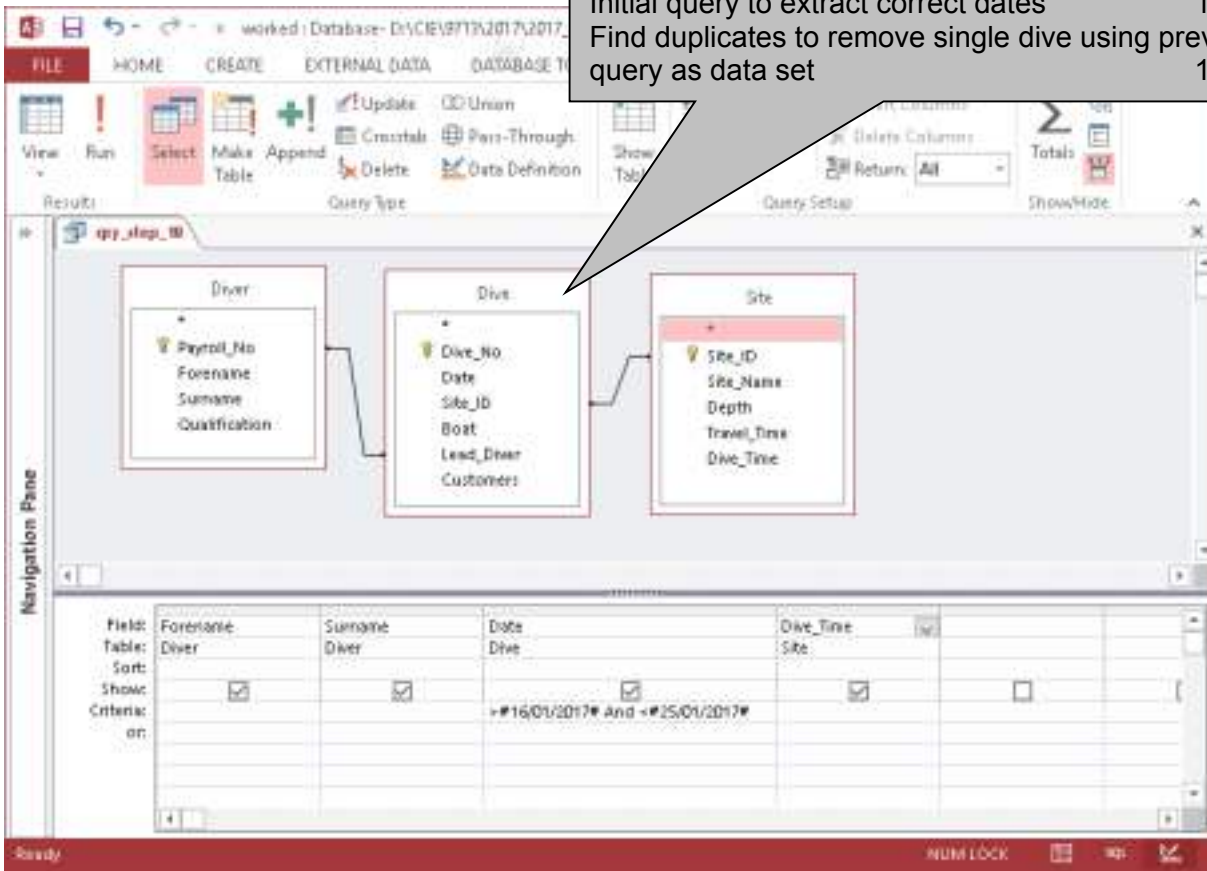
Find duplicates on original query to remove days with single dives:
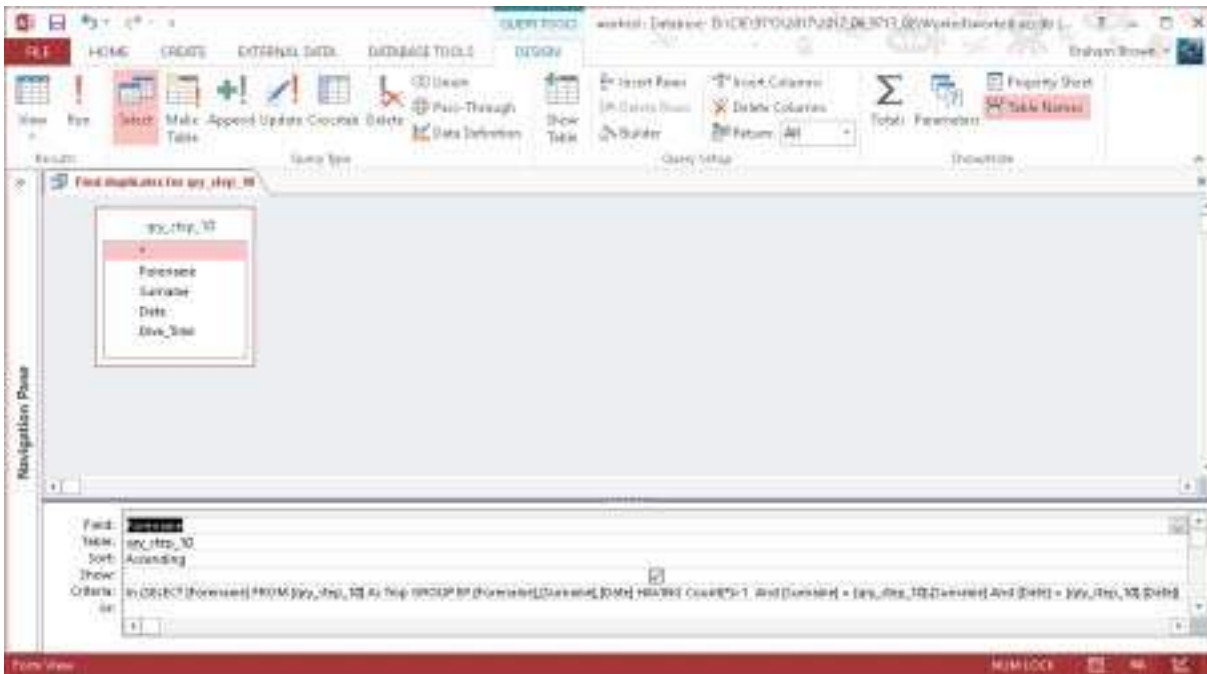
Exported into a spreadsheet:

Names and dates merged with dates converted to text.

