B. P. PODDAR INSTITUTE OF MANAGEMENT & TECHNOLOGY
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
LAB NAME: RICHARD STALLMAN
ACADEMIC YEAR: 2018-2019 ODD SEMESTER
DATABASE MANAGEENT SYSTEM LAB (EC 795C)

<table>
<tr><th>Nos.</th><th>LIST OF EXPERIMENTS</th><th>CO</th><th>PO/ PSO</th></tr>
<tr><td>E-01</td><td>
1. Create the following table : STUDENT
<table>
<tr><th>Column Name</th><th>Data Type</th><th>Size</th><th>Constraints</th></tr>
<tr><td>RegNo</td><td>Varchar2</td><td>6</td><td>Not null</td></tr>
<tr><td>RollNo</td><td>Number</td><td>6</td><td>Not null</td></tr>
<tr><td>Name</td><td>Varchar2</td><td>10</td><td>Not null</td></tr>
<tr><td>Address</td><td>Varchar2</td><td>15</td><td>Not null</td></tr>
<tr><td>PhoneNo</td><td>Number</td><td>10</td><td></td></tr>
<tr><td>YearOfAdm</td><td>Number</td><td>4</td><td>Not null</td></tr>
<tr><td>DeptCode</td><td>Varchar2</td><td>4</td><td>Not null</td></tr>
<tr><td>Year</td><td>Number</td><td>1</td><td>Not null</td></tr>
<tr><td>BirthDate</td><td>Date</td><td></td><td>Not null</td></tr>
</table>
2. Insert the following data in the student table.
<table>
<tr><td>RegNo</td><td>RollNo</td><td>Name</td><td>Address</td><td>PhoneNo</td><td>YearOfAdm</td><td>DeptCode</td><td>Year</td><td>BirthDate</td></tr>
<tr><td>012301</td><td>123001</td><td>Ashish</td><td>Jadavpur</td><td>24761892</td><td>2003</td><td>CSE</td><td>3</td><td>01-Jun-81</td></tr>
<tr><td>012315</td><td>123015</td><td>Kamal</td><td>Kasba</td><td>24424987</td><td>2003</td><td>CSE</td><td>3</td><td>19-Sep-81</td></tr>
<tr><td>012424</td><td>124024</td><td>Ipsita</td><td>Kaikhali</td><td>25739608</td><td>2004</td><td>CSE</td><td>2</td><td>15-Aug-82</td></tr>
<tr><td>012250</td><td>122050</td><td>Anita</td><td>Hooghly</td><td>36719695</td><td>2002</td><td>IT</td><td>4</td><td>22-Dec-80</td></tr>
<tr><td>012344</td><td>123044</td><td>Biplab</td><td>Howrah</td><td></td><td>2003</td><td>IT</td><td>3</td><td>03-Jan-82</td></tr>
<tr><td>012357</td><td>123057</td><td>Samik</td><td>Barasat</td><td>25426742</td><td>2003</td><td>IT</td><td>3</td><td>15-Jul-81</td></tr>
<tr><td>012419</td><td>124019</td><td>Srija</td><td>Garia</td><td>24755655</td><td>2004</td><td>EE</td><td>2</td><td>25-Oct-82</td></tr>
<tr><td>012427</td><td>124027</td><td>Saibal</td><td>Garia</td><td>24753306</td><td>2004</td><td>ECE</td><td>2</td><td>22-Mar-83</td></tr>
<tr><td>012236</td><td>122036</td><td>Santanu</td><td>DumDum</td><td></td><td>2002</td><td>ECE</td><td>4</td><td>11-Dec-80</td></tr>
<tr><td>012349</td><td>123049</td><td>Gita</td><td>Kasba</td><td>24428682</td><td>2003</td><td>MCA</td><td>3</td><td>14-Apr-81</td></tr>
</table>
3. Display all records
4. Display name, address and year of admission of each student
5. List the name and year of students who are in Computer Science.
6. List the names and departments of students belonging to 3rd year.
7. Display names of students with ‘a’ as the second letter in their names.
8. Display names of students in alphabetical order.
9. Display names and addresses of students who took admission in the year 2004.
10. List the names of students who do not have a phone number.
</td><td>CO2, CO3</td><td>PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO12, PSO2</td></tr>
</table>

