

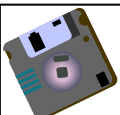
KEY SKILLS

DATA HANDLING: TASK 3

	Estimated number of people	Cost per person	Money spent
4 Transport	4	£1.00	£4.00
5 Food	4	£1.00	£4.00
6 Accommodation	4	£1.00	£4.00
7 Other expenses	4	£1.00	£4.00
8 Totals	4	£1.00	£4.00
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DATA HANDLING : TASK 3 - CONTENTS

- Creating reports from tables
- Creating reports from queries
- Reports with grouping
- Formatting



Wherever you see this symbol, make sure you remember to save your work!

DATA HANDLING : TASK 3

Before you begin this task you should create a new folder in the 'Data Handling' folder that you have saved in your user area. Call this folder 'Database Task 3'.

ABOUT REPORTS

So what are reports?

A report is an effective way to present your data in a printed format. Because you have control over the size and appearance of everything on a report, you can display the information the way you want to see it.

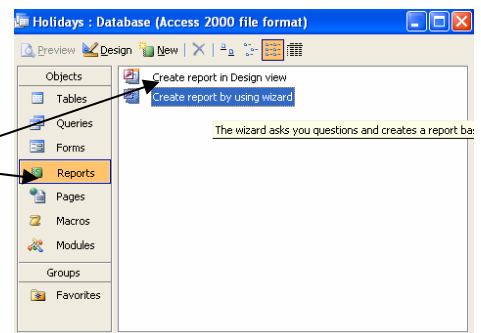
IMPORTING THE DATA

- From the teach-ict.com site, copy 'Holidays.txt' into your user area
- Open Microsoft Access
- Create a new database called 'Holidays'
- Import the Holidays file into the database, keep the table name as Holidays
REMEMBER: To select the file, make sure you change the file type to Text Files, and that when you have the option set the first row to contain the field headings
- In the table design, check the data types and if necessary change to a more appropriate type
- In the table design, check the field lengths and if necessary change to a more appropriate length

CREATING A REPORT FROM A TABLE

From the main menu, select reports.

Double-click on 'create report by using wizard'



Step 1

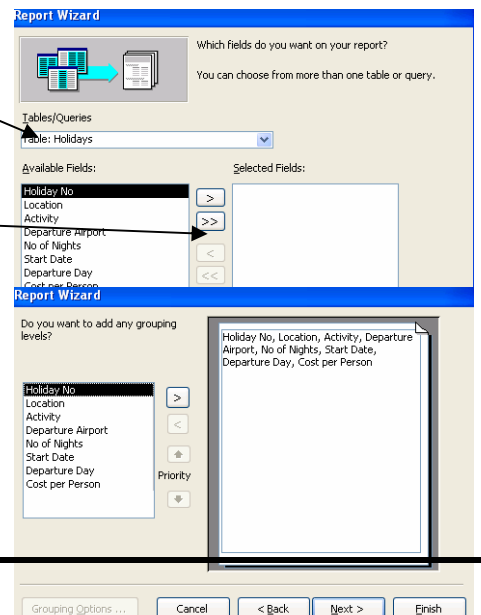
Select the Holidays table as the source of the report (i.e. we want the data in our report to come from the Holidays table)

We want to include all fields, so click on the double arrow

Click 'Next>'

Step 2

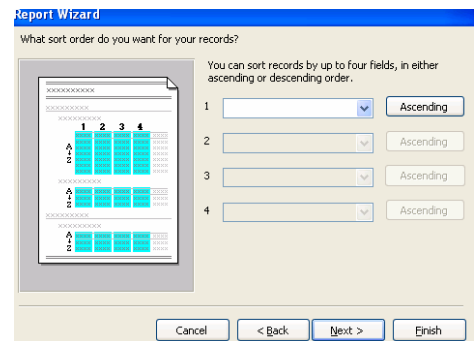
At this stage we do not want any grouping, so simply click



'Next>'

Step 3

At this stage we do not need to sort our data, so simply click 'Next>'

