Databases	Day 1
	2 hours
TUTORIAL 2 **Grouping Attributes into Entities**	

Learning Objectives

- Learn to group attributes into their logical group
- Learn the different types of keys used: Candidate Key, Primary Key, Alternate Key, Composite Key

REFERENCES
(i)   Receipt documents: NP Library Loan Receipt; Uniqlo Receipt

ACTIVITIES

Task 1 – Logically group the attributes for the documents examined
Time allotted: 60 mins

Your team is to logically group the attributes identified after examining each document and the typical queries which was done in Week 1 Tasks 2 and 3. You may ask "what is a logical grouping of attributes"?

Logical grouping refers to attributes that describe the characteristics of an object which may be physical or abstract. Any attribute that **does not** describe the object is **not** likely to belong to this logical group.

Examples:
Restaurant Branch (*restaurant name, manager, address, telephone, seating capacity, opening hours, etc*)
Delivery Charge (*minimum amount purchased, delivery charge*)
Food Item (*name of food, type of food, price of food, inventory quantity, ingredient used*)
Sales Transaction (date and time of transaction, serving staff name, name of food, type of food, quantity sold, payment mode)

Activity - for each document's identified attributes, logically group them into at least 2 or more logical groupings.

Task 2 – Looking for Unique Identifiers

Time allotted: 45 mins

2.1 How does one point to a particular record or instance of occurrence? For example, in the Fast-Food case scenario how do we identify a particular food item? The identifier used is the name of the food as within the restaurant, it is unique (in other words, no two food item will have the same name).

Another example: how does a tutor call a particular student in class? The natural way is to call by name, say "George". What if there are two boys with the name "George"?
What will be a better student identifier? Ans: _____

2.2 In DB jargon, we need to be able to identify unique records or instances of an object through the use of a "key".

The keys used are (refer to Week 2 Activity slides 2–6):

(a) Candidate Key – possible candidate attribute to be chosen as identifier
(b) Primary Key – a unique identifier for each object or entity, chosen from among one of the candidate keys
(c) Alternate Key – candidate keys that are not chosen as the Primary Key are known as alternate keys
(d) Composite Key – a combination of two or more attributes which serves as an identifier or primary key

Refer to the slides and/or your reference text to understand the different types of keys.
Provide 2 examples of these keys.

Use the template below to complete this task for each of the cases in Task 1:

Key Type	Name of Key	Brief Explanation
Candidate Key	(i) (ii)	
Primary Key	(i) (ii)	
Alternate Key	(i) (ii)	
Composite Key	(i) (ii)	

NGEE ANN
SCHOOL OF INFOCOMM TECHNOLOGY

Appendix A – NP Library Loan Receipt

SelfCheck L2

Ngee Ann Polytechnic
Lien Ying Chow Library

Customer name: CHIA KIM HEOK
Customer ID: ****9942

Title: Einstein's riddle : riddles, paradoxes, and conundrums to stretch your mind / Jeremy Stangroom.
ID: A4006105
Due: 05/11/2015 23:59

Title: Financial fraud / Balvinder Sandhu.
ID: A4532716
Due: 05/11/2015 23:59

Title: Apple Watch for dummies / by Marc Saltzman.
ID: A4624482
Due: 05/11/2015 23:59

Title: The iPhone photographer : how to take professional photographs with your iPhone / Michael Fagans.
ID: A4623517
Due: 05/11/2015 23:59

Title: Be careful what you wish for / Jeffrey Archer.
ID: A4623965
Due: 05/11/2015 23:59

Title: Ethical leadership : creating and sustaining an ethical business culture / Andrew
ID: A4692249
Due: 05/11/2015 23:59

Total items: 6
06/10/2015 13:29

Please :
- retain this receipt as proof of loan.
- report loss of Card immediately.
- feedback problems with DVDs/CDs at Circulation Counter.

THANK YOU & HAVE A NICE DAY!

NGEE ANN
SCHOOL OF INFOCOMM TECHNOLOGY

Appendix B – Uniqlo Sales Receipt

WWW.UNIQLO.COM

UNIQLO Somerset
313 Orchard Road #03-27/34
Singapore 238895
TEL:6834 4073
GST REG NO:200816544K

2000040797241 x 1		34.90 T
W's denim shorts		
2000041816897 x 1		24.90 T
W's chino shorts		
Total	2	59.80
Cash		60.00
Change		
Cash		-0.20
GST		3.91

Date   Time Store POS Empl Tran No
06/04/2013 17:27 0003   5 5236   197
You were served by CHAI LING, S

201304061727000305 0197