Blog Assignment No. 4 for Summer Vacations for class 11

Q1: Describe four methods used for automatic data capture. Give a different application for each of the methods chosen.

Q2: A record contains the following fields:

- Title (Mr/Mrs/Miss) and Sex (Male or Female)

- Date of birth (written in the form dd/mm/yyyy)

- Pay Number (which is made up of 8 digits)

- Telephone Number

- Pay

Give a different validation check for each of the above fields and explain why it is used.

Q3. A system uses the ISBN-10 (modulo 11) method to generate and validate bar codes: - each digit in the number is multiplied by its digit position - the result of each multiplication is added to a total - the total is then divided by 11 - the remainder is subtracted from 11 to give the check digit (if the remainder is 10, the letter “X” is used as the check digit)

(a) Which of the following numbers have the correct check digit?

(i) 0 – 5 5 5 – 2 1 6 2 2 – 5 (ii) 0 – 1 2 1 – 9 0 0 2 1 – X

(b) Calculate the check digit for the following number:

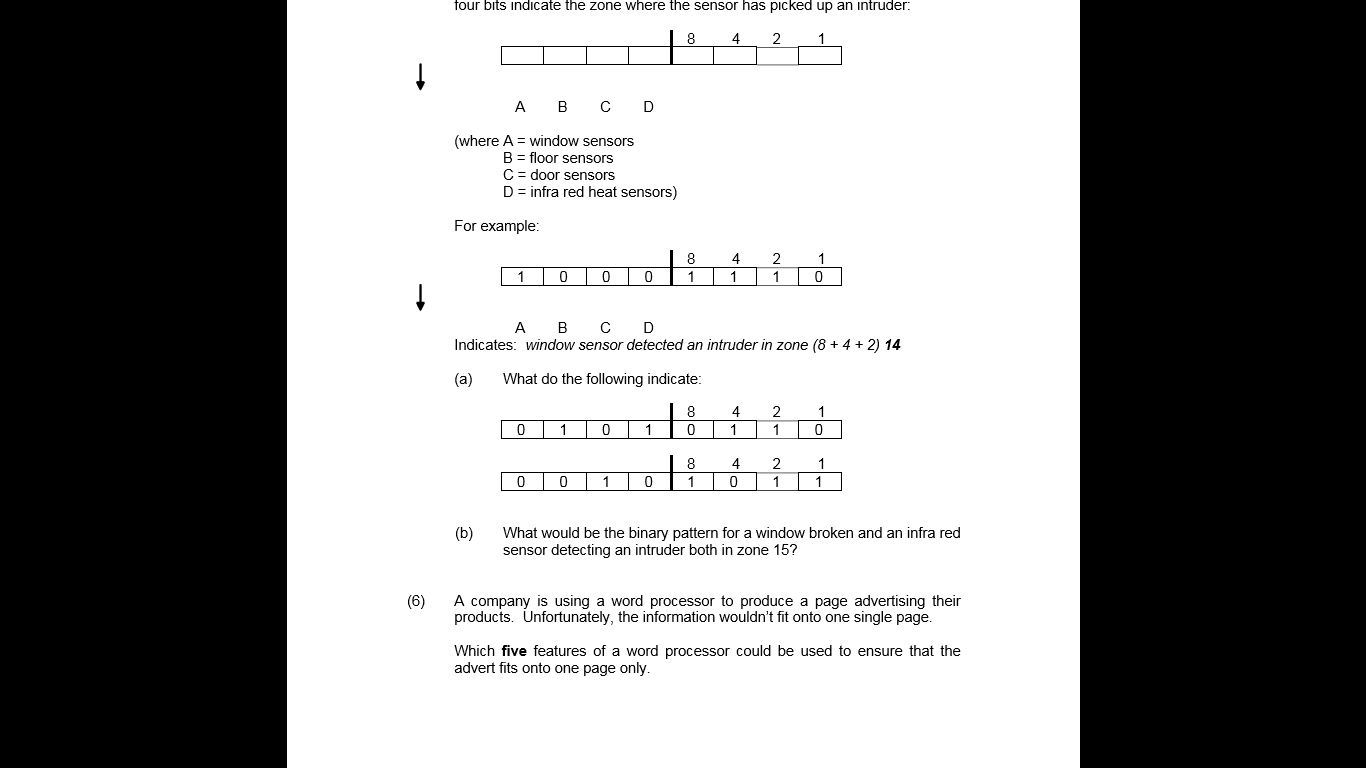
0 – 1 5 0 – 2 4 6 2 2 – ………

(c) Discuss the types of errors that check digits can identify.

