

CHRIST (Deemed to be University)

Department of Computer Science

Master of Computer Applications

Course: MCA513-1 - Advanced Database Technologies

Exercise No: LAB Exercise – 4

Date of assignment: 24-07-2025

Date of submission: 24.07.2025

Exercise: Demonstration of Normalisation Process.

1. The following is an unnormalized PATIENT record:

(PIDNO, PNAME, FAMDOCNO, DOCNAME, DOCADDR, *(APPTMT-DATE, APPTMT-TIME, CONSULTANT-NAME-CONSULTANT-PHONE, HOSPITAL, HOSPITAL-ADDR)) where * represents repeating groups of information. The business rules are,

- On any given day, a consultant attends at just one hospital
- On any given day, a patient will have only one appointment (APPTMT) with a given consultant
- Patient id numbers (PIDNO) and consultant names are unique
- Family doctor numbers (FAMDOCNO) and hospital names are unique
- Family doctor names (DOCNAME) and patient names (PNAME) are not unique
- Consultants have just one phone number, used as home base.

Reduce the above relation into normalized forms.

2. Produce the Third Normal Form of this document by normalization.

Order Form			
Order number: 1234 Date: 11/04/98			
Customer number: 9876			
Customer name: Billy			
Customer address: 456 HighTower Street			
City-Country: Hong Kong, China			
ProductNo	Desscription	Quantity	Unit Price
A123	Pencil	100	\$3.00
B234	Eraser	200	\$1.50
C345	Sharpener	5	\$8.00

Evaluation Scheme: (Total 10 Marks)

Correctness and Demonstration	(5 marks)
Concept Clarity (Viva)	(3 marks)
Initiative & Effort (self-learning)	(2 marks)

General Instruction:

1. Create a Word document and paste all the answers. The file name should be your register number followed by lab No. Example: 2547101_Lab4
2. Upload the answer document in Google Classroom on or before the deadline mentioned.