

Coursework Task

Intermediate 2 Information Systems

Valid for session 2011/2012 only

Coursework Task

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Introduction

Organisation and Conditions for Assessment

Organisation and Conditions for Assessment

The assessment is designed to test each candidate's ability to apply knowledge and understanding and practical skills, developed through study of the Database Systems and Using Information Units. The mark out of 30 should be submitted to SQA unscaled. This will be combined with the examination mark out of 70 to establish the candidate's overall grade of award. This mark should also be used in preparation of estimate grades.

The notional design length for the assessment is 8 - 10 hours. However, a candidate may be allowed longer than this if required.

The assessment is to be undertaken under "open book" conditions, but under supervision by the tutor to ensure that the work submitted is the candidate's own work. The tutor may give the candidate hints and/or help if requested. Any such help should be reflected in the marks awarded. Once the task has been completed and marked, it should not be returned to the candidate for further work.

These instructions are designed to be used in conjunction with the data files provided with the electronic distribution of the task. These can be downloaded from the SQA secure website.

The files to be downloaded should include :

- The 2011/2012 Intermediate 2 Information Systems Coursework Task
- SimpleBreaks Task 5-8 database
- BarcelonaData spreadsheet
- BookingSS spreadsheet

Candidates are not required to spend time entering data into a database. Instead, the data should be prepared beforehand and provided to candidates by the centre.

To facilitate this, database files for Microsoft Access and FileMaker Pro have been provided for this task. The files contain or represent a number of tables with data entered. The appropriate file(s) should be made available to the candidates.

Centres using alternative relational database software can use the accompanying data files, which contain tab-delimited data required for the tables. The centre should set up tables as appropriate within the database software and import the data provided. The resulting database file should then be made available to the candidates.

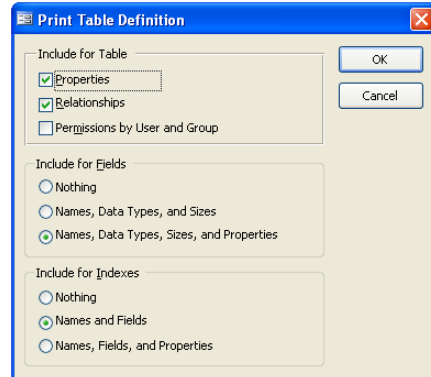
Candidates should be given a copy of the marking grid before starting the task so that they are aware of the mark distribution for each part.

Special Arrangements for Intermediate 2 Coursework 2011-2012

Centres are asked to pay special attention to the following arrangements.

- Candidates are not required to spend time entering data into a database. Instead, the data should be prepared beforehand and provided to candidates by the centre. To facilitate this, Microsoft Access (2003 format) and Filemaker (v.7) files as well as a text (tab) delimited file have been provided. Centres using other systems will require to create the database from the tab separated file provided. This file can also be used if centres encounter any difficulties with the supplied Access or Filemaker databases.
- In a change from previous years, candidates are required to set up both tables in the database. Candidates will be required to submit a printout of the Documenter (or equivalent screen shots) of **both the HOLIDAY table and the HOTEL table** as evidence for Task 4. After completing tasks 1-4, their work must be submitted and not returned. **Candidates must not be given access to the SimpleBreaks Task 5-8 database until they have submitted answers to prior tasks.**
- Task 4 asks candidates to print out a copy of the design of the tables. This is to provide evidence that the correct field types have been used and all necessary validation checks implemented. The assessor should help candidates produce this printout without penalty.
- Task 3 asks candidates to print out a copy of the relationship between the tables. The assessor should help candidates produce this printout without penalty.
- Candidates will **not** use their database structures to complete Tasks 5-8. Instead, centres should issue candidates with the fully populated database.
- The **SimpleBreaks Task 5-8** is a complete implementation of the system. This working database should be issued to candidates **after** Task 4 has been submitted. Candidates **must** use this working database to complete Tasks 5-8.
- In task 15, candidates are required to research three visitor attractions in one of the listed locations. These should be chosen by the candidate but could be directed by the assessor. Research can be done using WWW, travel brochures supplied by the assessor or using other reference materials available.
- Images are required, but do not need to be of the actual attraction. Appropriate images can be downloaded, scanned, clipart. For example, any castle photograph or clipart image might be used to illustrate Edinburgh Castle.
- Additional notes follow which detail how candidate evidence is to be generated.
 - In FileMaker Pro, to get a printout of the design, candidates should adhere to the following instructions.
 - (1) Select the “Define” option from the File menu and then select the “Database” option from the sub-menu.
 - (2) Click on the Tables tab.

