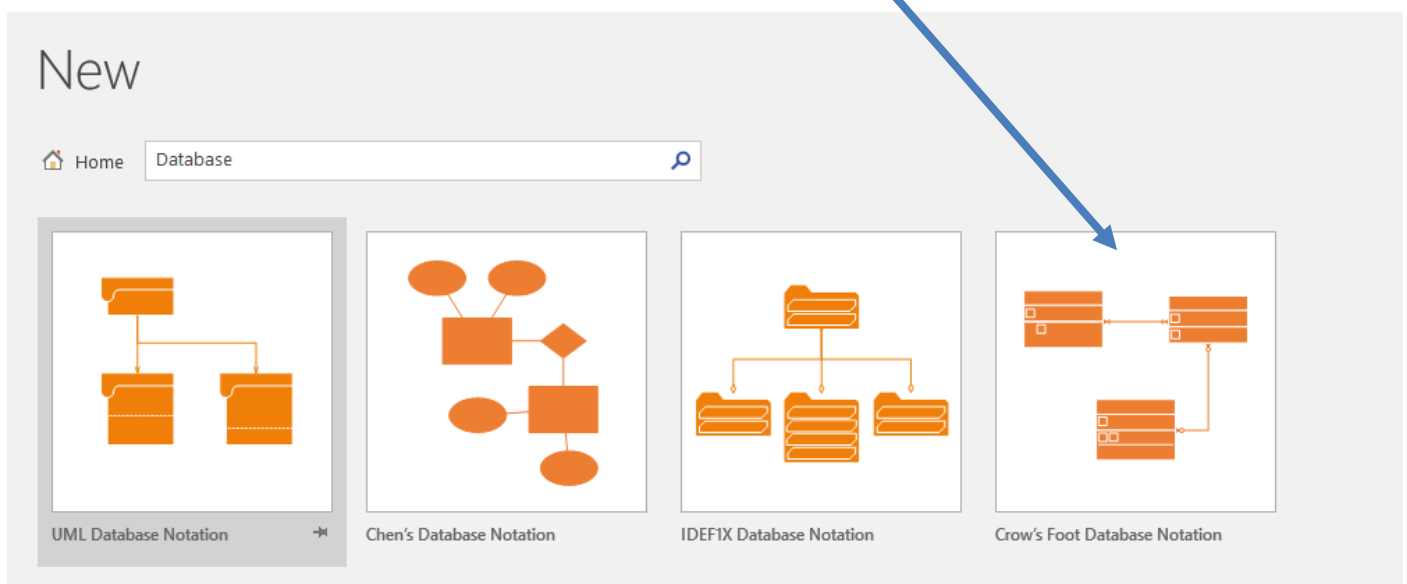


S2.4: NORMALISATION 1

First Normal Form (1NF)

Today we are going to concentrate on the First Normal Form. We will move onto second and third normal form next week.

Use MS Visio or similar software to draw your diagram – crow's foot database notation is best:



Tasks

1. List the four conditions of First Normal Form.
2. Read the DinoLand Museum case study.
 - a. Propose a structured table-based organisation for the gift shop that satisfies the First Normal Form conditions for the data you gather. Remember to identify the attributes first, then pick a suitable primary key attribute.
 - b. Explain and justify your steps, and the decisions you have made. You may add extra fields of data to clarify your decisions.

3. The following is a receipt and an envelope for a jewellery repair carried out in a local store in Chorley. There were two items taken in for repair (a necklace and a bracelet). Both were dropped off and collected at the same time.

Using this as a starting point, normalise this to first normal form (1NF) from the perspective of the jewellery store (not the customer – it is the store that would employ you to create the database). Explain and justify your steps, and the decisions you have made. You may add extra fields of data to clarify your decisions.

1062

MR
MRS
MISS May REP 8693

ADDRESS 46 PR999D.

Phone No. 0987506803

Nature Of Repair act fancy gate

Est to Rep - Piece missing

left message 28/11/15

Date Rec. <u>2/10</u>	Price <u>£37.50</u>
Date Req.	Phone/Calling

BURNS JEWELLERS

12a Chapel Street
Chorley, PR7 1BW
Tel: 01257 264125

BURNS JEWELLERS

Burns E-Commerce Ltd t/a Burns Jewellers
12a Chapel Street
Chorley PR7 1BW
Phone: 01257 264125
VAT Number: 221 2347 55

9001001	
JEWELLERY REPAIRS	
JEWELLERY REPAIRS	£37.50
Q: Repair Reference	
A: 8693	
9001001	
JEWELLERY REPAIRS	
JEWELLERY REPAIRS	£20.00
Q: Repair Reference	
A: 8694	

Total: £57.50

Paid By: Credit/Debit £57.50

No Change Due
Customer Information

Customer: 433840
Name: May

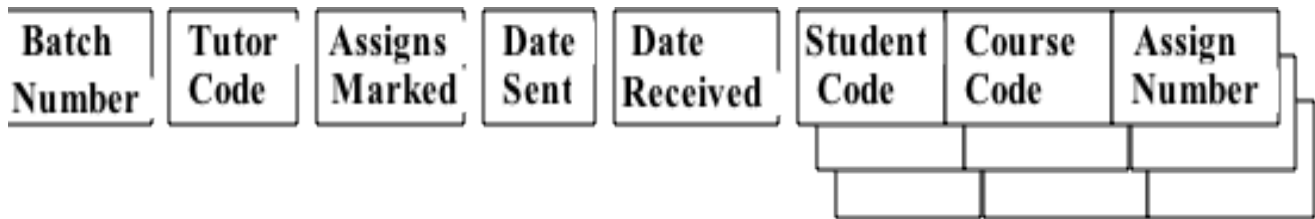
28/11/2015 12:59 004-01-17155
L12 Items: 2



Thank You - Please Call Again

THANK YOU FOR YOUR CUSTOM
We offer an exchange or credit note
on most purchases within 30 days. This
does not affect your statutory rights.

4. Below is part of a sub-system used to manage marking of assessments for a college. This system is intended to manage the handling of assignments submitted by students and posted in batches to tutors (at home) for marking.



This structure simply collects the required data into a convenient 'natural' structure. It represents a 'non-relational' view of the system.

If this structure were implemented as a table, it would appear as shown:

Batch Number	Tutor Code	Assigns Marked	Date Sent	Date Returned	Student Code	Course Code	Assign Number
23	JS	87	12/4/07	07/5/07	20071230	PR007	3
					20078001	AB003	1
					20070239	PR009	7
24	GH	91	21/09/07	15/10/07	20078001	AB003	4
					20079851	GM201	3

- a. Using this as a starting point, normalise this dataset to first normal form (1NF). Explain and justify your steps, and the decisions you have made.
5. There are 3 types of anomalies that could jeopardise the integrity of a dataset that has not been fully normalised. Explain these anomalies, using examples from this dataset.
6. Complete any work outstanding from the first 3 weeks.

Note that any work not finished in class should be completed in your own time.