



Computer Applications Olympiad



COZACARES
FOUNDATION
Enabling ICT in Education

A project of the Institute of IT Professionals South Africa, sponsored by ZACR/UniForumSA
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COMPUTER APPLICATIONS OLYMPIAD FINALS 2014

PART 2: [4 Hours]

SANParks asked you to do some research for them and to develop various documents to entice tourists to their parks, generate game reports and facilitate bookings.

1. You may produce the material in any order.
2. It is important that you submit something in each of the five categories.
3. Check the mark allocation and invest your time accordingly.
4. It is important to save every step of your work for later evaluation.
5. The rules are similar to those for a matric paper and include such items as:
 - No communication with each other or the outside world.
 - No electronic devices such as flash drives, iPods, phones etc.
 - Do nothing to disturb other participants.
 - Ask permission to get up and leave your station.
6. Before you hand in, please ensure that you have saved the following files:
 - Flyer
 - Bookings
 - Game Sightings
 - Personalised Invoice
 - Reports

A: ATTRACT TOURISTS

1. Produce a booklet – the best you can - that can be handed to tourists as they leave Ingonyama Camp in the morning to tell them where specific game was spotted previously.
2. The booklet is printed on one side of an A4 page, then folded to A5 and again folded to make an A6 booklet (A6 = 148mm x 105mm), as the example provided.
3. The covers are permanent, but page 1 and page 2 are adapted every morning and contain the information where game may be found.

4. You should use the information and illustrations from the web sites and blog supplied to you for material for the front and back cover and to populate pages 1 and 2. You have access to the following:

www.mavela.co.za

www.kariega.co.za

<http://www.moriti.co.za/kruger-park-sightings/>

<http://blog.londolozzi.com/weekly-updates/>

Note: the following will be evaluated

- Selecting and successfully incorporating various elements
- Providing relevant information effectively
- Formatting and layout.
(Partial solutions will be evaluated.)

[10 points]

B: BOOKINGS

Scenario:

The reservations officer for the “Ingonyama Camp” has requested your help in determining possible conflict in bookings as well as possible income for his accommodation complex. All the bookings for the accommodation complex covering a period of 2 weeks have been supplied. The information contains the date of arrival, date of departure and the number of beds required.

Task:

Use the information in the workbook “**SpeadsheetAnalysis**” to do the following:

- 1) Format the cells using appropriate formatting. Column A and B as well as cells E1 to L1 contain dates. You don't have to follow the formatting shown below or in the sample but whatever formatting you choose the document must be readable and show appropriate and helpful information.
- 2) Insert a formula which will calculate the number of nights (Column C) required in the booking.
- 3) Sort the data by arrival date, number of nights and number of beds required.
- 4) Insert an appropriate formula into cells E3 to L101. which will insert the number of beds required for the night indicated in row 1, i.e. if 3 people need accommodation on the 1st and 2nd July then the number 3 must appear in the row under the dates for the 1st and 2nd July. You must only calculate the accommodation requirements for the period from 2nd July to the 9th July. If a booking overlaps with this period then only the overlapping part must be shown. See the diagram below.

	A	B	C	D	E	F	G	H	I	J	K	L
1					Wed 2 July	Thu 3 July	Fri 4 July	Sat 5 July	Sun 6 July	Mon 7 July	Tue 8 July	Wed 9 July
2	In	Out	nights	persons								
3	04-Jul	06-Jul	2	2			2	2				
4	02-Jul	09-Jul	7	4	4	4	4	4	4	4	4	
5	26-Jun	03-Jul	7	6	6							
6	05-Jul	07-Jul	2	3				3	3			
7	09-Jul	13-Jul	4	3								3
8	26-Jun	29-Jun	3	2								
9	03-Jul	06-Jul	3	3		3	3	3				
10	08-Jul	12-Jul	4	3							3	3
11	07-Jul	09-Jul	2	2						2	2	
12	05-Jul	09-Jul	4	2				2	2	2	2	
13	30-Jun	05-Jul	5	2	2	2	2					
14	27-Jun	03-Jul	6	2	2							
15	07-Jul	09-Jul	2	3						3	3	

