***VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY***

**Department of CSE**

**Database Management Systems**

**Lab Cycle – I**

**Create the following tables along with their tuples:**

**Table Name: Programmer**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Null?** | **Data Type** | **Description** |
| PNAME | Not Null | Varchar2(20) | Name of Programmer |
| DOB | Not Null | Date | Date of Birth |
| DOJ | Not Null | Date | Date of Joining |
| GENDER | Not Null | Char(1) | Male/ Female |
| PROF1 |  | Varchar2(10) | Known Language 1 |
| PROF2 |  | Varchar2(10) | Known Language 2 |
| SALARY | Not Null | Number(7,2) | Salary |

**Data in table Programmer**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **PNAME** | **DOB** | **DOJ** | **GENDER** | **PROF1** | | **PROF2** | **SALARY** |
| Anand | 21-apr-66 | 21-apr-92 | M | Pascal | | Basic | 3200 |
| Altaf | 02-jul-64 | 13-nov-90 | M | Fortran | | Cobol | 2800 |
| Juliana | 31-jan-68 | 21-apr-90 | F | Cobol | | Dbase | 3000 |
| Tulasi | 30-oct-68 | 02-jan-92 | F | C | | Dbase | 2900 |
| Mary | 24-jun-70 | 01-feb-91 | F | C++ | | Oracle | 4500 |
| Nelson | 14-sep-65 | 11-oct-89 | M | Cobol | | Dbase | 2500 |
| Patrick | 11-nov-65 | 21-apr-90 | M | Pascal | | Fortran | 2800 |
| Qadir | 30-aug-65 | 21-apr-91 | M | Assembly | | C | 3000 |
| Ramesh | 08-may-67 | 28-feb-91 | M | Pascal | | Dbase | 3200 |
| Rebacca | 04-jan-67 | 01-dec-90 | F | Basic | | Cobol | 2500 |
| Remitha | 19-apr-70 | 20-apr-93 | F | C | | Assembly | 3600 |
| Revathi | 02-dec-69 | 02-jan-92 | F | Pascal | | Basic | 3700 |
| Vijaya | 11-dec-65 | 02-may-92 | F | Foxpro | | C | 3500 |
|  | | | | |

**Table Name: Studies**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Null?** | **Data Type** | **Description** |
| PNAME | Not Null | Varchar2(20) | Name of Programmer |
| SPLACE | Not Null | Varchar2(20) | Place of Study |
| COURSE | Not Null | Varchar2(20) | Course Name |
| COST |  | Number(5) | Course Cost |

**Data in table Studies**

|  |  |  |  |
| --- | --- | --- | --- |
| **PNAME** | **SPLACE** | **COURSE** | **COST** |
| Anand | Sabhari | PGDCA | 4500 |
| Altaf | CBIT | DCA | 7200 |
| Juliana | BITS | MCA | 22000 |
| Tulasi | Pragathi | DCP | 5000 |
| Mary | Sabhari | PGDCA | 4500 |
| Nelson | Pragathi | DAP | 6200 |
| Patrick | Pragathi | DCAP | 5200 |
| Qadir | Apple | HDCP | 14000 |
| Ramesh | Sabhari | PGDCA | 4500 |
| Rebacca | Brilliant | DCA&P | 11000 |
| Remitha | BDPS | DCS | 5000 |
| Revathi | Sabhari | DAP | 5000 |
| Vijaya | BDPS | DCA | 48000 |

**Table Name: Software**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Null?** | **Data Type** | **Description** |
| PNAME | Not Null | Varchar2(20) | Name of Programmer |
| TITLE | Not Null | Varchar2(25) | Title of Software Project |
| DEV\_D | Not Null | Varchar2(10) | Platform Used |
| SCOST | Not Null | Number(10,2) | Per Product Selling Cost |
| DCOST | Not Null | Number(10,2) | Development Cost |
| SOLD |  | Number(4) | Number of Products Sold |

