

Babu Madhav Institute of Information Technology, UTU  
5 Years Integrated M.Sc. (IT), Semester 1

**Course Code: CS3019**

**Course Name: Title: Introduction to Database Management Systems**

**Practical List**

Practical No	Enrolment Number	Date:
<b>1</b>	<p><b>Create the following tables with appropriate constraints:</b></p> <ol style="list-style-type: none"> <li><b>Student_Detail</b>(St_id, St_full_name, St_address, St_gender, Date_of_birth, St_landline_num, st_mobile_num, St_currant_sem, st_blood_group)</li> <li><b>Product_Master</b>( P_id, P_name, P_merchant_name, P_Quantity , P_price, P_purchase_date)</li> <li><b>Employee_Master</b>(E_id, E_full_Name, E_address, E_gender, Date_of_birth, E_designation, E_deprtment, E_salary , E_expirince(in year), Date_of_join)</li> <li><b>Customer_Master</b>(Cust_id, Cust_full_name, Cust_address, Date_of_birth, Cust_landline_num, cust_mobile_num, cust_blood_group)</li> <li><b>Apply_Leave_Detail</b>(L_id, Student_name, semester, To_date, From_date, To_time, From_time, Reason, Status(Approve/reject))</li> </ol> <p><b>Insert at least 10 records in each table and perform the following queries:</b></p> <ol style="list-style-type: none"> <li>Display all customer details.</li> <li>Find which customers belongs to city 'Surat'.</li> <li>List student's details who are belongs to city 'surat' or 'navsari'.</li> <li>Display the product details whose price is more than Rs.1000.</li> <li>Display name of the employee whose salary is more than 23000.</li> <li>List the product details which was purchased before six month.</li> <li>Find how many students apply leave form semester one.</li> <li>List the student details having blood group is 'A+' and 'O+'.</li> <li>Which product having quantity less than 10.</li> <li>Prepared student list who are not coming from city 'surat'.</li> <li>Display product name and product price along with merchant name.</li> <li>Find the details of products which were purchased in last week.</li> <li>Display student details who is 'male'.</li> <li>Find the employee details having more than 3 years of experience.</li> <li>Display P_id, P_name, P_merchant_name, P_Quantity and P_price for the product 101.</li> <li>List St_id, St_full_name, St_address, St_gender, Date_of_birth, St_landline_num and st_mobile_num for the student having id 103.</li> <li>Display all the leave details.</li> <li>Display all the details of employees having less than 10000 salary.</li> <li>List all product details.</li> <li>Display details of student who are girls.</li> </ol>	
<b>Objective(s)</b>	To make them understand simple select statements, update and delete commands.	

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<b>Pre-requisite</b>	Knowledge about SELECT, UPDATE and DELETE commands with WHERE Clause.
<b>Duration for completion</b>	4 hours
<b>PEO(s) to be achieved</b>	PEO4: To develop the awareness and skills to become professionally competent leaders in service to industry.
<b>PO(s) to be achieved</b>	PO2: Ability to design and develop system, component or process as well as test and maintain it.
<b>CO(s) to be achieved</b>	Use data definition and manipulation statements over one or more tables using SQL to store and retrieve data.
<b>Solution must contain</b>	DDL and DML query statements
<b>Nature of submission</b>	Handwritten
<b>References for solving the problem</b>	Beginning DB2: From Novice to Professional, Allen G. (Page No 255-283) <a href="http://www.w3schools.com/Sql/sql_where.asp">http://www.w3schools.com/Sql/sql_where.asp</a>
<b>Post Laboratory questions</b>	<p><i>Post Laboratory questions:</i></p> <ol style="list-style-type: none"> <li>1. What is difference between char and varchar data type?</li> <li>2. Mention the situation where float data type is used.</li> <li>3. What is the use of date data type? In which format date is stored in database.</li> <li>4. What is difference between float data type and decimal data type?</li> <li>5. How to apply check and not null constraint? Give one appropriate example of it.</li> </ol>