- 5) The complex has three types of units; some with 2 beds, some with 4 beds and some with 6 beds. Use the “**Summary**” sheet to calculate the following for each of the days from 2nd July to 9th July:
- The number of each type of unit required on each of the nights. A request for 1 or 2 people is accommodated in a 2 bed unit, a request for 3 or 4 in a 4 bed unit and 5 or 6 persons in a 6 bed unit.
 - Calculate the potential income for each day given that there is a maximum number of units available and the cost of each unit. The maximum number of units and the cost per unit can be found in the table on the “**Summary**” sheet.
- 6) Produce a chart showing the number of each type of unit required on each day, as well as the potential total income for each day. All information should appear on a single chart using a secondary axis for the income. An example is shown on the “**Summary**” sheet. Save your chart as a new worksheet called “**Unit Usage Chart**”

Notes:

- Formatting and layout will be evaluated.
- Where results can be obtained by various means, the most efficient method, as decided by the judges, will score more highly.
- Partial solutions will be evaluated.
- If you wish to complete the task and you are not able to do part 4, you may use the sheet labelled “**Sample**” or you may type the values into your table.

[20 points]

C: GAME SIGHTINGS

Task:

There are two tasks in this section

1. Create a database table and import a data file
2. Create a data capture form

1. Create a database table and import a data file

Create a new database called “**GameSightings**”.

In this database you will need to create a table called “**Sightings**” that will be populated with the data in the text file called “**Sightings.txt**”. Ensure that the fields in the database table are appropriately defined.

As some records in the text file might contain errors or there might be duplicate records you should first check the data file and as far as possible correct the errors. Do not delete any records from the text file unless they are duplicate records.

Should you wish to, you can normalise the database by including other related tables.

In the table add a field that will enable a single photograph to be captured.

[10 points]

2. Create a data capture form

Having created the database and populated it with data you now need to create an appropriately designed form that can be used to capture the details of a new sighting. Refer to the requirements below as you may need to modify the database before creating the capture form.

The capture form must include all the fields on the “**Sightings**” table.

Note the following:

- The field containing the contact number should include an appropriate input mask.
- The field containing the animal sighted should be a drop down field that contains the names of those of the Big-5 animals already in the database.
- The field containing the reporting date should automatically contain the date on which the sighting is captured and no data entry should be allowed.
- The field containing the date on which the sighting was made should be a date-picker field and should also check that the sighting date is before the reporting date.
- The fields for the number of adults and young sighted should restrict values to between 1 and 25.
- The field containing the description should allow for someone to write an entry containing up to 500 characters.

- Often when big game is sighted there are other smaller animals in the vicinity. The form should make provision for the person capturing the data to check off which of those listed was also spotted.

On completion you need to capture the following information:

Sighting 1	
Name	Boyle, Dorothy X.
Contact Number	(716) 668 3348
Country	Bosnia and Herzegovina
e-mail address	nibh@ultrices.org
Animal sighted	Lion
Date sighted	5 June 2014
Number of adults sighted	25
Smaller game sighted	Springbok, Warthog
Picture	One of the lion pictures
Sighting 2	
Name	Gray, Lavinia Q.
Contact Number	(081) 336 3275
Country	Nicaragua
e-mail address	eget@augue.org
Animal sighted	Elephant
Date sighted	12 March 2014
Number of young sighted	5
Smaller game sighted	Zebra, Wild Dogs, Springbok
Picture	One of the elephant pictures

Notes:

- Form design and aesthetics will be evaluated.
- Partial solutions will be evaluated.

[10 points]

D: PERSONALISED INVOICE

Scenario:

When each party checks out of the camp, they are presented with a personalised invoice showing a detailed list of all the charges that occurred during their stay.

Task:

Using the text file "**GuestInvoice.txt**" and the MS Word document "**GuestInvoice.docx**" create a mail merge that will allow the duty manager to print a personalised invoice for each guest.

[10 points]

E: REPORTS

Task:

Use the database "**CampReports**" to create the following reports:

1. Current Guest List
2. Total Referrals
3. Payment Report
4. Checked Out Report
5. Reservation Report

Printed examples of the reports are provided

[10 points]

Before you hand in, please ensure that you have saved the following files:

- Attracting Tourists
- Bookings
- Game Sightings
- Personalised Invoice
- Reports