**Data in table Software**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **PNAME** | **TITLE** | **DEV\_D** | **SCOST** | **DCOST** | **SOLD** |
| Anand | Pharachutes | Basic | 399.95 | 6000 | 43 |
| Anand | Video Titling Pack | Pascal | 7500.00 | 16000 | 9 |
| Juliana | Inventory Control | Cobol | 3000 | 3500 | 0 |
| Tulasi | Payroll Package | Dbase | 9000 | 20000 | 7 |
| Mary | Financial Acc S/W | Oracle | 18000 | 85000 | 4 |
| Mary | Code Generation | C | 4500 | 20000 | 23 |
| Patrick | Read Me | C++ | 300 | 1200 | 84 |
| Qadir | Bombs Away | Assembly | 750 | 5000 | 11 |
| Qadir | Vaccines | C | 1900 | 3400 | 21 |
| Ramesh | Hotel Management | Dbase | 12000 | 35000 | 4 |
| Ramesh | Dead Lee | Pascal | 599.95 | 4500 | 73 |
| Remitha | PC Utilities | C | 725 | 5000 | 51 |
| Remitha | TSR Help Package | Assembly | 2500 | 6000 | 6 |
| Revathi | Hospital Management | Pascal | 1100 | 75000 | 2 |
| Revathi | Quiz Master | Basic | 3200 | 2100 | 15 |
| Vijaya | ISR Editor | C | 900 | 700 | 6 |

**Execute the following queries:**

**Part - I**

1. Find out the selling cost for the package(s) developed in Pascal
2. Display the names and ages of programmers
3. Display the names of programmers who have done the DAP course
4. What is the highest number of copies sold by a package
5. Display the names and date of birth of all programmers born in January
6. Display the lowest course fee
7. How many programmers have done the PGDCA course
8. How much revenue has been earned through the sale of packages developed in C
9. Display the details of software developed by Ramesh
10. How many programmers have studied at Sabhari
11. Display the details of packages whose sales have been crossed 2000 mark
12. Find out the number of copies, which should be sold in-order to recover the development cost of each package
13. Display the details of the packages for which development cost have been recovered
14. What is the price of the costlier software developed in Basic
15. How many packages were developed in dbase
16. How many programmers studied in Pragathi
17. How many programmers paid 5000-10000 for their course
18. What is the average course fee
19. Display the details of programmers knowing C
20. How may programmers know either Cobol or Pascal
21. How many programmers don’t know Pascal and C
22. How old is the oldest male programmer
23. What is the average age of female programmers
24. Calculate the experience in years for each programmer and display along with their names in descending order
25. Who are the programmers who celebrate their birthdays in the current month
26. What are the languages known by male programmers
27. What is the average salary of programmers
28. How many male programmers are there
29. How many people draw 2000-4000
30. Display the details of programmers who don’t know Fortran, Cobol or Pascal
31. In which month did most of the programmers join
32. In which language are most of the programmers proficient
33. Who are the female programmers earning more than the highest paid highest paid male programmer
34. Which language have been stated as prof1 by most of the programmers
35. Identify and include the keys (Primary Keys & Foreign Keys) in the tables

**Part – II**

1. Display the number of packages developed in each language
2. Display the number of packages developed by each person
3. Display the number of male and female programmers
4. Display the costliest and highest selling package developed in each language
5. Display the number of people born in each year
6. Display the number of people joined in each year
7. Display the number of people born in each month
8. Display the number of people joined in each month
9. Display language wise count of prof1
10. Display language wise count of prof2
11. Display the number of people in each salary group
12. Display the number of people studied in each institute
13. Display the number of people studied in each course
14. Display the total development cost of packages developed in each language
15. Display the selling cost of packages developed in each language
16. Display the costs of packages developed by each programmer language wise
17. Display the number of packages sold by each programmer
18. Display the sales cost of the packages developed by each programmer
19. Display the sales cost of the packages developed by each programmer language wise
20. Display the language name with average development cost, average selling cost and average price per copy
21. Display the programmers name, costliest package, cheapest package developed by him/ her
22. Display each institute name with number of courses, average cost per course
23. Display each institute name with number of students
24. Display the names of male and female programmers
25. Display the programmers name and their packages
26. Display the number of packages in each language except C and C++
27. Display the number of packages in each language for which the development cost is less than 1000
28. Display the average difference between SCOST and DCOST for each language
29. Display the total SCOST, DCOST and amount to be recovered for each programmer for those whose DCOST has not yet been recovered
30. Display the highest, lowest and average salaries for those earning more than 2000
31. Display the name of programmer(s) with highest salary
32. Display the name of programmer(s) of second highest salary

