

DEPARTMENT OF COMPUTER SCIENCE  
ROLLWALA COMPUTER CENTRE  
GUJARAT UNIVERSITY  
M.C.A. – II

ROLL NO : 10  
NAME : Pradip S Karmakar  
SUBJECT : Relational Database Management System

| NO. | TITLE                                                                                                                                                                           | PAGE NO. | DATE       | SIGN |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|------|
|     | <b><u>Theory Assignments</u></b>                                                                                                                                                |          |            |      |
| 1   | File Storage & Query Processing                                                                                                                                                 | 8        | 01/07/2020 |      |
| 2   | Transaction & Security                                                                                                                                                          | 62       | 01/07/2020 |      |
|     | <b><u>Practical Assignment 1</u></b>                                                                                                                                            | 77       | 01/07/2020 |      |
| 1   | Creare a procedure for emp which will fetch all employees details and display on screen.                                                                                        |          |            |      |
| 2   | Create a cursor to find list of all employees jn a deoartment passed as an argument from the employee table.                                                                    |          |            |      |
| 3   | Create a cursor to increment the salary based on the designation.                                                                                                               |          |            |      |
|     | <b><u>Practical Assignment 2</u></b>                                                                                                                                            | 87       | 01/07/2020 |      |
| 1   | GENERAL PL/SQL BLOCKS                                                                                                                                                           |          |            |      |
|     | <p>➔ Input two numbers and find out all arithmetic operations( +, -, x, / ).</p> <p>➔ Enter rollno and three subject marks. Find out Total, percentage, result &amp; Grade.</p> |          |            |      |

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|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
|   | <p>→ Print First 10 Odd Number unsing Loops.</p> <p>→ Print Prime Number Upto 10 using While Loops.</p> <p>→ Print MAX &amp; MIN number from 3 numbers.</p> <p>→ Get Input From user as empid and check whether that empid is exist, if Not then Show appropriate Message else show empname and salary</p> <p>→ Get Input From user as empid and check whether that empid is exist, if Not then Show appropriate Message else show empname and salary.</p>                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |
| 2 | FUNCTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |
|   | <p>→ Input name and count the length of the name.</p> <p>→ WAF which accepts one number and return TRUE if no is prime and return FALSE if No. is not prime.</p> <p>→ Write a function which accepts the department no and returns maximum salary of that Department. Handle the error if deptno does not exist or select statement return more than one row.</p> <p>→ Write a function to display whether the entered (User Input) employee no exists or not.</p> <p>→ WAF which accepts one no and returns that no+100. Use INOUT mode.</p> <p>→ WAF which accepts the empno. If salary=10000 than give raise by 20%. If salary&gt;20000 than give raise by 10%. Handle the error if any.</p> <p>→ WAF which accepts the empno and returns the experience in years. Handle the error if empno does not exist. EMP(Empno, Empname, DOJ);</p> |  |  |  |

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|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |
| 3 | <b>CURSORS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |
|   | <p>→ Create a cursor for the emp table. Produce the output in following format: {empname} employee working in department {deptno} earns Rs. {salary}.<br/>EMP(empno, empname, salary, deptno);</p> <p>→ Create a cursor for updating the salary of emp working in deptno 10 by 20%. If any rows are affected than display the no of rows affected. Use implicit cursor.</p> <p>→ Create a cursor for updating the salary of emp working in deptno 10 by 20%. If any rows are affected than display the no of rows affected. Use EXPLICIT cursor.</p> <p>→ WAP that will display the name, department and salary of the first 10 employees getting the highest salary.</p> <p>→ WAP using parameterized cursor to display all the information of employee living in specified city. Ask the city from user.</p> <p>→ WAP which display the sum of salary department wise.</p> <p>→ Create a cursor to generate defferent two tables from one master table. Students(Rno, Name, Std, B_date, Sex); Girl_Table(Rno, Name, Std, B_date); Boy_Table(Rno, Name, Std, B_date); First fetch the row from Student table. If sex is 'M' then insert that row in Boy_Table and if 'F' then insert that row in Girl_Table. In both table Rollno entry must be in Sequence(Using create sequence command).</p> |  |  |  |
| 4 | <b>PROCEDURES</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |
|   | → : Write a procedure which accepts the empno and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |

