

Daffodil International University Department of Software Engineering Faculty of Science & Information Technology Final Examination, Spring 2024 Course Code: SE 223; Course Title: Database Systems Sections & Teachers: NJ, KRA, AM

Time: 2:00 Hrs

Marks: 40

Answer <u>ALL</u> Questions [The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

Employee											
Employee_	id Employ	ee_name	Department_ID	Department							
101	Ste	ven	200	HR Finance Marketing							
202	Johr	Doe	201								
301	I	.ex	114								
402	Alex	ander									
501			203	Accounting							
Salary Bruce			121	IT							
EMPLOY	EE_ID Salary	PHONE_NUM	IBER HIRE_DATE	Department ID	ا ۲						
101	20000	515123456		200	-		CLO-3 Level-3				
202	3598	524123456	57 2005-09-21	201	-						
301	3000	515125856	57 2001-01-13	114	[Marks-10	[Marks-10]					
404	79000	515124856	57 2006-01-03	203							
505	348799	51548956	7 2005-06-25	121	_						
102	12390	57848956	2000 01-03	123	_						
 Develop SQL queries for the given question: a. Retrieve the average salary for each department. b. Find all employees who earn more than John Doe. c. Find those employees who earn more than the average salary. d. Count the number of employees in each department. e. Get the details of employees who work in the "Marketing Department". f. Find all employees who do not have a salary entry. g. Get the employee information whose name starts with "A". h. Find the phone numbers of those employees who were hired between 17th June 2003 and 3rd January 2006. i. Find all employees whose salary is higher than the average salary of their department. 											

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2.	\top									
2.		Consider the DIU library borrowed a		$\left[\right]$						
		borrowed a l StudentID: (StudentNam StudentEma StudentPho BorrowID: (
		BookID	BookName	Auth	orName	Publisher				
		04	To Kill a Mockingbi	rd Harpe	Lee	HarperCollins				
		05	1984	Georg	Orwell	Penguin Books				
			The Great Gatsby		et Fitzgerald	Scribner				
	<i>a)</i>	from those t	the table from 1NF ables given in ques	up to BCNF; existion 2 with properties	amining ever er explanatio	y step of the process	[Marks-6]			
2	b)	Distinguish above tables	[Marks-4]	CLO-4 Level-4						
1	10	List the norr databases.	[Marks-4]	-						
	<i>d</i>)	Analyze fou	r anomalies that m		Marke (1					
	e)	Student_Id Student name Student Address G					[Marks-4] [Marks-2]	-		
		Explain the	e current normalizat			Course_title				
3.	a)	Explain the current normalization level of the given table. Establish an Entity relationship diagram based on the tables given in question 2 [Marks-5] CL with appropriate attribute type, cardinality, and relationship.								
4.	a)	Demonstra properties, a		Level-3						
	b)	Define eac integrity, ar	[Marks-2]	CLO-5 Level-2						
					ansactions.					