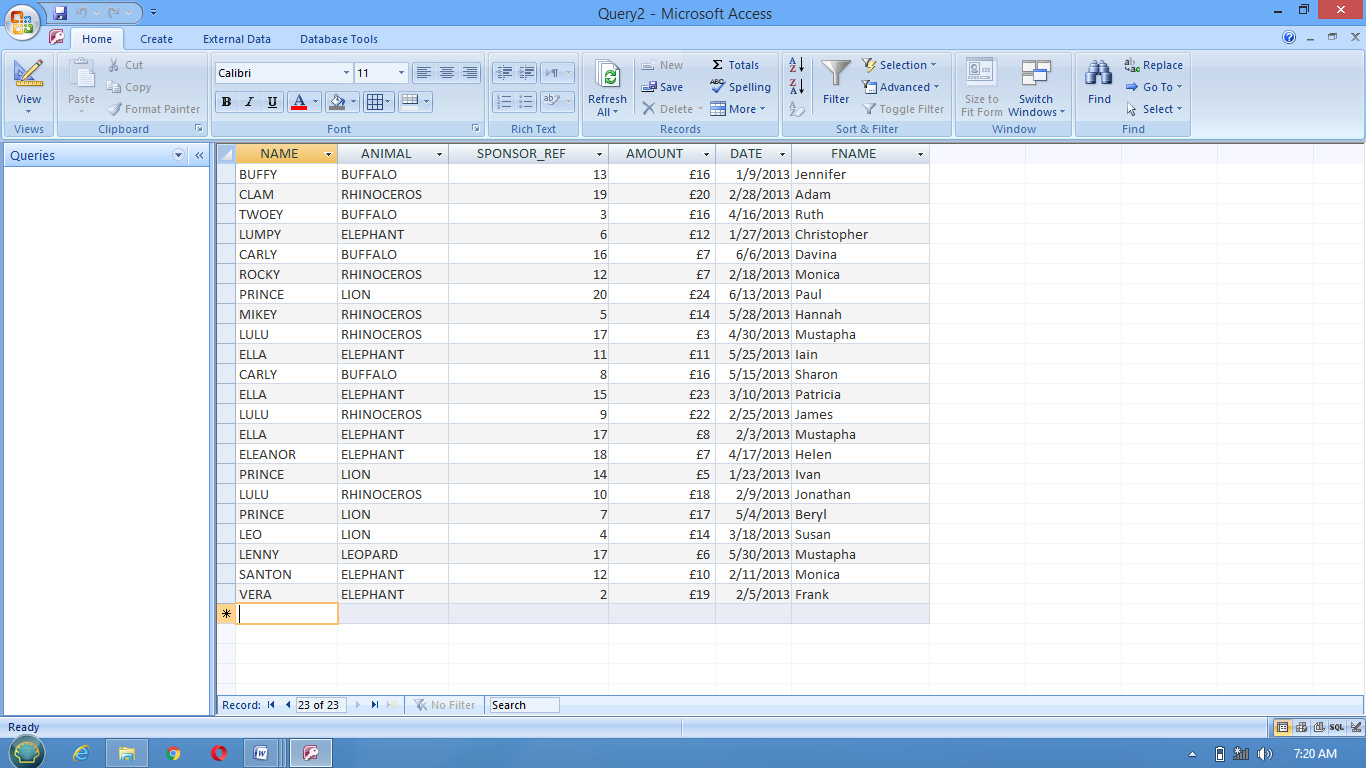
Q4: (a) Describe three ways of carrying out verification checks.

(b) Give two examples where verification checks would be made.