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|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------|--|
|   | <p>returns the associated empname. If empno does not exist than give proper error message. EMP(Empno, Empname).</p> <p>➔ WAP which accepts the student rollno and returns the name,city and marks of all the subjects of that student. STUDENT (Stud_ID, Stud_name, m1, m2, m3).</p> <p>➔ : WAP which accepts the name from the user. Return UPPER if name is in uppercase, LOWER if name is in lowercase, MIXCASE if name is entered using both the case.</p> <p>➔ WAP which accepts the student rollno and returns the highest percent and name of that student to the calling block.<br/>STUDENT(Stud_ID,Stud_name,percent);</p> <p>➔ WAP which accepts the date of joining for specific employee and returns the years of experience along with its name. Accept the Employee no from user.<br/>EMP (empno, empname, DOJ);</p> <p>➔ WAP which accepts the student roll no and returns the result (in the form of class: first class, second class, third class or fail). STUDENT (Stud_ID, Stud_name,m1, m2, m3).</p> |     |            |  |
|   | <b><u>Practical Assignment 3</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 145 | 01/07/2020 |  |
| 1 | <b>TRIGGERS (BOOK EXERCISE)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |            |  |
|   | <p>➔ This example is divided in three categories : Insert, Update and Delete</p> <p>Insert : Write a trigger which updates the sale value if customer already exists else create new entry of customer.</p> <p>Update : If the customer is updating, WAT to update</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |            |  |

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|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
|   | <p>the sales value by incrementing the Sale_vale field</p> <p>Delete : If the customer is deleting , WAT to update the sales value by decrementing the Sale_vale field</p> <p>→ Wirte a program to create trigger signal to restrict entering negative value in balance.</p> <p>→ Write a trigger to perform data validation using select statement.</p> <p>→ Write a example to create a sales table which provides free shipping on orders above 500</p>                                                                                                                 |  |  |  |
| 2 | TRANSACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |
|   | <p>→ Create a procedure to commence a transaction using auto commit.</p> <p>→ Create a procedure to commence a transaction using start transaction.</p> <p>→ Create a procedure which displays use of Savepoint with a transaction.</p>                                                                                                                                                                                                                                                                                                                                    |  |  |  |
| 3 | TRIGGERS (DO IT YOURSELF)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |
|   | <p>→ Write a Trigger that stores the old data table of student table in student_backup while updating the student table. Student_backup (Stud_ID, Stud_name, Address, Contact_no, Branch, Operation_date) Student (Stud_ID, Stud_name, Address, Contact_no, Branch).</p> <p>→ Write a trigger, that ensures the empno of emp table is in a format 'E00001' (empno must start with 'E' and must be 6 characters long). If not, than complete empno with this format before inserting into the employee table.</p> <p>→ Write a trigger which checks the age of employee</p> |  |  |  |

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while inserting the record in emp table. If it is negative than generate the error and display proper message.

- ➔ Write a trigger which converts the employee name in upper case if it is inserted in any other case. Change should be done before the insertion only.
- ➔ WAT that stores the data of emp table in emp\_backup table for every delete operation and store the old data for every update operation.  
EMP(Empno, Empname, salary);  
Emp\_Backup(Empno, Empname, Date\_of\_operation, Type\_of\_operation (i.e. update or delete));
- ➔ WAT which display the message 'Updating', 'Deleting' or 'Inserting' when Update, Delete or Insert operation is performed on the emp table respectively.
- ➔ WAT which generate an error if any user try to delete from product\_master table on weekends (i.e. Saturday and Sunday).
- ➔ We have two tables student\_mast and stu\_log. student\_mast have three columns STUDENT\_ID, NAME, ST\_CLASS. stu\_log table has two columns user\_id and description. WAT which inserts the student details in stu\_log table as soon as we promote the students in student master table( e.g. when a student is promoted from sem 2 to 3, auto entry in log table)
- ➔ WAT to calculate the Income Tax amount and insert it in emp table.  
EMP(emp\_no, emp\_name, emp\_income, income\_tax);  
If emp\_income < 100000 and >= 50000 then incometax = 10%  
If emp\_income < 200000 and >= 100000 then incometax = 15%  
If emp\_income < 300000 and >= 200000 then incometax = 20%