

Examples of Normalisation

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Normalisation

1. Remove all repeating groups
2. Ensure that all non-identifying attributes are functionally dependant on the whole of the table identifier
3. Ensure that all non-identifying attributes are mutually independent

1st Normal Form

StudentNo	Uniquely identifies a student
Surname	Student's surname
Forename	Student's forename
DateofBirth	Date they were born
CourseNo	Identifies course taken
PhoneNo	Students phone number
Qualification	Qualification completed

Courses

CourseKey	Uniquely identifies a course
Title	The title of the course
StartDate	The day the course starts
EndDate	The day the course ends
ExamBoard	The validating exam board
Tutor	The tutor teaching the course
Location	The room the course is taught in

2nd Normal Form

- Ensure that all non-identifying attributes are functionally dependant on the whole of the table identifier

Student_Grades

StudentKey	CourseKey	Final Grade	CourseTitle
Anne	S100	A	Biology
Anne	S200	B	Chemistry
Bob	S100	A	Biology
Bob	S300	C	Maths
Carol	S100	C	Biology

BookCopies

BookNo	CopyNo	Title	Author
1	1	Yoga	Smith
1	2	Yoga	Smith
2	1	Mediation	Jones
2	2	Meditation	Jones
3	1	Yoga	Harris

3rd Normal Form

- Ensure that all non-identifying attributes are mutually independent

Enrolments

<u>Enrol</u>	Student	Class	Course	Surname
E2001	S1001	B100	Biology	Peacock
E2002	S1001	C100	Chemistry	Peacock
E2003	S1002	B100	Biology	Smith
E2003	S1002	C100	Chemistry	Smith
E2004	S1003	M100	Maths	Jones

Classes

<u>Class</u>	Course	Tutor	Depart	Phone
B100	Biology	George	Botany	Ext 345
B101	Biochem	George	Botany	Ext 345
C100	Chemistry	Gina	Chemistry	Ext 456
M100	Maths	Garry	Maths	Ext 567
B102	Phytochem	Greg	Botany	Ext 346