- (3) Highlight both tables by clicking on the name of the first table then holding down the shift key and clicking on the other table.
 - (4) Click on the Print button.
- In MS Access, to get a printout of the design, candidates should adhere to the following instructions.
 - (1) Select the “Analyze” option from the Tools menu and then select the “Documenter” option from the sub-menu.
 - (2) Select the table(s) required and then click Options button.
 - (3) Make sure that the following options are checked/selected:
 - Include for Table
 - Properties
 - Relationships
 - Include for Fields
 - Names, Data Types, Sizes and Properties
 - Include for Indexes
 - Names and Fields
 - (4) Click on OK
 - (5) The required table design is displayed on screen and can be printed.



- Printing Relationships in FileMaker 8.
 - (1) Select the “Define” option from the File menu and then select the “Database” option from the sub-menu.
 - (2) Click on the Relationships tab then click on the Print button.
- Printing Relationships in Access
 - (1) Open the Relationships window.
 - (2) Select the “Print Relationships” option from the File menu.

Alternatively, screendumps of the evidence would also be acceptable.

Section 1

Coursework Task

Intermediate 2 Information Systems Coursework Task 2011/2012

SimpleBreaks offers a number of holidays in a variety of European cities. Each holiday has a set departure date and length of stay in a specified hotel.

SimpleBreaks wants to store details about the holidays and the hotels in a relational database so it is easy for travel agents to answer questions from travelers such as “Which holidays do you have in Edinburgh?” or “Do you have any 4 night breaks in Barcelona?”

SimpleBreaks have designed the tables required for the database.

Hotel table

Field Name	Field Type	Field Size	Key	Format	Sample Data
Hotel Ref	Text	4	Primary Key		H101
Hotel	Text	30	No		Catalonia Inn
City	Text	20	No		Barcelona
Grade	Text	6	No		2 star
Price per Night	Number		No	Currency 0 decimal places	£40
Kilometres from airport	Number		No	1 decimal place	1.1

Holiday table

Field Name	Field Type	Field Size	Key	Format	Sample Data
Title	Text	30	Primary Key		Catalonia Caper
Destination	Text	20	No		Catalonia
Country	Text	20	No		Spain
Date of Departure	Date		No	dd/mm/yyyy	25/06/2013
Nights	Number		No		3
Hotel Ref	Text	4	Foreign Key		H101

What you have to do

	Tasks	Evidence Required
1	Using a relational database application create a new database file and set up the Holiday table and the Hotel table . You should use the design shown on the previous page.	
2	Each hotel is given a star rating which can be 1 star, 2 star, 3 star, 4 star or 5 star. Set up the Grade field in the Hotel table with a restricted choice validation check. This should be set to allow only these five options to be entered.	
3	Link the Hotel table to the Holiday table using the foreign key. Print out a copy of the relationship showing the link between the tables.	Printout/screendump of the relationship window showing the link between the two tables.
4	Print out a copy of your design for both tables in the database. This should show the field types, field sizes and validation checks. <i>(If you are unsure how to do this, your assessor will be able to help you.)</i>	Printout/screendump of the Hotel table and Holiday table design showing field types, field sizes and validation checks.