<table>
<tr>
<td>E-02</td>
<td>
1. Delete the name of a student whose roll no, year and department code is given.
2. Display the number of students in each department.
3. Change the address of a student whose roll no and name is given.
4. Add the college phone number (25739607) to each of these students.
5. Change the size of column Name to 15 characters.
6. Add a column MarksObtained (number) to the student table.
7. Insert values against marks column.
8. Drop column MarksObtained from table student.
9. Add constraint primary key to the column RegNo of table student.
10. Add check constraints to the column year of student table. (year should be entered within 1,2,3,4).
</td>
<td>CO2, CO3, CO4</td>
<td>PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO12, PSO2</td>
</tr>
<tr>
<td>E-03</td>
<td>
1. Create table DEPARTMENT
<table>
<tr><th>Column Name</th><th>Data Type</th><th>Size</th><th>Constraints</th></tr>
<tr><td>DeptCode</td><td>Varchar2</td><td>4</td><td>Not null, Primary key</td></tr>
<tr><td>DeptName</td><td>Varchar2</td><td>15</td><td>Not null</td></tr>
<tr><td>HOD</td><td>Varchar2</td><td>4</td><td>Not null</td></tr>
</table>
FACULTY
<table>
<tr><th>Column Name</th><th>Data Type</th><th>Size</th><th>Constraints</th></tr>
<tr><td>FacultyCode</td><td>Varchar2</td><td>4</td><td>Not null, Primary key, Starts with ‘F’</td></tr>
<tr><td>FacultyName</td><td>Varchar2</td><td>15</td><td>Not null</td></tr>
<tr><td>DateOfJoin</td><td>Date</td><td></td><td>Not null</td></tr>
<tr><td>DeptCode</td><td>Varchar2</td><td>4</td><td>Must be either CSE,IT, CA, CHEM, MTHS, PHYS, HUM, BBA</td></tr>
</table>
2. Insert appropriate values in the above table.
3. Add constraint : DeptCode of Faculty is foreign key and references DeptCode in Department
4. Find the names of faculties of CSE Department.
5. Find the number of faculties in the Computer application department
6. Show the names of the heads of departments with department name.
7. Find the names of 3rd year CSE students whose date of birth is earlier than 15th August 1981.
8. Find the number of faculties who joined in August.
9. Add an extra attribute to the faculty table - Salary Number(8,2)
10. Insert values into the corresponding field Salary Number(8,2).
11. Find the name and salary of the faculty who earn more than 8000.
12. Find the name, department of the faculties who earn between 8000 and 12000.
13. Find the maximum salary among the faculties.
</td>
<td>CO2, CO3, CO4</td>
<td>PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO12, PSO2</td>
</tr>
<tr>
<td>E-04</td>
<td>
1. Create table SUBJECT and insert appropriate values.
<table>
<tr><th>Column Name</th><th>Data Type</th><th>Size</th><th>Constraints</th></tr>
<tr><td>SubjectCode</td><td>Varchar2</td><td>4</td><td>Not null, Primary key</td></tr>
<tr><td>SubjectName</td><td>Varchar2</td><td>15</td><td>Not null</td></tr>
<tr><td>Faculty</td><td>Varchar2</td><td>4</td><td>Foreign key references FacultyCode of table FACULTY</td></tr>
</table>
2. Find the number of students in each department with their department name.
</td>
<td>CO1, CO2, CO3, CO4</td>
<td>PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12, PSO2</td>
</tr>
</table>

	3. Increment the salary of each faculty by Rs 500. 4. Find the names of students and faculties whose name start with 'S'. 5. Find the students who stay in Kaikhali 6. Find the names of faculties who take classes in the IT department. 7. Find the names of all faculties whose HOD is given. 8. Add extra attribute to the Subject table - **department varchar2 (4), year varchar2 (1)** 9. Insert values into the fields - **department, year**. 10. Find the names of faculties who earn more than the average of all faculties. 11. List the names of faculties of CSE department who earn more than the average salary of the department. 12. Find the maximum and minimum salaries among faculties. 13. Find the second maximum salary among all faculties. 14. Find the names of faculties who are not the HOD's of any department. 15. Find the names of subjects for students of CSE 3rd year. 16. Name the departments having highest number of faculties and display the names of faculties		
E-05	**1.** Write a PL/SQL code, EX_INVNO.SQL, block for inverting a number using all forms of loops. **2.** Write a PL/SQL code, EX_SUMNO.SQL that prints the sum of 'n' natural numbers. **3.** Write a PL/SQL code, EX_AREA.SQL, of block to calculate the area of the circle for the values of radius varying from 3 to 7. Store the radius and the corresponding values of calculated area in the table AREA_VALUES. **4.** Empa Schema<id number, name, dname, age, income, expence, savings> Emp Schema<institute name, employee id, salary> Sal <institute name, total employee, total salary> a. For every insert or delete or update in Empa table create trigger to display the message TABLE IS INSERTED or TABLE ISDELETED or TABLE IS UPDATED b. Define trigger to force all department names to uppercase. c. Create a Trigger to check the age valid or not using message after every insert or delete or update in Trig table d. Create a Trigger to check the age valid and Raise appropriate error code and error message. e. A trigger restricting updates that allows changes to Empa records only on Mondays through Fridays, and only during the hours of 8:00am to 5:00pm. f. Create a Trigger for Emp table it will update another table Sal while inserting values.	CO1, CO4, CO5	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12, PSO2
E-06	**1.** Write a PL/SQL program to print all the prime numbers between 100 and 400 **2.** Write a PL/SQL program to print n terms of fibonacci series. **3.** Write a PL/SQL block of code for inverting a number 5639 to 9365. **4.** Write a PL/SQL program to calculate HCF of two numbers.	CO1, CO5	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12, PSO2
E-07	**1.** Create a PL/SQL program using cursors, to retrieve first tuple from the department relation.(use table dept(dno, dname, loc)) **2.** Create a PL/SQL program using cursors, to retrieve each tuple from the department relation.(use table dept(dno, dname, loc)) **3.** Create a PL/SQL program using cursors, to display the number, name, salary of the three highest paid employees. (use table emp(empno, ename,sal)) **4.** Create a PL/SQL program using cursors, to delete the employees whose salary is more than 3000. **5.** Create a PL/SQL program using cursors, to update the salary of each employee by the avg salary if their salary is less than avg salary. **6.** Create a PL/SQL program using cursors, to insert into a table, NEWEMP, the record of ALL MANAGERS. Also DISPLAY on the screen the NO, NAME, JOIN_DATE. Handle any user defined exceptions. (use table emp(emp_no, emp_name, join_date, design))	CO1, CO5	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12, PSO2