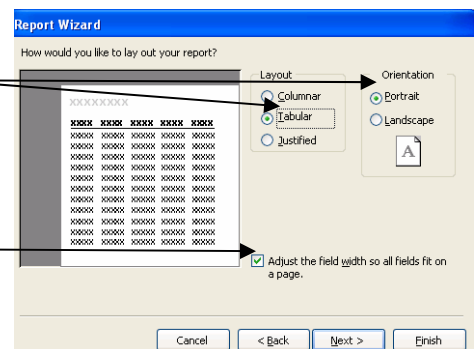


Step 4

The most appropriate layout for this report is a tabular, with orientation as portrait.

Select these options.

Make sure that the check box is ticked to adjust the field width so all fields fit on a page.

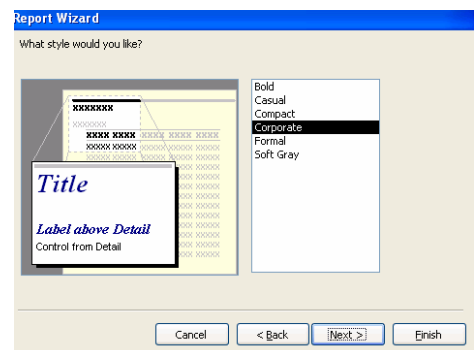


Click 'Next>'

Step 5

You can select the style that you want for your report. Look at all and choose one.

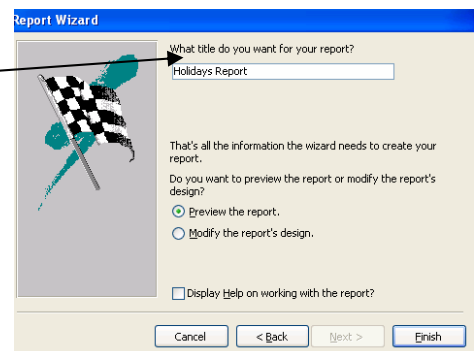
Click 'Next>'



Step 6

Enter 'Holidays Report' as the title for the report.

Click 'Finish'



Your report will be displayed on the screen.

You will see that all records in the Holidays table



are displayed in the report.

However, you may notice that not all field headings are fully displayed. This is also true for some of the data in the fields.

We need to format the report to make the appearance better.

- Select the Design View icon at the top of the page

When you view a report in design view, the fields are displayed in the page header.

The records are all displayed in the detail section of the report. The field is only displayed once, but every record will be displayed in the report

To change the size of a text box:

- Select the text box
- Resize using the handles

In this example the Departure Day field heading Does not need to be very long, but will not fit in the header.

- You can resize the header by hovering above the detail bar until you see the horizontal line with two arrows.
- Then drag down until it is the correct size.

In this example, the field headings have been resized so that all the wording can be seen.

The field headings have also been moved so that they fit in the width of the page better.

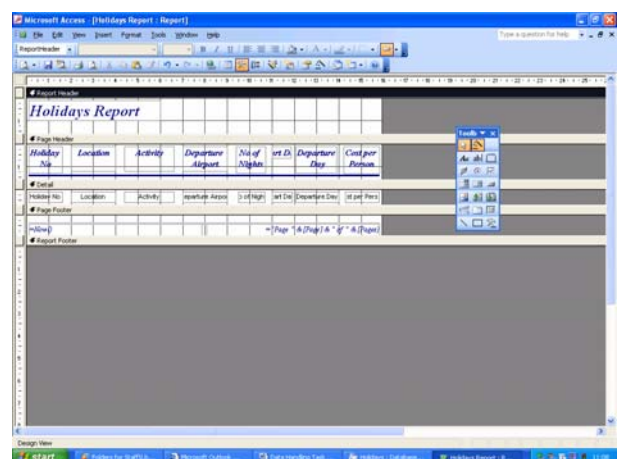
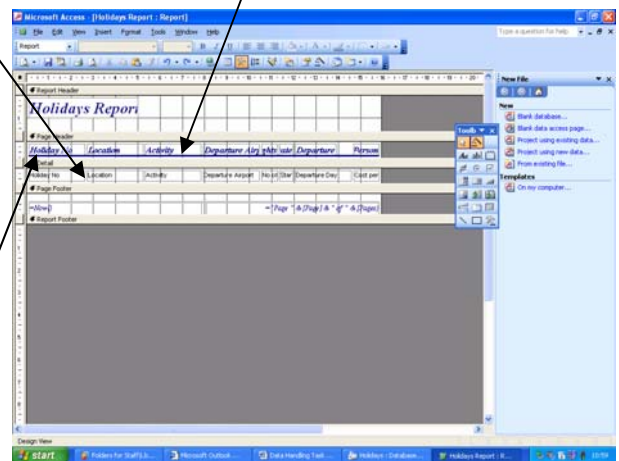
The blue line has also been moved down, as the ruler under the headings.