Concatenation of names and dates or appropriate grouping for same effect   1 mark

Find duplicates function run to give single list and dates. Then SUMIF function used to calculate total time.

Find duplicates or appropriate grouping	1 mark
SUMIF correct formulae or grouped subtotals	1 mark
Calculations to retain original names and dates	1 mark

	F	G	H	I	J
1	Name & Date		Name	Date	Total Time
2	Christopher Scott 19/01/2017		=LEFT(F2,(LEN(F2)-10))	=RIGHT(F2,10)	=SUMIF(C$2:C$40,F2,D$2:D$40)
3	Carlos Heredia 23/01/2017		=LEFT(F3,(LEN(F3)-10))	=RIGHT(F3,10)	=SUMIF(C$2:C$40,F3,D$2:D$40)
4	Christopher Scott 21/01/2017		=LEFT(F4,(LEN(F4)-10))	=RIGHT(F4,10)	=SUMIF(C$2:C$40,F4,D$2:D$40)
5	Alberto Acosta 22/01/2017		=LEFT(F5,(LEN(F5)-10))	=RIGHT(F5,10)	=SUMIF(C$2:C$40,F5,D$2:D$40)
6	Jorge Burgos 20/01/2017		=LEFT(F6,(LEN(F6)-10))	=RIGHT(F6,10)	=SUMIF(C$2:C$40,F6,D$2:D$40)
7	Gustavo Pulido 17/01/2017		=LEFT(F7,(LEN(F7)-10))	=RIGHT(F7,10)	=SUMIF(C$2:C$40,F7,D$2:D$40)
8	Jorge Burgos 23/01/2017		=LEFT(F8,(LEN(F8)-10))	=RIGHT(F8,10)	=SUMIF(C$2:C$40,F8,D$2:D$40)
9	Juan Gutierrez 23/01/2017		=LEFT(F9,(LEN(F9)-10))	=RIGHT(F9,10)	=SUMIF(C$2:C$40,F9,D$2:D$40)
10	Jesus Euan 18/01/2017		=LEFT(F10,(LEN(F10)-10))	=RIGHT(F10,10)	=SUMIF(C$2:C$40,F10,D$2:D$40)
11	Ismael Cardenas 21/01/2017		=LEFT(F11,(LEN(F11)-10))	=RIGHT(F11,10)	=SUMIF(C$2:C$40,F11,D$2:D$40)
12	Gustavo Pulido 20/01/2017		=LEFT(F12,(LEN(F12)-10))	=RIGHT(F12,10)	=SUMIF(C$2:C$40,F12,D$2:D$40)
13	Michelle Scott 24/01/2017		=LEFT(F13,(LEN(F13)-10))	=RIGHT(F13,10)	=SUMIF(C$2:C$40,F13,D$2:D$40)
14	Jorge Burgos 17/01/2017		=LEFT(F14,(LEN(F14)-10))	=RIGHT(F14,10)	=SUMIF(C$2:C$40,F14,D$2:D$40)
15	Christopher Scott 24/01/2017		=LEFT(F15,(LEN(F15)-10))	=RIGHT(F15,10)	=SUMIF(C$2:C$40,F15,D$2:D$40)

Find duplicates for qry_step_10

Name and date removed from string for final formatting.

Correct totals shown   1 mark
Sorted into descending on total dive time   1 mark

Total dive times for all lead divers with more than 1 daily dive between 16th and 25th January

Report by A Candidate, ZZ999, 9999

Name	Date	Total Time
Christopher Scott	19/01/2017	03:40
Carlos Heredia	23/01/2017	03:05
Christopher Scott	21/01/2017	03:00
Alberto Acosta	22/01/2017	02:55
Jorge Burgos	20/01/2017	02:15
Gustavo Pulido	17/01/2017	02:15
Jorge Burgos	23/01/2017	01:40
Juan Gutierrez	23/01/2017	01:30
Jesus Euan	18/01/2017	01:30
Ismael Cardenas	21/01/2017	01:30
Gustavo Pulido	20/01/2017	01:30
Michelle Scott	24/01/2017	01:25
Jorge Burgos	17/01/2017	01:25
Christopher Scott	24/01/2017	01:25

Name and Candidate details in the header   1 mark
Appropriate title includes >1 dive per day
and correct 2 dates & total dive time   1 mark
Appropriate image selection   1 mark
Appropriate position/aspect ratio   1 mark
Tabular form with gridlines present   1 mark

Chart:
Appropriate chart type	1 mark
Appropriate title	1 mark
Correct values shown	1 mark
Both names and dates fully visible	1 mark
Appropriate labels	1 mark

Total dive times for all lead divers with over 2 hour dive times between 16ᵗʰ and 25ᵗʰ January

Cumulative dive time for this day

Y-axis
04:19
03:50
03:21
02:52
02:24
01:55
01:26
00:57
00:28
00:00

19/01/2017	23/01/2017	21/01/2017	22/01/2017	20/01/2017	17/01/2017
Christopher Scott	Carlos Heredia	Christopher Scott	Alberto Acosta	Jorge Burgos	Gustavo Pulido

Name of lead diver and date of dives