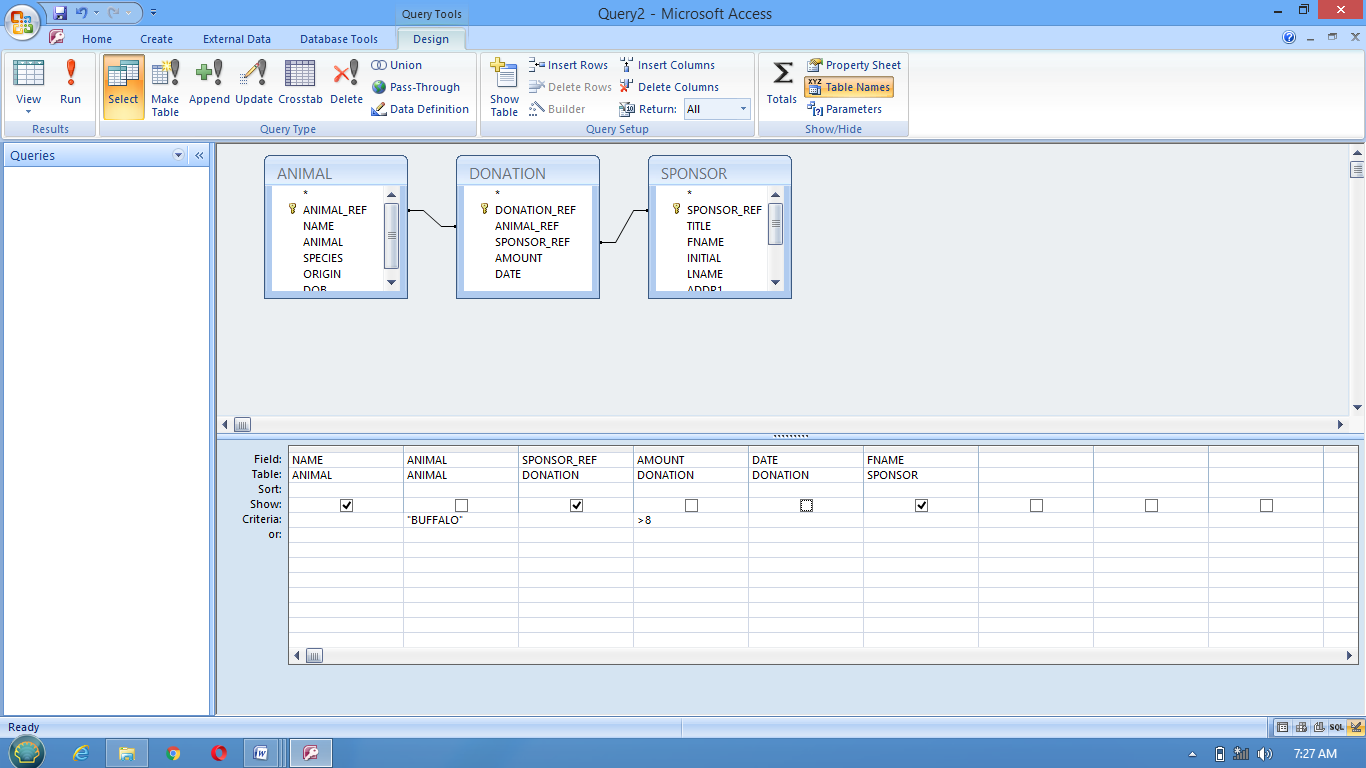
Q5: A burglar alarm system uses an 8 – bit register. The first 4 bits indicate if a sensor has picked up an intruder (shown with a 1 – value) and the second four bits indicate the zone where the sensor has picked up an intruder:



Q1:A database, DONATION, was set up to record the information of sponsors of different animals . Part of the database is shown below.

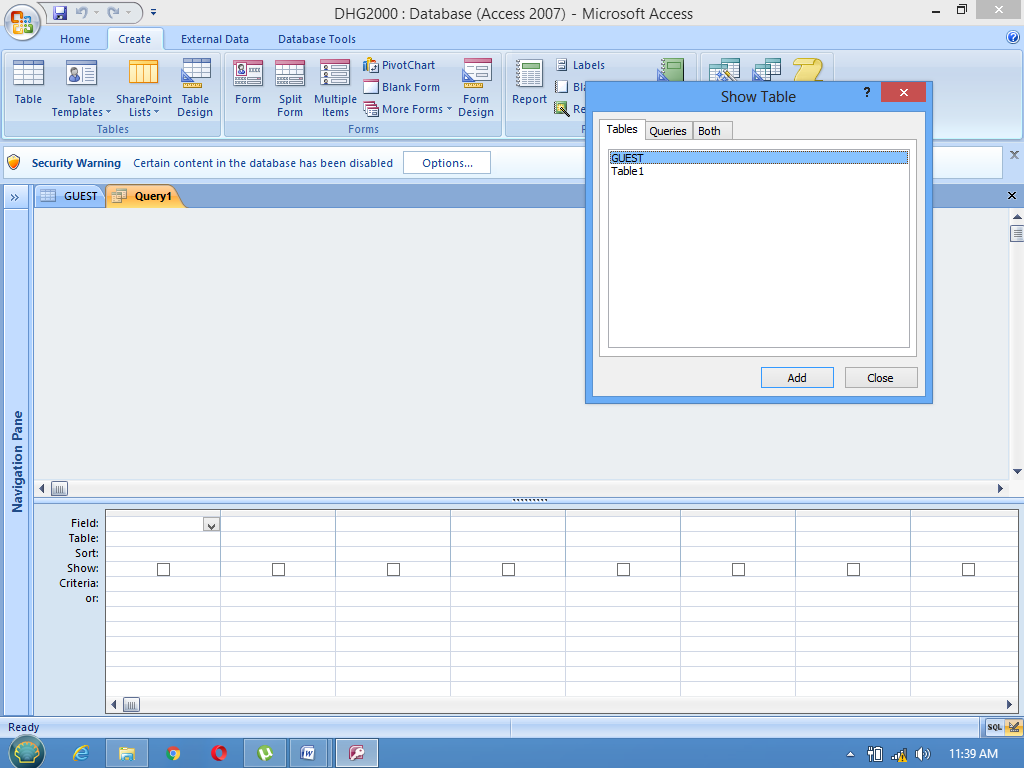


1. Give the number of fields that are in each record. /1
2. State which field you would choose for the primary key. /1
3. The query-by-example grid below selects all buffalos with more than $8. /6



Show what would be output.

1. Complete the query-by-example grid below to select and show the reference numbers and first names of all the sponsors who donate for lions. /3



1. What can be the data types of following fields: /4

NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ANIMAL \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SPONSOR\_REF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AMOUNT \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q2