The fields in the detail section have also been moved so that they are in line with the headings.

Select the view icon so that you can check if your changes have made the improvements you wanted to.

Open the report in design view.

Now change the alignment of the data in the report.



- Select a text box
- Centre align the text in the text box, by clicking on the centre align icon
- Do this for all text boxes (you can press shift and then select each text box to change all at once)
- View the report to see if this looks better
- If not change back to left aligned

Change the font of the report title to Trebuchet size 22, by selecting the text box, then choosing the text and changing the size.

Centre the title in the middle of the report header. (Select it and drag to the centre of the page).

Change the font of the other text boxes to Trebuchet.

In the report footer there is a text box displaying =Now(). Although this looks a bit strange, if you view the report you will actually see that it displays the current date.

You need to insert the time:

- Open the report in design view
- Select 'Insert'
- Select 'Date and time'
- Make sure only the time check box is selected
- Choose the format you want for the time
- Select OK
- The time field will be displayed in the report header - you need to select this and place it below the date by dragging it
- Change the font to Trebuchet and make sure that it is the same size and colour as the date
- View the report to check that it displays the current time

Check the report for any other changes that could be made to improve the appearance. Make any changes.

Save and close the report.

CREATING QUERIES

Create the following queries in Design View:

- Create a new query that selects all holidays with Newcastle as the departure airport and the number of nights equals 7
 - Display all fields
 - Run the query to check it works correctly
 - Save the query and call it "Newcastle and no of nights"
 - Close the query
-
- Create a new query that selects all holidays where you can do windsurfing
 - Display only the location and activity fields (in that order)
 - Run the query to check it works correctly
 - Save the query and call it "Windsurfing locations"
 - Close the query
-
- Create a new query that selects all holidays that are longer than 7 nights.
 - Display the following fields:
 - Holiday number
 - Location
 - Departure airport
 - No of nights
 - Departure date
 - Cost per person
 - Run the query to check it works correctly
 - Save the query and call it "longer than 7 night holidays"
 - Close the query

CREATING A REPORT FROM A QUERY USING REPORT WIZARD

You now need to create a new report using the report wizard, but before you create the report:

- Open the Windsurfing locations query
- Note down on a scrap piece of paper the locations that offer windsurfing as an activity as displayed in your query
- Close the query

Now create a new report:

- Select Reports from the main menu
- Create a new report using the report wizard
- When you have the option to select a table/query to use as the source of the report, select the query, windsurfing locations
- Select both fields to be displayed in the report
- You don't need to set up any grouping or sorting
- Use the default report layout and orientation settings
- Choose a style for your report
- Save the report as Windsurfing locations report
- Select Finish

Compare the results that are displayed in your report to the results that you noted down from your query. They should be identical because the report was based on the query.

Change the appearance of the report to be more attractive.

Save and close the report.

TASK

Now create a new report for each of the two other queries you created earlier.

Check that the results in the report match your expectations.

Change the appearance of the report.

