



SARVAJANIK UNIVERSITY
Sarvajani College of Engineering and Technology
Master of Computer Applications



Integrated MCA I Semester 2

Subject Name: Introduction to Relational Database Management System - Practical

Subject Code: IMCA13204

Type of course: Professional Course

Prerequisite (if any):
 Basic knowledge of working with computers

List of Courses where this course will be prerequisite:

- Web based dynamic application.

Rationale: Understand the concepts of Database. Various commands to store, retrieve and manage data from databases.

Teaching and Examination Scheme:

TEACHING SCHEME				Theory Marks		Practical Marks		Total
L	T	P	C	TEE	CAT	TEP	CAP	
0	0	4	2	-	-	30	20	50

CAT: Continuous Assessment Theory comprised of CA1 and CA2 **CA1:** Continuous Assessment (assignments/projects/open book tests/closed book tests **CA2:** Sincerity in attending classes/class tests/ timely submissions of assignments/self-learning attitude/solving advanced problems **TEE:** Term End Examination **TEP:** Term End Practical Exam (Performance and viva on practical skills learned in course) **CAP:** Regular submission of Lab work/Quality of work submitted/Active participation in lab sessions/viva on practical skills learned in courses.





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LIST OF PRACTICALS:

Set 1	
1	Create a STUDENT Table. Student (Student_id INTEGER, Name VARCHAR(50), Age INTEGER, Gender CHAR(1))
2	Display the structure of the STUDENT Table.
3	Create a COURSE Table. Course(Course_id INTEGER, Course_name NVARCHAR(100), Credits INTEGER)
4	Display the structure of COURSE Table.
Set 2	
Use STUDENT Table created in SET 1 for SET 2 queries	
1	Add Phone_No VARCHAR(10) column using the Alter table command.
2	Change the data type of Phone_No to INTEGER using the Alter table command.
3	Rename STUDENT table to STUD.
4	Drop table STUD.
Use COURSE Table created in SET 1 for SET 2 queries	
5	Add Course_Description NVARCHAR(250) column Alter table command.
6	Change the size of the Course_Description column from NVARCHAR(250) to NVARCHAR(50) using the Alter table command.





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Set 3

Set 3					
1	Again create STUDENT table and Insert following records into STUDENT Table.				
	Student_id	Name	Age	Gender	Phone_No
	1	Neha	20	F	9767565456
	2	Ankit	21	M	9765454345
	3	Nikita	20	F	9907564321
	4	Piyush	20	M	9912345980
	5	Dimple	21	F	9076548776
6	Neha	20	F	9767565456	
2	Display STUDENT table records.				
3	List students whose age is greater than 20 years.				
4	List Name and age of girl students only.				
5	List Students with distinct names.				
6	List students' details in the descending order of Names.				
7	Display Ankita's student_id and phone number.				
8	Delete Neha's record.				
9	Update phone number of Piyush.				
10	Delete all records.				





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Set 4				
1	Insert following records into COURSE Table.			
	Course_id	Course_name	Credits	Course_Description
	101	C Programming	80	This is C Programming Course
	102	JAVA	75	This is JAVA Hands on Course
	103	Python.	83	This is Python Technical Course
104	Oracle	88	This is database course	
2	Display COURSE table records.			
3	List the courses name and course description whose credit is more than 78 points.			
4	Update the Course name to C++ where course id is 102.			
5	List course details where credit is between 75 to 80 points.			
6	Display course details where credit is 83 and it is a python course.			
7	Display course details where credit is greater than 80 or it is an Oracle course.			
8	Insert a JAVA course with 72 credits.			
9	Display course details of JAVA or Python.			
10	Delete C programming course.			
Set 5				
1	Create an EMPLOYEE Table. EMPLOYEE (EmployeeID INTEGER, Name NVARCHAR(50), Age INTEGER, DeptName INTEGER, Salary NUMBER(10,2), City NVARCHAR(50))			
2	Insert appropriate 10 records into the Employee Table.			
3	List all the records of the Employee table.			
4	Display the details of employees having salaries greater than 35000 rs.			
5	Display the details of employees belonging to surat, vapi, valsad or bharuch.			





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6	Display the details of employees who do not belong to Navsari.
7	Display the details of employees whose age is between 45 to 55 years.
8	Display the details of employees whose names start with A.
9	Display the details of employees whose name consists of the letter R anywhere in their name.
10	Display the details of employees whose name ends with I.

