

SE302T: Database Management Systems

Quiz # 5

Name:

Zunaira Abdul Aziz

Roll #:

BSSSE23058

Time: 40 minutes

Marks: 15

StudentID	StudentName	Courses	Instructor
101	Ali Khan	DBMS, OOP	Mr. Ahmed, Ms. Sana
102	Sara Malik	OOP, DSA	Ms. Sana, Mr. Bilal
103	Ahmed Raza	DBMS, AI	Mr. Ahmed, Dr. Hina
104	Zainab Fatima	DSA, AI	Mr. Bilal, Dr. Hina

Question # 1: Convert this table into 1NF. Show the new structure where repeating groups are removed. (Marks-3) (CLO-3)

Student ID	Student Name	Courses	Instructor
101	Ali Khan	DBMS	Mr. Ahmed
101	Ali Khan	OOP	Ms. Sana
102	Sara Malik	OOP	Ms. Sana
102	Sara Malik	DSA	Mr. Bilal
103	Ahmed Raza	DBMS	Mr. Ahmed
103	Ahmed Raza	AI	Dr. Hina
104	Zainab Fatima	DSA	Mr. Bilal
104	Zainab Fatima	AI	Dr. Hina

StudentID	CourseCode	StudentName	InstructorName	CourseTitle
101	DB101	Ali Khan	Mr. Ahmed	DBMS
101	OOP102	Ali Khan	Ms. Sana	OOP
102	OOP102	Sara Malik	Ms. Sana	OOP
102	DSA103	Sara Malik	Mr. Bilal	DSA
103	DB101	Ahmed Raza	Mr. Ahmed	DBMS
103	AI104	Ahmed Raza	Dr. Hina	AI

Question # 2: Normalize this table into 2NF by removing partial dependencies. Show the decomposed tables. (Marks-3) (CLO-3)

Zarina Abdul Aziz

StudentID.	Course Code	StudentName

StudentID.	Instructor Name.	Course Title.

1.5

enrollment
table
student
table

mixed!!

EmpID	EmpName	DeptID	DeptName	DeptLocation
201	Usman Raza	D1	HR	Lahore
202	Nida Shah	D2	Finance	Karachi
203	Ayesha Khan	D1	HR	Lahore
204	Bilal Hussain	D3	IT	Islamabad
205	Sana Iqbal	D2	Finance	Karachi

Question # 3: Normalize this table into 3NF by removing transitive dependencies. Show the resulting tables. (Marks-3)

(CLO-3)

EmpID.	EmpName
201	Usman Raza.
202.	Nida Shah

EmpID	DeptID
201	D1
202	D2.
203	D1.

DeptID	DeptName.	DeptLocation.

OrderID	CustomerName	CustomerAddress	ProductID	ProductName	Quantity
301	Imran	Islamabad	P1	Laptop	2
301	Imran	Islamabad	P2	Mouse	1
302	Ayesha	Lahore	P1	Laptop	1
303	Bilal	Karachi	P3	Keyboard	3
303	Bilal	Karachi	P2	Mouse	2

Question # 4: (Marks-3)

- a) Identify which normal form the given table currently satisfies. 1NF
- b) Normalize it into 3NF. Provide the decomposed tables.

(CLO-3)

OrderID	CustomerName	CustomerAddress
301	Imran	Islamabad
302	Ayesha	Islamabad

CustomerName	CustomerAddress
Imran	Islamabad
Ayesha	Lahore
Bilal	Karachi

ProductID	ProductName	Quantity
P1	Laptop	
P2	Mouse	
P3	Keyboard	

OrderID	CustomerName	ProductID
301	Imran	P1

missing

table !!

ProjectID	EmployeeID	EmployeeName	ProjectName	ProjectManager
401	501	Ali Raza	ERP System	Mr. Asad
401	502	Fatima Noor	ERP System	Mr. Asad
402	503	Usman Javed	Website Revamp	Ms. Nida
402	501	Ali Raza	Website Revamp	Ms. Nida
403	504	Sara Khan	Mobile App	Mr. Hamza

Question # 5: Normalize this table into 3NF and BCNF normalized table. (Marks-3) (CLO-3)

Project ID	Project Name	Project Manager

Product ID	Employee ID

Employee ID	Employee Name