Unit 2 Creating Systems to Manage Information





Level 3 National in Information Technology

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Example Solution

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Part A

Activity 1 – Database relationships screenprint



Activity 2 – Table structures

tblPlayer $ imes$	
Field Name	Data Type
PlayerID	AutoNumber
PlayerSurname	Short Text
PlayerInitial	Short Text
PlayerDOB	Date/Time
MentorID	Number

	tblPosition $ imes$		
4	Field Name	Data Type	
ţ,	PositionID	AutoNumber	
	PositionName	Short Text	

Presence check

	tblPlayer $ imes$		
	Field Nam	ne	Data Type
Ū.	PlayerID		AutoNumber
	PlayerSurname		Short Text
	PlayerInitial		Short Text
	PlayerDOB		Date/Time 🗸
G	General Lookup		
F	ormat	Short Date	
Input Mask			
Caption			
Default Value			
Validation Rule		Is Not Null	
Validation Text		The player's date of birth must be present	
Dequired		Ma	

Value lookup or range check

tblPlayerStatistics ×

	Field Name	Data
Ū.	PlayerID	Number
ţ.	PositionID	Number
	PlayerPositionYellowCards	Number
	PlayerPositionGoals	Number
	PlayerPositionSubstitutions	Number
	PlayerPositionRating	Number

General Lookup		
Display Control	Combo Box	
Row Source Type	Value List	
Row Source	1;2;3;4;5	
Bound Column	1	
Column Count	1	
Column Heads	No	
Column Widths		
List Rows	16	
List Width	Auto	
Limit To List	Yes	

	tblMentor $ imes$	
	Field Name	Data Type
Ŭ.	MentorID	AutoNumber
	MentorSurname	Short Text

	tblPlayerStatistics $ imes$	
	Field Name	Data
1	PlayerID	Number
	PositionID	Number
	PlayerPositionYellowCards	Number
	PlayerPositionGoals	Number
	PlayerPositionSubstitutions	Number
	PlayerPositionRating	Number

Format and length check

	tblPlayer $ imes$	
	Field Name	Dat
Ū.	PlayerID	AutoNumb
	PlayerSurname	Short Text
	PlayerInitial	Short Text
	PlayerDOB	Date/Time
	MentorID	Number

General Lookup

Field Size	1
Format	
Input Mask	>L
Contion	

Table lookup Any foreign key

	🛅 tblPlayer 🗙				
	Field Name	Data Type			
(PlayerID	AutoNumber			
	PlayerSurname	Short Text			
	PlayerInitial	Short Text			
	PlayerDOB	Date/Time			
	MentorID	Number 🗸			

Field

General Lookup	
Display Control	Combo Box
Row Source Type	Table/Query
Row Source	SELECT [tblMentor].[MentorID], [tblMentor].[MentorSurname]
Bound Column	1
Column Count	2
Column Heads	No
Column Widths	1.508cm;2.54cm
List Rows	16
List Width	4.048cm
Limit To List 🛛 🕰	Yes

Activity 3 – Queries and report

(a) Create a query to display a list of players who have a rating of at least one and no more than three. It must show the player surname, date of birth, position and rating. It must be sorted from youngest to oldest player.

	blDlavor		thIDIavorStatistics		thIDesition	R ⁱ	qry(a) 🗙			
	*		*		*	- /	PlayerSurname 👻	PlayerDOB 👻	PositionName 👻	PlayerPositionRating 👻
	PlayerID	1 00	PlayerID		PositionID		Johnson	12/12/2007	Centre Forward	3
	PlayerSurname		PositionID	<u>~</u> /	PositionName		Zhang	14/08/2007	Right Back	3
	PlayerInitial		PlayerPositionYel PlayerPositionGo				Meek	10/07/2007	Centre Midfield	2
	MentorID		PlayerPositionSul 🔻				Morris	26/09/2006	Centre Forward	2
							Hernandez	05/04/2006	Goalkeeper	1
							Taylor	04/05/2005	Right Midfield	2
						. []	Garcia	14/02/2005	Centre Back	1
Field	PlayerSurname 🔍	PlayerDO	B PositionName	PI	ayerPositionRating		Garcia	14/02/2005	Centre Forward	1
Table	tblPlayer	tblPlayer	tblPosition	tb	PlayerStatistics	*				
Sor		Descendi	ng							
Show	:									
Criteria				Be	etween 1 And 3					

- (b) Create a query that will calculate and display the:
 - age of the players, for example 16
 - number of players for each age
 - number of yellow cards for each age
 - highest number of goals for each age.