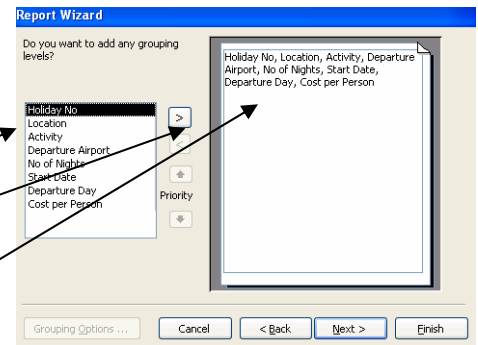
Save and close the reports.

GROUPING & SORTING

Grouping is an excellent way to format a report. It is possible to group data by any field of your choice that is included in the report.

Create a new report using the wizard:

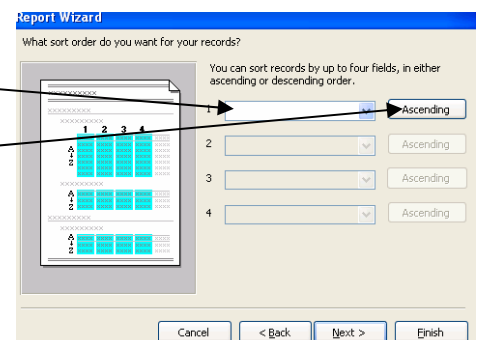
- Use the holidays table as the source of data
- Select all fields to be included
- When you are asked if you want to add any grouping levels, select the location field followed by the arrow pointing to the right
- The grouping level will be displayed at the top of the page to the right of the options
- (This will organise the report so that all holidays who have the same location are grouped together)
- Select 'Next>'



Note: You could if you wanted to, select more than one grouping level e.g. group the data into holiday locations, followed by departure airport. This would keep all holiday locations together, and within that all departure airports.

The next step is to choose if you want to sort the records in the report. You can sort the records by any field in your report, other than those already used to group the records (step above).

- Sort the records in the report by departure airport
- Click on the ascending button to change it so that the data is displayed in descending order.
- Click 'Next>'



Note: It is possible to sort the records again, by another field - you can have four sorts in total.

In the next step:

- Choose a page layout
- Set the page to landscape orientation
- Click 'Next>'

Next step:

- Choose a style
- Click 'Next>'

Next step:

- Enter the name holidays grouped by location report
- Finish the wizard

Now look carefully at the report, to see how the grouping and sorting has affected your report.

The records in this report are exactly the same as the records in the Holidays report. Look how differently they are laid out.

The records are grouped by the holiday location field (this automatically sorts the fields in alphabetical order)

The screenshot shows a Microsoft Access window with a report titled "Holidays". The report is displayed in a table view with the following data:

Location	Departure Airport	Holiday No	Activity	Nights + Date	Departure Day	Cost per Person
<i>Australia</i>						
	Leeds	A101	Scuba Diving	28/06/2002	MO	1258
	Heathrow	A103	Back Packing	21/11/2002	MO	800
	Glasgow	A102	Scuba Diving	21/13/2002	MO	1258
<i>Corfu</i>						
	Stratford	C107	Windsurfing	14/11/2002	TH	320
	Norwich	C106	Hang Gliding	14/11/2002	SU	420
	Newcastle	C108	JSB	7/11/2002	MO	282
	Manchester	C103	Sailing	7/11/2002	SA	282
	Leeds	C102	Windsurfing	7/15/2002	WE	250
	Glasgow	C105	Paragliding	7/15/2002	WE	100
	Glasgow	C104	JSB	7/15/2002	MO	282
	Gatwick	C101	JSB	14/10/2002	SA	282
<i>Denver</i>						
	Heathrow	D101	Mountain Biking	14/16/2002	SA	350
	Glasgow	D102	River Rafting	14/13/2002	SA	950
<i>Eiger</i>						
	Newcastle	E102	Abseiling	7/16/2002	FR	250
	Manchester	E101	Ice Climbing	7/12/2002	SA	258
	Glasgow	E103	Ice Climbing	14/11/2002	TU	300
<i>Greenland</i>						

The report footer shows "09 November 2005" and "Page 1 of 3".