You must now submit Tasks 1-4 to your teacher/lecturer

Your teacher/lecturer will provide you with the database file **SimpleBreaks Task 5 -8**. You must use this version to complete tasks 5, 6, 7 and 8

What you have to do (continued)

	Tasks	Evidence Required
5	<p>Design and create an attractive and user friendly form/layout to display all the details for one holiday including the details of the hotel.</p> <p>Your layout should be formatted so that the name of the holiday and the name of the hotel clearly stand out.</p> <p>Produce a one page printout using this form/layout ensuring that all fieldnames and data can be clearly seen.</p>	<p>Printout of the form/layout showing all details.</p>
6	<p>Produce a printout of a report/layout showing all the holidays in Spain at 5 star hotels.</p> <p>The printout should display only the following fields: Title, Destination and Hotel</p> <p>Save your work as Task 6.</p> <p>Your name must be included in the report as a header or footer.</p>	<p>Printout of all 5 star Spanish holidays in a report/layout as specified.</p>
7	<p>Produce a printout of a report/layout showing all the hotels in the city of Paris for holidays starting in August.</p> <p>The printout should display only the following fields: Title, Destination, Hotel, Date of Departure, Nights and Kilometres from airport.</p> <p>Save your work as Task 7.</p> <p>Your name must be included in the report as a header or footer.</p>	<p>Printout of all holidays in Paris hotels starting in August in a report/layout as specified.</p>
8	<p>The manager of SimpleBreaks wants a list of all the holidays for at least 4 nights in hotels costing less than £65 per night.</p> <p>Produce a printout of a report/layout showing the appropriate list of holidays. The report data should be listed in order of length of holiday, shortest first. If there are two or more holidays of the same length they should be listed in order of price, lowest first.</p> <p>The printout should display only the following fields: Title, Nights and Price per night</p> <p>Save your work as Task 8</p> <p>Your name must be included in the report as a header or footer.</p>	<p>Sorted printout of all holidays with at least 4 nights and costing less than £65 per night in a report/layout as specified.</p>

Collect all printouts in the order they were asked for. Ensure your name and task number is printed on each report before handing to your teacher/lecturer.

SimpleBreaks is often asked about the climate in the holiday destinations. The company wants to create a graph for each destination showing the monthly temperature and rainfall throughout the year.

What you have to do (continued):

	Tasks	Evidence Required
9	<p>Note: Your teacher/lecturer will provide you with the file <i>BarcelonaData</i> containing the spreadsheet data.</p> <p>Open the file called BarcelonaData.</p> <p>You have to create a single graph that shows the temperature as a bar graph and rainfall as a line graph for each month in Barcelona.</p> <p>Your graph should include clearly labelled axes, a suitable title and a key which indicates which part of the graph shows temperature and which part shows the rainfall.</p>	
10	<p>Print the BarcelonaData chart.</p> <p>Your name and task number must be included in the chart as a header or footer.</p>	<p>Printout of one graph, correctly labelled, showing temperature (bar chart) and rainfall (line graph).</p>

SimpleBreaks keeps track of bookings for holidays in a spreadsheet. The manager asks you to update the spreadsheet to calculate the total cost of the booking and how much has to be paid as a deposit.

What you have to do (continued)

	Tasks	Evidence Required
11	<p>Note: Your teacher/lecturer will provide you with the file <i>BookingSS</i> containing the spreadsheet data.</p> <p>Open the file called BookingSS.</p> <p>Enter a suitable formula in column H to automatically calculate the total cost of each booking. This is calculated by multiplying the number of people travelling by the price per night by the length of stay.</p>	
12	<p>If the Total cost of booking is £500 or more, then a 20% deposit must be paid, otherwise a 40% deposit must be paid.</p> <p>Enter a suitable formula in column I to automatically calculate the amount of deposit to be paid.</p>	

The manager wants a list of bookings for the Hotel Ref H133.

What you have to do (continued)

	Tasks	Evidence Required
13	Filter the spreadsheet data to show only the bookings for Hotel H133.	
14	<p>Print two copies of your spreadsheet – one showing the answers and another showing the formula used.</p> <p>Your printouts must include the column and row headings.</p> <p>Your name and task number must be included in the printouts as a header or footer.</p>	<p>Two printouts of spreadsheet – one showing booking details for hotel H133 and one showing formulas used.</p>

Holidaymakers often ask questions about things to do or places to see in their holiday destination. SimpleBreaks asks you to research some tourist attractions in one destination and create a single page printed leaflet which tourists can take with them on their holiday.