Example 1 (taking into account 8 players)

qry(b)_1 ×							
tblPlayer * 8 PlayerlD PlayerSu PlayerIni PlayerDC Mentorl	rname tial DB	1 00	tblPlayerStatistic * ® PlayerID ® PositionID PlayerPositio PlayerPositio PlayerPositio	nYel			
Field: PlayerID Table: tblPlayer	NumYel tbIPlaye	lowCards rStatistics	: PlayerPositionYello s	wCards	HighestNumGoals: PlayerPo tbIPlayerStatistics	sitionGoals	AgeGroup: Int((Date()-[playerDOB])/365)
Total: Group By	Sum				Max		Group By
Sort:							
Criteria:	_						.
q	y(b)_1 * PlayerID NumYellov HighestNu AgeGroup	vCards ImGoals	-	-			
				-			
Field	AgeGroup	Num	Players: PlayerID	NumYello	wCards: NumYellowCards	HighestNum	berOfGoals: HighestNumGoals
Table:	qry(b)_1	qry(b)_1	qry(b)_1	wearas numerowearas	qry(b)_1	seror o cash night strain o cas
Total:	Group By	Cour	nt	Sum		Max	
Sort:			_		_		
Show: Criteria:	<u>~</u>		<u>~</u>		<u>~</u>		×.
Citteria.							

R.	qry(b)_2 $ imes$			
2	AgeGroup 👻	NumPlayers 👻	NumYellowCards 👻	HighestNumberOfGoals 👻
	15	3	15	8
	16	2	2	5
	17	1	2	1
	18	2	25	6





Learners were still fully credited if they did not take into account 8 players rather than 11.

(c) Create a report that shows the statistics for each player who has played in more than one position.

Display a suitable report title.

- For each player display:
- the surname
- the initial
- the date of birth.

Calculate and display:

- the number of positions they have played in
- the best rating they have achieved
- the total number of yellow cards they have received.

The report must fit on one page.

tblPlayerS * 한 Player 한 Positio Player 	rID ionID rPositionYel	tbiPlay * Pla Pla Pla Pla 	er yerID yerSurname yerInitial yerDOB						
ield: PlayerID	D	PlayerInitial	PlayerSurname	PlayerInitial	PlayerDOB	NumberPositions: PositionID	BestRating: PlayerP	PositionRating	NumberYellowCards: PlayerPositionYellowCa
ble: tblPlaye	erStatistics	tbIPlayer	tblPlayer	tblPlayer	tblPlayer	tbIPlayerStatistics	tblPlayerStatistics		tblPlayerStatistics
Sort:	Dy	Стопр ву	Group by	Group by	Group by	Count	MID		Sum
0140	\sim				<u>~</u>				
eria:						>			
eria: or:						>1			
or:		Statis	tics For	Players	With I	More Than O	ne Positi	on	
or:	Surna	Statis	tics For	Players Date of Birth	With I	More Than O Number of E Positions	Ne Positi Best Rating	O N Number Yellow C	r of ards
OF.	Surna	Statist	tics For Initial R	Players Date of Birth 18/01/2005	With I	More Than O Number of E Positions 2	ne Positi Best Rating 4	ON Number Yellow C 17	r of ards

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

Activity 4 – Structure testing

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	PlayerID:generated PlayerSurname:Smith PlayerInitial: G PlayerDOB: left blank MentorID:1	Error message saying "The player's date of birth must be present"	tblPlayer × PlayerID • PlayerSurna • PlayerInitial • PlayerDOB • MentorID • Click to 1 Hernandez G 05/04/2006 2 1 Hernandez G 05/04/2006 2 1 Hernandez G 05/04/2006 2 2 Isl Microsoft Access × 1 2 doi The player's date of birth must be present 1 2 doi The player's date of birth must be present 1 2 doi OK Help 2 3 Taylor A 04/05/2005 1 9 11 Smith G 1
2	PlayerID:generated PlayerSurname:Smith PlayerInitial: g PlayerDOB: 04/05/2005 MentorID:1	Initial to be converted to uppercase G	Image:
3	PlayerID:generated PlayerSurname:Smith PlayerInitial: G PlayerDOB: 04/05/2005 MentorID:3	Error message to say the item is not in the list and to select an item from the list	tbiPlayer × PlayerID • PlayerSurna • PlayerInitial • PlayerDOB • MentorID • Click to Ac I Hernandez G 05/04/2006 2 Microsoft Access × I Hernandez G 05/04/2006 2 I Hernandez G 06/05/2005 1 I Hernandez G 0K I Hernandez G 04/05/2005 1 I Staylor A 04/05/2005 3 I Smith G 04/05/2005 3
4	PlayerID: 1 PositionID:2 YellowCards:0 Goals:0 Substitutions:0 Rating:0 PlayerID: 1 PositionID:2 YellowCards:0	Error message to say the item is not in the list and to select an item from the list Error message to say the item is not in	Itervar PlayerPosition
6	Goals:0 Substitutions:0 Rating:6 PlayerID: 1 PositionID:9 YellowCards:0	the list and to select an item from the list Error message to say the record cannot	3 3 3 4 4 8 1 4 8 1 5 8 1 6 6 2 7 4 0 8 7 2 1 0 8 7 2 1 0 6 1 2 0 0 0 0 9 1 2 0 0 0 0 9 1 2 0 0 0 0 0 9 1 2 0 0 0 0 0 0 9 1 2 0 0 0 0 0 0 9 1 1 0 0 0 0 0 0 1 1 0 0 0 0 1 1 1 1 1 0 0 0 1 3 5 1 1 1 1 1 1 1
	Goals:0 Substitutions:0 Rating:3	be added as a related record is required in tblPosition	3 5 Microsoft Access 4 3 5 Microsoft Access 4 4 8 5 8 6 6 7 4 8 7 2 1 0 2 3 3