The records are then sorted by the departure airport in descending order

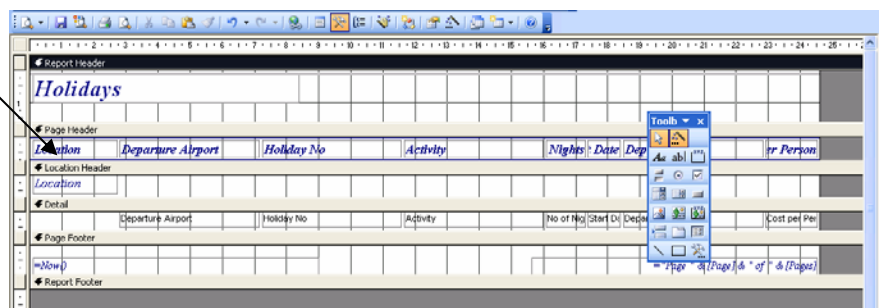
Now open the report in design view.

You will notice that another section has been added to the report design - Location Header.

This shows the level of grouping.

Change the appearance of this report to make sure that all data is displayed in full. Also change the font style. Close the report.

FORMATTING



One of the main purposes of reports is to make the presentation of data more attractive and easy to read.

If we do not format our report after it has been created, then this would defeat the purpose of reports. The wizard is very good at setting reports out, but it does not always present it in the best way.

COLUMN WIDTHS

Most of the time the data does not fit into the text boxes the wizard creates and these need to be adjusted.

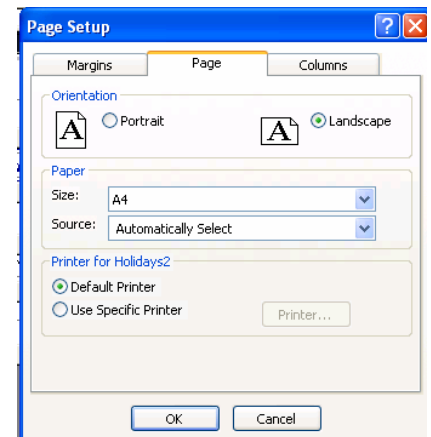
Always make sure that you check the report with the records displayed to see if all the data can be seen. If not you need to adjust the width of the text boxes in design view.

LAYOUT - PORTRAIT/LANDSCAPE

If you want to change the layout of your page from portrait to landscape - or vice versa:

- Select File
- Select Page Setup
- Select the Page tab
- Click in the orientation check box you require
- Select OK

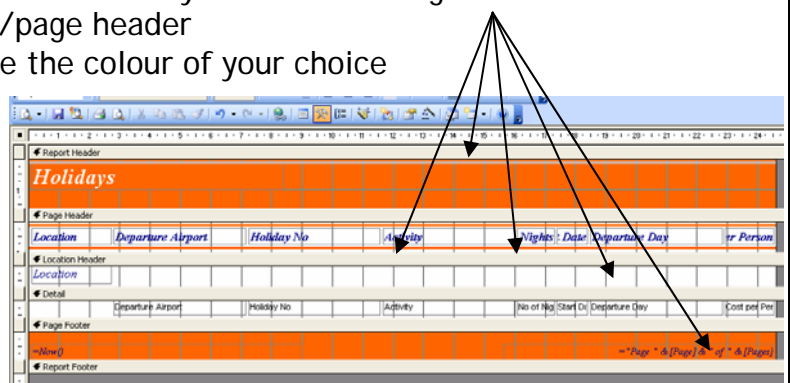
NOTE: It is VERY likely that you will have to adjust all fields so that they can all be seen on the report.



CHANGING THE COLOURS OF THE SECTIONS IN THE REPORT

You may want to change the background colours in the report. It is possible to change each section to a different colour

- Open the holidays grouped by location report
- Right-click on the bar above the section that you want to change the colour of e.g. report header/report footer/page header
- Select fill/back colour and choose the colour of your choice
- Try changing each of the sections to a different colour
- Then select view to view the report
- Look at where the sections start and finish
- Now change the colour to make the report look more attractive



INSERTING A PICTURE

It is possible to insert pictures into a report. If you want to include a picture you need to insert it into the report header or report footer. If you tried to insert the picture into the detail section of the report then the image would be displayed for every record that is in the report.