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2	Use tables <b>Student_Detail</b> , <b>Product_Master</b> , <b>Employee_Master</b> , <b>Customer_Master</b> and <b>Apply_Leave_Detail</b> created in practical no. 1 and solve following queries 1. Update all the product by decreasing 5 for all quantity. 2. Update the student detail whose id is 1. 3. Modify the student mobile number with 9998817009 whose id is 5. 4. Find maximum product price. 5. Find minimum product quantity. 6. Retrieve average employee salary. 7. Find total number of employee. 8. Update student Name and student date of birth having id is 10; 9. Delete employee details whose salary is less than 5000. 10. Student id 6 enter wrong to date and from date now update to date with 17 <sup>th</sup> July 2016 and from date with 18 <sup>th</sup> July 2016 in apply leave detail table. 11. Remove the reject leave application from the table. 12. Remove the student details who belong to surat. 13. Update customer details based on the cust_id. 14. Update customer blood group having id 009. 15. Delete product details which price is more than 10000.	
<b>Objective(s)</b>	To make them understand simple select statements, update and delete commands.	
<b>Pre-requisite</b>	Knowledge about SELECT, UPDATE and DELETE commands with WHERE clause.	
<b>Duration for completion</b>	2 hours	
<b>PEO(s) to be achieved</b>	PEO4: To develop the awareness and skills to become professionally competent leaders in service to industry.	
<b>PO(s) to be achieved</b>	PO2: Ability to design and develop system, component or process as well as test and maintain it.	
<b>CO(s) to be achieved</b>	Use data definition and manipulation statements over one or more tables using SQL to store and retrieve data.	
<b>Solution must contain</b>	DDL and DML query statements	
<b>Nature of submission</b>	Handwritten	
<b>References for solving the problem</b>	Beginning DB2: From Novice to Professional, Allen G. (Page No 255-283) <a href="http://www.w3schools.com/Sql/sql_where.asp">http://www.w3schools.com/Sql/sql_where.asp</a>	
<b>Post Laboratory questions</b>	<i>Post Laboratory questions:</i> 1. What is Null? 2. What is the difference between DELETE and DROP commands? 3. What do you mean by constraint? 4. What is the use of check constraint?	

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<b>3</b>	<p>Create following tables with necessary constraints:  <b>PRODUCT_MST</b>(PROD_ID, PROD_NAME, PROD_DESC, PROD_RATE)  <b>SALES_ORDER_DTL</b>(<u>SALES_ID</u>, SALES_DATE, CUSTOMER_NAME, ORDER_CITY, <u>PROD_ID</u>, QUANTITY)  Solve following queries:</p> <ol style="list-style-type: none"> <li>1. Display PROD_ID, PROD_NAME and PROD_RATE for all the products.</li> <li>2. Display SALES_ID, SALES_DATE, and QUANTITY for all the sales.</li> <li>3. Display all product details having SALES_ID greater than 2.</li> <li>4. Update ORDER_CITY to Bardoli in SALES_ORDER_DTL table.</li> <li>5. Update ORDER_CITY to Surat in SALES_ORDER_DTL having SALES_ID greater than 3.</li> <li>6. Update all the orders by decreasing 5 for all QUANTITY.</li> <li>7. Update all the products by increasing 10% PROD_RATE.</li> <li>8. Delete all the sales order details which are from Surat.</li> <li>9. Display product details with PROD_RATE greater than 50.</li> <li>10. Display sales order detail with ORDER_CITY is "Bardoli".</li> <li>11. Display sales order detail with PROD_RATE is in between 5 to 50.</li> <li>12. Display product details with their PROD_NAME starts with 'P'.</li> <li>13. Display product details with their PROD_NAME ends with 'S'.</li> <li>14. Display sales order detail with ORDER_CITY is "Bardoli" and QUANTITY is greater than 25.</li> <li>15. Display product details with PROD_NAME starts with 'C' or PROD_RATE is greater than 35.</li> <li>16. Display sales order details which are ordered before "15-August-2014".</li> <li>17. Display sales order details which are placed in July 2014.</li> <li>18. Display product detail with length of the PROD_NAME is 5 characters.</li> </ol>	
<b>Objective(s)</b>	To make them understand conditional select statements.	
<b>Pre-requisite</b>	Knowledge about SELECT command with WHERE clause, various operators and functions.	
<b>Duration for</b>	3 hours	
<b>PEO(s) to be achieved</b>	PEO4: To develop the awareness and skills to become professionally competent	
<b>PO(s) to be achieved</b>	PO2: Ability to design and develop system, component or process as well as test	
<b>CO(s) to be achieved</b>	Use data definition and manipulation statements over one or more tables using	
<b>Solution must</b>	DML query statements	
<b>Nature of submission</b>	Handwritten	
<b>References for solving the</b>	Beginning DB2: From Novice to Professional, Allen G. page no 255-276 <a href="http://www.w3schools.com/Sql/sql_wildcards.asp">http://www.w3schools.com/Sql/sql_wildcards.asp</a>	
<b>Post Laboratory questions</b>	<p><i>Post Laboratory questions:</i></p> <ol style="list-style-type: none"> <li>1. In the WHERE clause what is the use of BETWEEN and IN?</li> <li>2. Solve query no – 9 by using another alternative.</li> <li>3. How do you eliminate duplicate values in output of SELECT statement?</li> </ol>	