What you have to do (continued):

15	<p>Select one destination from those offered by SimpleBreaks – Barcelona, Berlin, Madrid, Paris, London, Lisbon, Rome, Edinburgh or Dublin.</p> <p>Using suitable resources, research three things to do or places to visit in that destination. As well as finding a few lines of facts for each visitor attraction, you should also find a picture to illustrate each visitor attraction.</p>	
16	<p>Create a single page leaflet by</p> <ul style="list-style-type: none"> • entering the city destination as the title and the sub headings for each visitor attraction • formatting the titles and subtitles using a suitable font, size and style • entering the facts for each visitor attraction • inserting a picture illustrating each visitor attraction • formatting the body text using a suitable font, size and style • adding a border around the facts and picture for each visitor attraction. 	
17	<p>Print the completed leaflet</p> <p>Your name and task number must be included in the printout as a header or footer.</p>	<p>One single page printout as specified showing 3 visitor attractions.</p>

(30 marks)

Collect all printouts in the order they were asked for. Ensure your name and task number is on each printout before handing to your teacher/lecturer.

Section 2

Marking Information

Marking Grid

Name _____ Date _____

Topic		Possible Marks	Marks Gained	Comment
Task 1–4	Create the database	Creation of tables	3,2,1,0	
		Restricted Choice	1,0	
		Link tables	1,0	
Task 5	Form/Layout	Printed Layout	2,1,0	
Task 6	Report	Correct Search	1,0	
		Correct Report Printed	1,0	
Task 7	Report	Correct Search	1,0	
		Correct Report Printed	1,0	
Task 8	Report	Correct Search	1,0	
		Correct Sort	2,1,0	
		Correct Report Printed	1,0	
Tasks 9–10	Chart	Correct Chart Printed	3,2,1,0	
Tasks 11–14	Spreadsheet	Calculate Total Cost	1,0	
		Calculate Deposit	3,2,1,0	
		Filter Results	1,0	
		Print	1,0	
Tasks 15–17	Leaflet	Research Facts	1,0	
		Include Pictures	1,0	
		Formatted Leaflet	3,2,1,0	
All	Printouts	Name and Task	1,0	
Overall Total			30	

Appendix 1

Detailed Marking Instructions

CONFIDENTIAL – not to be issued to candidates
Detailed Marking Guidelines

The following guidelines assume that all work was carried out by the candidate on their own (or with the assistance of open book materials). Any assistance by the assessor should be reflected in a reduction of the number of marks awarded.

Tasks 1-4	Create the database	Creation of tables	3,2,1,0	Accurate creation of <ul style="list-style-type: none"> all tables and field names and PKs (1 mark) all field types and sizes (1 mark) all formatting (1 mark)
		Restricted Choice	1,0	Grade set to restricted choice – only 1 star, 2 star, 3 star, 4 star, 5 star values accepted
		Link tables	1,0	Tables linked without teacher help using Hotel Ref
Task 5	Form/ Layout	Printed Layout	2,1,0	<ul style="list-style-type: none"> One page layout created without help. All fields from both tables should be clearly visible. (Hotel Ref should only appear once) (1 mark) Appropriate design with Holiday name and Hotel name standing out using larger size or different style or colour etc (1 mark)
Task 6	Report	Correct Search	1,0	Complex search for <ul style="list-style-type: none"> Country is Spain Grade is 5 star
		Correct Report Printed	1,0	Title, Destination and Hotel fields included and clearly visible.
Task 7	Report	Correct Search	1,0	Complex search for <ul style="list-style-type: none"> City is Paris Month is August
		Correct Report Printed	1,0	Title, Destination, Hotel, Date of Departure, Nights and Kilometres from Airport fields included and clearly visible.
Task 8	Report	Correct Search	1,0	Complex search for <ul style="list-style-type: none"> Nights greater than or equal to 4 Price per night less than 65
		Correct Sort	2,1,0	Complex sort (2 marks) <ul style="list-style-type: none"> Nights ascending And Price per night ascending Simple sort (1 mark) Otherwise (0 mark)
		Correct Report Printed	1,0	Title, Nights and Price per night fields included and clearly visible.

