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SUBJECT	Information Technology	DATE	July 2015
GRADE	12	MARKS	120
EXAMINER	Mrs Kench	MODERATOR	Mrs Gill
NAME		DURATION	3 hours
CLASS			

COGNITIVE LEVELS			
LOW ORDER	30 %	MIDDLE ORDER	40 %
		HIGH ORDER	30 %

STUDENT'S RESULT COMMENT	
TEACHER'S SIGNATURE PARENT'S SIGNATURE	

SECTION A: SQL**40 MARKS****Table designs:****tblCarnivores**

Field Name	Data Type
EnclosureNo	Short Text
FamilyName	Short Text
ScientificName	Short Text
GeneralName	Short Text
NumAdults	Number
NumYoung	Number
EnclosureSize	Number
Endangered	Short Text

tblCarnivores							
EnclosureNo	FamilyName	ScientificName	GeneralName	NumAdults	NumYoung	EnclosureSize	Endangered
ZA1	Felidae	Acinonyx jubatus	Cheetah	2	1	50	VU
ZA2	Felidae	Caracal caracal	Caracal	2	2	36	LE
ZA5	Felidae	Felis nigripes	Black-footed cat	2	0	36	VU
ZA9	Felidae	Felis silvestris	Wildcat	3	3	36	LE
ZB2	Felidae	Leptailurus serval	Serval	3	5	80	LE
ZB5	Felidae	Panthera pardus	Leopard	3	3	700	LE
ZB6	Felidae	Panthera leo	Lion	4	2	800	VU
ZB9	Viverridae	Civettictis civetta	African civet	3	0	50	LE
ZC2	Viverridae	Genetta tigrina	Cape genet	8	1	50	LE
ZC3	Viverridae	Genetta genetta	Common genet	6	2	50	LE
ZC5	Viverridae	Genetta maculata	Rusty-spotted genet	3	2	50	LE
ZD1	Herpestidae	Atilax paludinosus	Marsh mongoose	2	3	34	LE
ZD10	Herpestidae	Mungos mungo	Banded mongoose	2	3	40	LE
ZD2	Herpestidae	Cynictis penicillata	Yellow mongoose	2	6	44	LE

tblVetVisits

Field Name	Data Type
VisitID	AutoNumber
VisitDate	Date/Time
EnclosureNo	Short Text
ReasonForVisit	Short Text
FollowUp	Yes/No
Animal_ID	Short Text

Visit	VisitDate	Enclosure	ReasonForVisit	FollowUp	Animal
1	2012-09-20	ZA1	Skin problem	☒	ZA1_9
2	2012-09-20	ZC2	Routine check-up	☐	ZC2_3
3	2012-09-20	ZC3	Injured eye	☒	ZC3_8
4	2012-09-20	ZD4	Routine check-up	☐	ZD4_2
5	2012-09-20	ZA5	Routine check-up	☐	ZA5_2
6	2012-09-20	ZB6	Routine check-up	☐	ZB6_6
7	2012-09-20	ZA9	Ear infection	☒	ZA9_2
8	2012-09-20	ZB5	Routine check-up	☐	ZB5_3
9	2012-09-20	ZB2	Fever	☒	ZB2_8
10	2012-09-20	ZD10	Skin problem	☒	ZD10_9

QUESTION 1

- 1.1 List all the visits to the vets sorted according to enclosure number and then by the most recent date. (4)

select *

from tblvetvisits

order by enclosureno, visitdate desc;

- 1.2 List all the vet visits that occurred in 2012 and had a follow up visit. Show only the date of the visit, the reason for the visit and the follow up fields. (5)

SELECT VisitDate, ReasonForVisit, FollowUp

FROM tblvetvisits

WHERE year(VisitDate) = 2012 AND followUp = true

- 1.3 Write a SQL statement to count the number of animals in each family type. Rename this field as FamilyCount. Display the name of the family and the FamilyCount. (5)

SELECT familyname, count(*) as FamilyType

FROM tblCarnivores

GROUP BY familyname

- 1.4 Determine the total number of animals young and adult in each family type. Only display those families with more than 30 animals of each family type. (7)

SELECT sum(numAdults + numYoung) as NumAnimals

FROM tblcarnivores

GROUP BY FamilyName

HAVING NumAnimals > 30;

- 1.5 Add a visit to the vet for animal ZA1_9 from enclosure ZA1 who has a runny nose using today's date. Ensure that the SQL statement will be able to run should the date change. (4)

```
INSERT INTO zoodb.tblvetvisits (`VisitDate`, `EnclosureNo`, `ReasonForVisit`, `FollowUp`,
`Animal_ID`) ✓✓
```

```
VALUES (now()✓, 'ZA1', 'Runny nose', false, 'ZA1_9'); ✓
```

- 1.6 Generate a code for the vet visits. Use the last letter of the enclosure number followed by the month, the day and then the second and third letter of the reason for the visit. For example the code for the vet visit ID =1 will be: 1920ki. (5)

```
SELECT concat(✓(right(enclosureno,1), ✓month(visitdate), ✓day(visitdate),
✓mid(reasonforvisit,2,2)) ✓as code
```

```
FROM tblvetvisits
```

- 1.7 The zoo is considering combining enclosures. Enclosures with the same first two characters will be combined. For example ZA1, ZA2, ZA5 and ZA9 will be combined. Write a SQL statement to determine the average size of each enclosure that will be combined. The result of the query should display the table below. (6)

```
SELECT LEFT(enclosureno,2) as CombinedEnclosure, ✓ AVG(Enclosuresize) ✓ as
AveSize ✓
```

```
FROM tblcarnivores
```

```
GROUP BY ✓ LEFT ✓ (enclosureNo,2); ✓
```

#	CombinedEnclosure	AveSize
1	ZA	39.5000
2	ZB	407.5000
3	ZC	50.0000
4	ZD	38.5000

- 1.8 The Africa Civet has had 4 babies. Code a SQL statement to reflect this change. (4)

```
UPDATE tblCarnivores ✓
```

```
SET numyoung = 4 ✓
```

```
WHERE GeneralName = 'African Civet' ✓✓
```