**Part – III**

1. Who is the highest paid C programmer
2. Who is the highest paid female Cobol programmer
3. Display the name of the highest paid programmers for each language (prof1)
4. Who is the least experienced programmer
5. Who is the most experienced male programmer knowing Pascal
6. Which language does only one programmer know
7. Who is the above programmer
8. Who is the youngest programmer knowing dbase
9. Which female programmer earning more than 3000 doesn’t know C, C++, Oracle or dbase
10. Which institute has the most number of students
11. Which course has been done by most of the students
12. Display the names of the institute and course which has below average course fee
13. Which is the costliest course
14. Which institute conducts the costliest course
15. Which course has the below average number of students
16. Which institute conducts the above courses
17. Display the number of courses whose fee are within the average fee
18. Which package has highest development cost
19. Which package has lowest development cost
20. Who developed the package that has sold least number of copies
21. Which language was used to develop the package which has the highest sales amount
22. Display the package that has the least difference between development and selling cost
23. Which is the costliest package developed in Pascal
24. Which language was used to develop the most number of packages
25. Which programmer has developed the highest number of packages
26. Who is the author of the costliest package
27. Display the names of the packages which have sold less than the average number of copies
28. Who are the authors of the packages who have recovered more than the double the development cost
29. Display the programmers name and his cheapest package developed by him in each language
30. Display the language used by each programmer to develop the highest selling and lowest selling package
31. Who is the youngest male programmer born in 1965
32. Who is the oldest female programmer joined in 1982
33. In which year did most of the programmers join
34. Display the details of those who will be completed 20 years of service this year
35. Calculate the amount to be recovered for those packages whose development cost has not yet been recovered
36. List the packages which have not been sold so far
37. Find out the cost of the software developed by Mary
38. Display the institute name from studies table without duplicates
39. How many different courses are mentioned in the studies table
40. Display the names of the programmers whose names contain 2 occurrences of the letter ‘a’
41. Display the names of programmers whose names contains up to 5 characters
42. How many female programmers knowing Cobol have more than 2 years experience
43. What is the length of the shortest name in the programmers table
44. What is the average development cost of a package developed in Cobol
45. Display the name, sex, dob (dd/ mmm/ yy format), doj (dd/ mmm/ yy format) for all programmers without using the conversion function
46. Who are the programmers who were born on the last day of the month
47. What is the amount paid salaries of male programmers who don’t know Cobol
48. Display the title, scost, dcost and difference between scost and dcost in descending order of difference
49. Display the names of the packages whose name contain more than one word
50. Display the name, job, dob, doj of those month of birth and month of joining are same

**Part – IV**

1. Display the details of those who are drawing the same salary
2. Display the details of the software developed by the male programmers earning more than 3000
3. Display the details of the packages developed in Pascal by female programmers
4. Display the details of software developed in C by female programmers of Pragathi
5. Display the number of packages, number of copies sold and sales value of each programmer institute wise
6. Display the details of the software developed in dbase by male programmers who being to the institute in which most number of programmer studied
7. Display the details of the software developed by male programmers who salary less 2500 and female programmers whose salary greater than 2500
8. Display the details of the software that was developed in the language that is not programmers first proficiency
9. Display the details of the software that was developed in the language that is neither the first nor the second proficiency of the programmer
10. Display the details of the software that was developed by the male students of Sabhari
11. Display the names of programmers who have not developed any package
12. What is the total cost of the software developed by the programmer in apple