Tasks 9-10	Chart	Correct Chart Printed	3,2,1,0	<p>Correct Graph</p> <ul style="list-style-type: none"> • Single graph showing temperature as bar graph and rainfall as line graph (2 marks) • Legend, Title and labelled X and Y axes (1 mark) <i>only need 1 Y axis labelled</i> • 2 separate but correct graphs with labels etc 1 mark only
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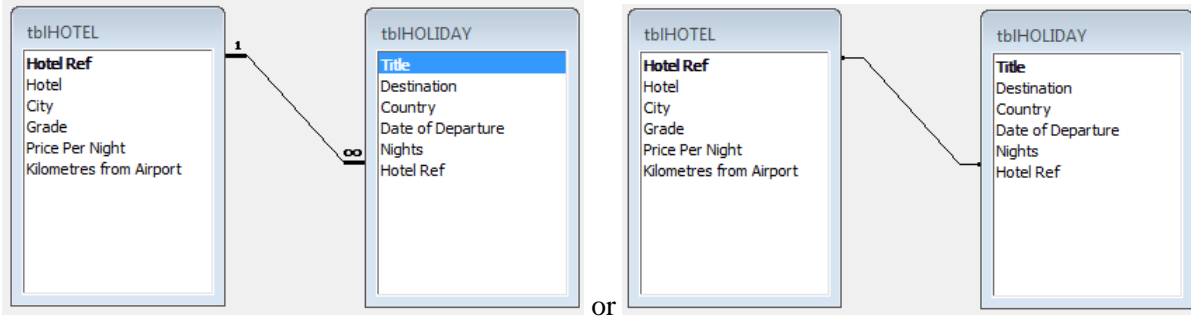
Tasks 11-14	Spreadsheet	Calculate Total Cost	1,0	<p>=E2*F2*G2 Replicated down column correctly =SUM(E2*F2*G2) – 0 marks</p>
		Calculate Deposit	3,2,1,0	<p>=IF(H2>=500,20%*H2,40%*H2) Replicated down column correctly.</p> <p>Correct condition (1 mark) Correct TRUE calculation (1 mark) Correct FALSE calculation (1 mark)</p> <p>Other correct formulas acceptable such as =(H2<500,40%*H2,20%*H2) =(H2>=500,0.20* H2,0.40*H2)</p>
		Filter Results	1,0	<p>Only bookings for H133 visible in rows 17, 18, 58, 59 Other rows not visible but not deleted.</p>
		Print	1,0	<p>One printed version showing answers to formula calculations and filter results with row/column headings visible and one printed version showing formulas used.</p>

Tasks 15-17	Leaflet	Research Facts	1,0	<ul style="list-style-type: none"> • Enter relevant facts on 3 attractions for one destination
		Include Pictures	1,0	<ul style="list-style-type: none"> • Insert suitable picture of visitor attraction
		Formatted Leaflet	3,2,1,0	<p>Formatted as specified</p> <ul style="list-style-type: none"> • Title and 3 subheadings in suitable and consistent font, size, style (1 mark) • Body text with appropriate and consistent font, size, style (1 mark) • Borders included (1 mark)

Tasks 6, 7, 8 and 10, 14, 17	Printouts	Name and Task	1,0	All printouts include printed name and task number in header or footer
		Total Marks	30	

Sample Solutions

Task 3 - Relationship



Task 5

Example A - 2 marks

Good consideration of design, all fields visible.

Holiday name and hotel name clearly stand out using appropriate feature.

Catalonia Caper Catalonia
Spain

Date of Departure: 25/06/2013 Nights: 3

Hotel Ref: H101 Hotel: Catalonia Inn 2 star Price Per Night: £40
Barcelona

Kilometres from Airport: 11.1

Example B - 1 mark.

No consideration of design or highlighting as specified, but all fields included and visible.