Set 6

	Create BOOKS table.
1	Books (Book_id INTEGER PRIMARY KEY, Title NVARCHAR(200), Author NVARCHAR(100), Publisher NVARCHAR(100), Publication_Date DATE, Price NUMBER(10,2))
2	Apply check constraint while creating the table to check that the prices of books should be greater than 500 rs.
2	Insert appropriate 10 records into the Books Table.
3	List the details of Python Books.
4	List average price of the books.
5	List total prices of JAVA Books.
6	Display book details published in the month of March.
7	List books with the lowest price.
8	List books with the highest price.
9	List the book's details where the author name can be '_it%'.
10	Display the book details published in the year 2023.

Set 7





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Use EMPLOYEE Table created in SET 5	
1	Alter table Employee add column Joining Date DATE.
2	List department wise average salary.
3	List department wise total salary where age is greater than 35.
4	List all the employees who have salaries greater than the average salary of all the employees.
5	Display department wise employee count.
6	List department wise employee count who have joined after 2010.
7	Display the details of employees who have joined on 12th April 2021.
8	List the employee details who have a salary greater than the minimum salary of the HR department.
9	Delete the employee who joined in 2017.
10	Delete the employee who is 5 years older than the average age of all employees.
Set 8	
1	Create CATEGORY table. Category(Category_id Integer PRIMARY KEY, Category_name NVARCHAR(50)) Create PRODUCT table Product (Product_id INTEGER PRIMARY KEY, Product_name NVARCHAR(100), Price NUMBER(10, 2), Category_id INTEGER FOREIGN KEY)
2	Apply check constraint while creating the product table to check that the Product code should start with P.
3	Insert appropriate 5 records in both the Category and Product Tables.
4	Display product name as Name, product price as Price where product_id is P105.





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5	Display the products that are priced higher than all products with category_id=10.
6	Display the products that are priced higher than at least one price in the category_id=30.
7	Display category wise average product price as "Average Price".
8	Display Product details like: Product: Product_Name ' ' Product_Price AS Product_Info
9	Display Categor_Name, Product_Name, Product_Price.
10	Display category wise product details.
Set 9	
1	Create TEACHER Table Teacher (Teacher_id INTEGER, Teacher_name NVARCHAR(100), Teacher_DOB DATE, Teacher_JoiningDt DATE) Create ASSIGNMENT Table Assignment(Assignment_id INTEGER PRIMARY KEY, Assignment_name NVARCHAR(50), Subject_Name NVARCHAR(50), Submission_Date DATE, Teacher_id INTEGER FOREIGN KEY)
2	Apply check constraint while creating the Teacher table that Teachers DOB should not be current date.
3	Display Teacher Wise assignment list.
4	Display assignment details where Submission_Date is NULL.
5	Display assignment details where Submission_Date is NULL but while listing Submission_date should be replaced with current date.
6	Count the assignment where Submission_Date is NULL.
7	Display teacher details who have joined in the month of Feb.
8	Delete all assignment Submission_Date is NULL.
9	Display the total assignment given by each teacher.





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10	Display Teacher_Name, Assignment_Name where the subject is DBMS.
Set 10	
Use Dual table for following queries	
1	Write a query to add 10 days to the current date.
2	Write a query to Add and subtract 3 months from the current month.
3	Find out the ASCII equivalent of character 'S'.
4	Find out the character equivalent of ASCII 67, 65 and 84
5	Write a query to find the last day of the month.
6	Find out how many days are left in the current month.
7	Write a query to calculate the Date difference between current date and 20/12/2024
8	Write a query to Calculate the number of months between current date and 03/11/2024.
9	Find out the second occurrence of 'or' from the third position in the string 'corporate floor.
10	Find out log to the base 3 of 81.
11	Convert the string 'sarvajanik university' so that the first character of each word is in capital.
12	Convert the string 'jack and jue' into 'black and blue'.
13	Round off the date 27-July-2023 to the current year.
14	Find out the names of all the tables, views and constraints associated with current tables in the system.
15	Find out the user name and user id of the currently logged on user.





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Reference Text Books:

Sr. No.	Title of book /article	Author(s)	Publisher and details like ISBN	Year of publication	Publication Edition
1	SQL, PL/SQL the Programming Language of Oracle	Ivan Bayross	BPB Publications ISBN978817656964, 9788176569644	2009	4 th Edition