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<b>4</b>	<p>Consider the BMIIT CLUB is a social site which provides so many functionalities that are as follows.</p> <ul style="list-style-type: none"> <li>• Student can login after the register in the SRIMCA CLUB.</li> <li>• Student can upload photos and videos.</li> <li>• Student can become member of any community.</li> </ul> <p><b>Personal_Info</b>(P_Id, F_Name, M_Name, L_Name, User_Name, Password, Gender, DOB, Contact_No, City_Id)  Note: Start P_Id with 101, 102,103.....N.  <b>City</b>(City_Id, City_Name)  <b>Community</b>(C_id, C_Name, C_Disc, Date)  <b>CommunityMember</b>(Cm_id, C_Id, P_Id)  Community Name consist(MCA, M.Sc(IT), fresher and BCA)  <b>Note:</b> Apply Integrity constraint, Not null, Unique and Check.  Solve following queries:</p> <ol style="list-style-type: none"> <li>1. Display all Student's detail who are leaving in city 'Surat'.</li> <li>2. Display student's details those who have joined more than one community.</li> <li>3. Display student's details whose last name is 5 characters long, where first two characters is 'Sm' and last two character is 'th'. Eg: 'Smith', 'Smyth', 'Smeth'</li> <li>4. Display student's F_Name, M_Name and DOB whose F_Name starts with 'M'.</li> <li>5. Get the list of student's personal information whose F_Name ends with 'M'.</li> <li>6. Display student's User_Name and Password whose F_Name does not starts with 'M'.</li> <li>7. List the student Fname whose F_Name contains the letter "s". Eg: 'Mahesh', 'Manish', 'Amish', 'Suresh'</li> <li>8. Display Student's personal information whose P_Id is 3 digits and start with '10'.</li> <li>9. Retrieve student details where P_id is either 101,102,103,104 or 105. Use 'In' condition.</li> <li>10. Retrieve student details where P_id is neither 101,102,103,104 nor 105. Use 'In' condition.</li> <li>11. Display student name where P_id is between 101 and 110. Use between conditions.</li> <li>12. Display student personal detail where DOB is between 1st January 1993 and 31st December 1993 .Use between conditions.</li> <li>13. Display student name where P_id is not between 101 and 110. Use between conditions.</li> <li>14. Display student's F_Name and password from the Personal_Info table.</li> </ol>	
<b>Objective(s)</b>	To make them understand conditional select statements.	
<b>Pre-requisite</b>	Knowledge about SELECT command with WHERE clause, various operators and functions.	
<b>Duration for</b>	3 hours	

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<b>PEO(s) to be achieved</b>	PEO4: To develop the awareness and skills to become professionally competent
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<b>CO(s) to be achieved</b>	Use data definition and manipulation statements over one or more tables using
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<b>Post Laboratory questions</b>	<i>Post Laboratory questions:</i> <ol style="list-style-type: none"><li>1. Solve query no – 12 by using another alternative.</li><li>2. How do you eliminate duplicate values in output of <i>SELECT</i> statement?</li><li>3. Describe a situation where it is best suitable to use <i>LIKE</i> operator.</li></ol>

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Practical No	Enrolment Number	Date:
	<b>Sale_Product</b> (S_Id, Salesman_Name, Cust_Name, Product_Name, , Quantity, Sale_Price) <b>Note: Apply Integrity constraint, Not null, Unique and Check.</b> <ol style="list-style-type: none"> <li>1. Give total number of salesman who sales any product in more than 20000.</li> <li>2. Find out total amount of sales was done by all salesmen.</li> <li>3. Display the minimum Sale_Price form the Sale_Product.</li> <li>4. Find the maximum Sale_Price form the Sale_Product.</li> <li>5. Retrieve the second minimum Sale_Price form the Sale_Product.</li> <li>6. Display the second maximum Sale_Price from the Sale_Product.</li> <li>7. Display the average Sale_Price from the Sale_Product.</li> <li>8. Display the average Sale_Price of particular one product.</li> <li>9. Display salesman's minimum Sale_Price.</li> <li>10. Find the salesman's average Sale_Price.</li> <li>11. Retrieve salesman's maximum Sale_Price.</li> <li>12. Display salesman name that how many number of product sold by him.</li> <li>13. Display customer name that how many number of product purchased by him.</li> </ol>	
<b>Objective(s)</b>	To make them understand conditional select statements.	
<b>Pre-requisite</b>	Knowledge about SELECT command with WHERE clause, various operators and functions.	
<b>Duration for</b>	3 hours	
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<b>Post Laboratory questions</b>	<i>Post Laboratory questions:</i> <ol style="list-style-type: none"> <li>1. Solve query no – 12 by using another alternative.</li> <li>2. How do you eliminate duplicate values in output of SELECT statement?</li> <li>3. Describe a situation where it is best suitable to use LIKE operator.</li> </ol>	