Title	Destination	Country	Date of Departure	Nights
Catalonia Caper	Catalonia	Spain	25/06/2013	3
Hotel Ref	Hotel	City	Grade	
H101	Catalonia Inn	Barcelona	2 star	
Price Per Night	Kilometres from Airport			
£40	11.1			

Task 6 – 7 records

5 star holidays in Spain

A Candidate

Title	Destination	Hotel
Spanish Luxury	Catalonia	Casa Luxor
Spanish Beach	Catalonia	Villa Grande
Spanish Sun	Catalonia	Villa Grande
Spanish Siesta	Madrid	Hotel Tranquilo
Glorious Spain	Madrid	Hotel Tranquilo
Madrid City Break	Madrid	Hotel Tranquilo
Madrid Attractions	Argüelles	Hotel Tranquilo

Task 7 – 6 records

Holidays in Paris hotels starting in August

A Candidate

Title	Destination	Hotel	Date of Departure	Nights	Kilometres from Airport
Paris on a budget	Ile De France	Napolean Ville	01/08/2013	3	18.3
French Attractions	Ile De France	Maison De Jean	08/08/2013	4	17.7
France Fantastic	Ile De France	Hotel Saint-Jean	16/08/2013	5	18.0
La vie française	Ile De France	Hotel Saint-Jean	03/08/2013	5	18.0
Paris Package	Quartier Latin	Hotel Saint-Jean	02/08/2013	5	18.0
Paris Luxury	Champs Élysées	Champs-Elysees Star Residence	23/08/2013	2	19.0

Task 8 – 20 records

Holidays costing less than £65 per night for at least 4 nights

A Candidate

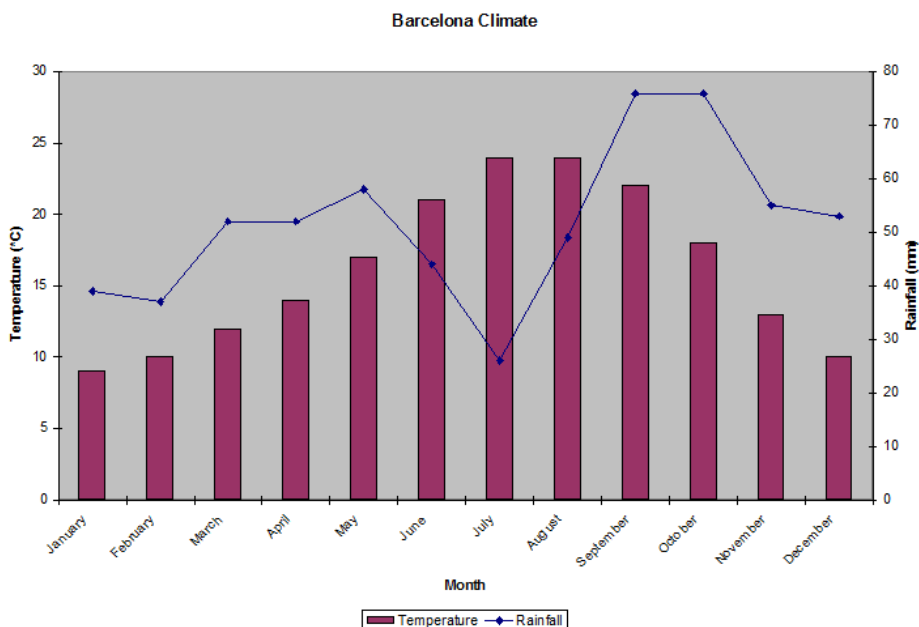
Title	Nights	Price Per Night
French Attractions	4	£35
London Traveller	4	£47
Sorbonne Special	4	£48
Old England	4	£55
Green Ireland	4	£55
Scottish Glory	4	£57
Geloland	4	£58
Scenic Scotland	4	£59
Beautiful Berlin	4	£60
Roman Route	4	£64
Vibrant Paris	5	£35
Italy Package	5	£45
Seven Hills	5	£55
France Fantastic	5	£59
La vie française	5	£59
Paris Package	5	£59
Germany Afresh	5	£60
French Experience	6	£59
Lisbon Package	6	£62
Madrid Summer Madness	7	£62