- Go onto the internet and save a picture of a holiday into your user area
- Using the holidays grouped by location report, click in the report header where you want to put the image
- Select 'insert' from the menu bar
- Select 'picture'
- Browse for the image you saved
- Select OK
- View the report to see what the image looks like on the report

Now try moving the image into the detail section to see what happens:

- Select the image from the header
- Cut the image
- Paste the image into a position in the detail section
- View the report to see what the image now looks like on the report.

You can see in this example that the image is displayed next to each record.

If this is the effect you would like keep the image where it is, otherwise put it back into the page header.

View the report to check that the image is displayed as you want it.

Holidays							
Location	Departure Airport	Holiday No	Activity	Nights	Date	Departure Day	Per Person
<i>Australia</i>							
	Leeds	A 101	Scuba Diving	28	16/2002	MO	1258
	Heathrow	A 103	Back Packing	21	11/2002	MO	800
	Glasgow	A 102	Scuba Diving	21	13/2002	MO	1258
<i>Confu</i>							

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ADDING NAME TO FOOTER

You have already added the date and time to the footer. Now you are going to add your name.

- The toolbox should be displayed when you are in the design view for your report. If it isn't then to display it select 'View' followed by 'Toolbox'
- From the toolbox, click on the label icon
- The label icon is like a text box, draw a rectangle in the report footer
- Enter your name into the text box
- Change the font colour / style / size
- Save and close the report



ADDING AN ADDITIONAL FIELD TO THE REPORT

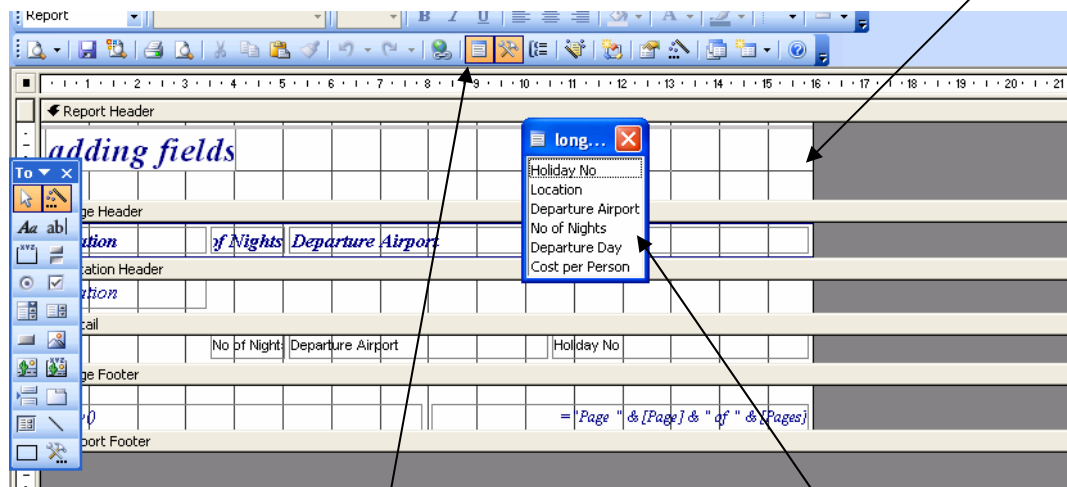
Sometimes you may select some fields from a table to be displayed in a report, but you may decide at another time that you want other fields.

Create a new report using the report wizard.

- Select the longer than 7 night holidays query as the source for the report
- Select the following fields to be included in the report:
 - Holiday No
 - Location
 - Departure Airport
 - No of nights
- Select 'Next>'
- Group the report by location
- Sort the report by number of nights (ascending order)
- Sort the report by a second field - departure airport (ascending order)
- Select a layout and page orientation
- Select a style
- Call the form 'adding fields' report

Open the report in design view.

