

DBMS - Lab Assignment
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Q1.

id	name	Age	Location	Course
1	Sachin	22	Delhi	OS
1	Sachin	22	Delhi	DBMS
2	Ram	22	Jamshedpur	DAA
2	Ram	22	Jamshedpur	DBMS
3	Mike	23	Chennai	ML
3	Mike	23	Chennai	OS
4	Sameer	21	Bengaluru	DAA
4	Sameer	21	Bengaluru	ML
5	Vijay	22	Mumbai	DAA
5	Vijay	22	Mumbai	DBMS

i)

The above table has been converted to 1NF from the given table, the given table was not in 1NF form since there were more than one entries in the 'course' column.

ii)

Primary key: id

Candidate key: id, name, location

Prime attributes: id, name, location

Non-prime attributes: age, course

iii)

Transitive dependency:

id -> age

id -> location

---- the second table is already in 1NF ----

Q2.

The first table is not in 2NF form since it is not fully functionally independent

As emp_id -> name, age
Emp_id,duty_shift_id -> duty_shift

Converted table for the first given table:

Emp table:

emp_id	name	age
101	Arun	26
102	Bobby	28
103	Suresh	32
104	Sita	24

Duty shift table:

emp_id	duty_shift_id	duty_shift
101	1	Morning
102	2	Night
103	3	Afternoon
104	1	Morning

Primary Key: emp_id, duty_shift_id
Candidate Key: emp_id, duty_shift_id
Prime attributes: emp_id,duty_shift_id
Non-prime attributes: name, age, duty_shift

The second table is already in 2NF

Q3.

The first table is not in 3NF as it is not transitively independent.

Cust_address -> cust_postcode

Cust_loc -> cust_postcode

The converted table:

Customer table:

cust_id	cust_name	cust_Postcode
25	Dell	560037
45	Lenovo	560046
89	Acer	210067
90	Samsung	4500078

cust_postcode	cust_address	cust_loc
560037	whitefield	Bangalore
560046	marathahalli	Bangalore
210067	bandra	Mumbai
4500078	Delhi Central	Delhi

The second table given is also not in 3NF

The converted table:

Building	Contractor	Builder
B_2156	Taylor	Prestige
B_8765	Sandeep	Hiranandani
B_4567	Vishaka	Tata

Contractor	Fee
Taylor	2567891
Sandeep	3567356
Vishaka	4567990