Task 9 – Single graph showing temperature and rainfall, correctly labelled

Example 1 – 2 marks

Single graph, title included and labelled axes (temperature left & rainfall right)

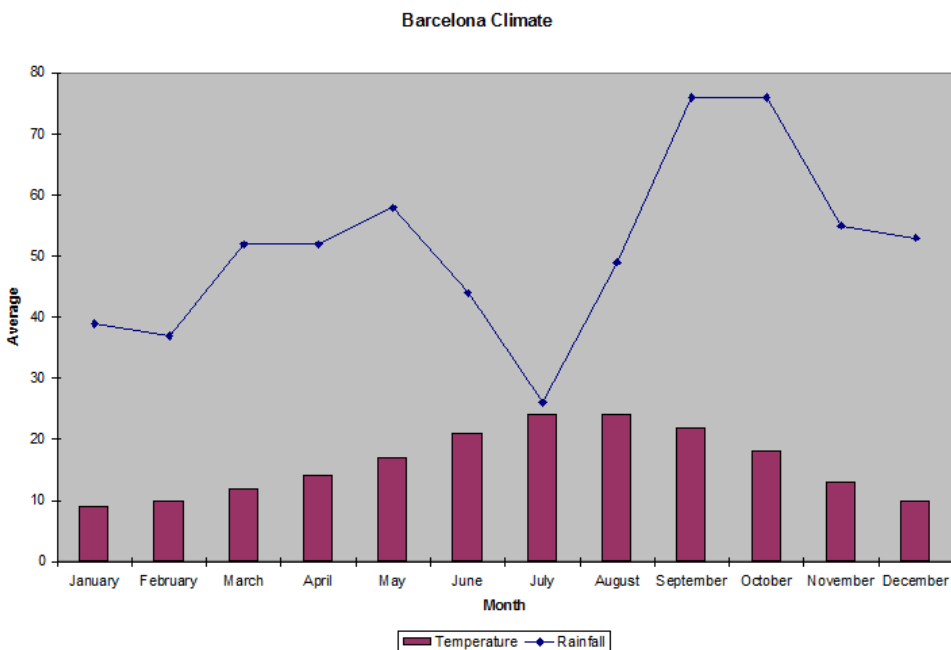
A Candidate
Task 10



Example 2 – 2 marks

Single graph, title included and labelled axes (both averages left axes)

A Candidate
Task 10



Task 14: Answers

Spreadsheet showing result of calculations

A Candidate
Task 14

	A	B	C	D	E	F	G	H	I
1	Booking ref	Holiday	Hotel Ref	Customer	Length of stay	Price per person per night	Number of People	Total cost of booking	Deposit to be paid
17	A153	Edinburgh City Break	H 133	Yates	2	65	2 €	260.00 €	104.00
18	A173	Edinburgh City Break	H 133	Macdonald	2	65	4 €	520.00 €	104.00
58	A154	Scotland Attractions	H 133	Kidd	5	65	3 €	975.00 €	195.00
59	A174	Scotland Attractions	H 133	Herman	5	65	8 €	2,600.00 €	520.00

Spreadsheet showing formula used for calculations

A Candidate
Task 14

	A	B	C	D	E	F	G	H	I
1	Booking ref	Holiday	Hotel Ref	Customer	Length of stay	Price per person per night	Number of People	Total cost of booking	Deposit to be paid
17	A153	Edinburgh City Break	H133	Yates	2	65	2	=E17*F17*G17	=IF(H17>=500,H17*20%,H17*40%)
18	A173	Edinburgh City Break	H133	Macdonald	2	65	4	=E18*F18*G18	=IF(H18>=500,H18*20%,H18*40%)
58	A154	Scotland Attractions	H133	Kidd	5	65	3	=E58*F58*G58	=IF(H58>=500,H58*20%,H58*40%)
59	A174	Scotland Attractions	H133	Herman	5	65	8	=E59*F59*G59	=IF(H59>=500,H59*20%,H59*40%)

Task 17 – Leaflet

Any suitable layout – some examples shown below