Part B

Activity 6 – Interface Referee form

Fixture Results X 🖪 Add a Referee X	🗃 Fixture Results 🗙 📰 frmReferee 🗙
Add a Defense	1 • 1 • 1 • 1 • 2 • 1 • 3 • 1 • 4 • 1 • 5 • 1 • 6 • 1 • 7 • 1 • 8 • 1 • 8
Add a Referee	Form Header
Enter the surname Enter the email address Select the level	Add a Referee
Referee ID ###	Enter the email address Select the level
Surname *	🗲 Detail
Email * Select the level 5 v * Save	Referee ID ere Surname RefereeSurname * Email RefereeEmail * Select the level Nu < *
LevelNumber Format Data Event Other All	Form Footer
Control Source LevelNumber	RefereeEmail 🗸
Row Source tblRefereeLevel	Format Data Event Other All
Row Source Type Table/Query Bound Column 1 Limit To List Yes	Control Source RefereeEmail Text Format Plain Text Input Mask
	Default Value
	Validation Rule Like **?@?*.?** Validation Text Plese enter a valid email address
	Tanadaron rene intere enter a vana cilian adaress

□ If IsNull([Referee	Surname]) Then
MessageBox	
Message	The surname must be input
Веер	Yes
Туре	None
Title	
Else If IsNull([Ref	fereeEmail]) Then
MessageBox	
Message	You must enter a referee's email address
Веер	Yes
Туре	None
Title	
Else If IsNull([Lev	velNumber]) Or [LevelNumber]<5 Or [LevelNumber]>7 Then
MessageBox	
Message	The level must be between 5 and 7
Веер	Yes
Туре	None
Title	
🗆 Else	
RunMenuCom	mand
Command	SaveRecord
MessageBox	
Message	The referee details has been saved
Веер	Yes
Туре	None
Title	
GoToRecord	
Object Type	
Object Name	
Record	New
Offset	
End If	

Fixture results form

📑 Fixture Results 🗙	
Add Fix	ture Results
Select the Team	*
Goals For	Goals scored by Martlepool
Goals Against	Goals scored by the opposition
Result	Loss
Total Goals For	
Total Goals Against	





cboTeam			\sim
Format Data	Event	Othe	er All
Control Source			
Row Source			SELECT tbITeam.TeamID, tbITeam.TeamName FROM tbITeam INNE
Row Source Ty	pe	1	Table/Query
Bound Column			1
Limit To List		1	/es
ATT			/

Activity 7 – Interface testing

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	RefereeID: generated Surname: left blank Email: test@test.com Level: 5	Error message to say "The surname must be input"	Add a Referee Enter the surname Enter the email address Select the level Referee ID 16 Surname * Email test@test.com * Select the level 5 * *
			The surname must be input OK
2	RefereeID: generated Surname: Smith Email: test.com Level: 5	Error message to say "Please enter a valid email address"	Add a Referee X Add a Referee X Enter the surname Enter the email address Select the level Referee ID 16 Surname Smith * Email test.com * Select the level 5 * Microsoft Access X Plese enter a valid email address OK
3	RefereeID: generated Surname: Smith Email: test@test.com Level: 4	Error message to say The item is not in the list and the user must select an item from the list	Add a Referee × Add a Referee × Enter the surname Enter the email address Select the level Referee ID 16 Surname Smith * Email test@test.com * Select the level 4 * Microsoft Access × The text you entered isn't an item in the list. Select an item from the list, or enter text that matches one of the listed items. OK

4	RefereeID: generated Surname: Smith Email: test@test.com Level: 5	The data is saved in tblReferee. A message is displayed to say the details have been saved and the form clears ready for the next data entry	Add a Referee × Add a Referee Enter the sumame Enter the sumame Enter the level Surname Enter the sumame Email Select the level Add a Referee Microsoft Access Select the level Surname Enter the sumame Enter the sum
5,6,7	Team: Northside College Goals For: 4 Goals Against: 4	Result to be automatically displayed as a draw Total Goals For:43+4=47 Total Goals Against: 41+4=45	Fixture Results Add Fixture Results Select the Team Goals For 4 6oals For 4 6oals Against 4 Forult Coals Against 4 7otal Goals For 45