You have now decided you want to add the departure day and cost per person fields to the report. The page is not wide enough, so make it wider by dragging the white page to the right.




Now we need to insert the additional fields:

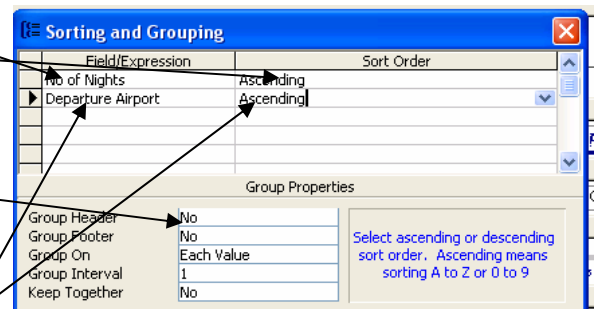
- Click on the field list icon
- This will display the list of fields that you can include in the report
- Select the departure day field and drag it into the detail section of the report
- The label will also be displayed
- Click on the label and press the delete key on your keyboard
- Move the remaining field adjacent to the holiday number field in the detail section

- Now insert a new label in the report header - adjacent to the holiday number label, parallel with the departure day field
- Carry out the actions above with the cost per person field
- Position this adjacent to the departure day field
- View the report to check that the new fields look OK in the report

SORTING & GROUPING IN DESIGN VIEW

If you did not sort or group your data when you were setting up the report, it is possible to do so in design view.

- Open the Holidays report
- Click on the sorting and grouping icon 
- The first field that you need to group the records by is the no of nights field
- Click in the first row of the field/expression column and select the no of nights field from the drop down box
- Sort the records in ascending order
- Select yes from the group header option. (This will create a new section in the report)
- Also sort the records by departure airport
- Select the departure airport field from the drop down box in row 2
- Sort the records by this field also in ascending order
- Select yes from the group header option.

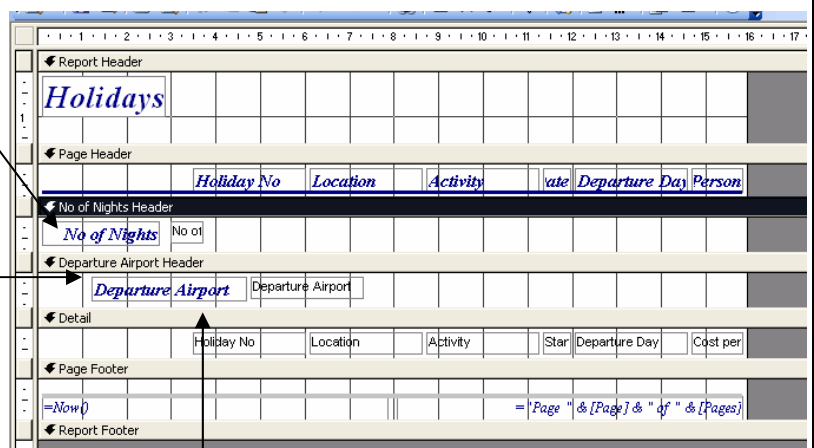


In the report design view move the no of nights label and field to the number of nights header

Move the departure airport label and field to the departure airport header

Set the fields out so that the second grouping is indented.

Move the rest of the fields so they are indented. Also resize them so that all the data is displayed in the report.



View the report to check that the fields are sorted and indented.

You do not need to do this but you can remove a group/sort at any time, by selecting the sorting and grouping icon from the report design toolbar.

Select the row of the sort/group you want to remove.

Press delete on the keyboard.

Save the report. Close the report and the database.

You may:

- Guide teachers or students to access this resource from the teach-ict.com site
- Print out enough copies to use during the lesson

You may not:

- Adapt or build on this work
- Save this resource to a school network or VLE
- Republish this resource on the internet

A subscription will enable you to access an editable version and save it on your protected network or VLE