***List of Programs***

***WORK SHEET-1( USING EMP TABLE)***

1. **List empno, empname and salary.**
2. **List the names of all MANAGERS.**
3. **list all clerks in deptno. 30.**
4. **List the employees to who manager is 7698.**
5. **List jobs in dept 20.**
6. **List employee names whose salary is between 2000 and 3000.**
7. **List employees in the departments 10, 20.**
8. **List employee names which begin with S.**
9. **List employee names having ‘A’ in their names.**
10. **List employees who have joined in JAN.**
11. **List employees who have joined in the year 81.**
12. **List all distinct jobs.**
13. **List employee names in alphabetical order.**
14. **List employee names alphabetically department wise.**
15. **List employee names alphabetically job wise.**
16. **List employee numbers, name sal, DA(15% OF SAL) and PF (10% of sal).**
17. **List employee names having an experience more than 15 years.**
18. **List employee names whose commission is NULL.**
19. **list employees who do not report to anybody.**
20. **List maximum sal, minimum sal, average sal.**
21. **List the numbers of jobs.**
22. **List the numbers of people and average salary in deptno 30.**
23. **List maximum sal and minimum sal in the designations SALESMAN and CLERK.**
24. **List the numbers of people and average salary of employees joined in 81, 82 and 83.**
25. **List jobs that are unique to deptno 20 set operations (Add more problems).**
26. **Display today’s date and present time.**
27. **List employee names and their joining date in the following formats**

**A. SMITH 17th DEC NINETEEEN EIGHTY**

**B. SMITH SEVENTEENTH DEC NINETEEN EIGHTY**

**C. SMITH Week day of joining**

**D. SMITH 17/12/80**

1. **List employee names and their experience in years**
2. **List employee names who joined in DEC and on Monday or Friday.**
3. **Display a given date as a string in different formats.**

***WORKSHEET-II (USING EMP TABLE)***

1. **List employee names and their hire dates sorted in the order of their experience.**
2. **List managers names and their joining dates completely spelled in alphabetical order of names.**
3. **List employee names and their experience in years with names arranged in descending order.**
4. **List employee names having a minimum of 2 years experience sorted on experience.**
5. **List employee names with all capital letters, with all small letters and with first letter only as capital.**
6. **List employee names with length of the name sorted on length.**
7. **List employee names appending Sri to the beginning and Garu to the end.**
8. **List employee names and month names of joining.**
9. **List employee names and year of joining in words.**
10. **List employees names, job and salary with 5 hyphens in between.**
11. **List employee names and position of first occurrence of I in their name.**
12. **List employee names and the string without first character and last character in their name.**
13. **List employees who joined between Apr 81 and Apr 82.**
14. **List max sal, min sal and average sal of depts. 10,30.**
15. **List the designation in dept 30 but not in 20.**
16. **List the number of employees ine ach department along with dept numbers.**
17. **List number of employees joined year wise.**
18. **List number of employees job wise.**
19. **List max sal, min sal, average salary dept wise.**
20. **List max sal, min sal, average salary job wise.**
21. **List max sal, min sal for the jobs MANAGER and CLERK.**
22. **List max sal, min sal AND average salary of the depts. Having a minimum 3 employees.**
23. **List the number of employees in each job in each department.**
24. **List MGR and the number of employees report to them in the sorted order.**
25. **List emp numbers of employees to whom a minimum of 3 people report.**
26. **List dept numbers having a minimum of 3 persons.**
27. **List names of jobs having a minimum of 3 persons in that job.**
28. **List names of months in which a minimum of 3 persons joined.**
29. **List hiredates of employees having 2 or more employees having the same hiredate.**
30. **List departments having minimum of 3 people having a minimum of 17 years of experience.**

***WORKSHEET-III (USING EMP TABLE)***

1. **List employee names and dept names with which they are associated.**
2. **List employee names, salary and their grade.**
3. **List employee name, dept name along with grade.**
4. **List employee names and their manager names.**
5. **List dept name and Manager name.**
6. **List managers of various depts.. Along with grade sorted on grade.**
7. **List employees having commission along with grade.**
8. **List employees names with job manager along their manager names to whom they have to report.**
9. **List names of employees who are working in the same dept of their manager.**
10. **List names of employees who are not working in the same dept of their manager.**
11. **List names of employees having first character in their name first character in their dept name same.**
12. **List employees who joined in the present month in any year and having grade and last digit in the year are same.**
13. **List names of employees whose empno, mgr and grade given the same remainder when divided by 2.**
14. **List the names of employees having grade and tens position in the deptno same.**
15. **List the names of employees having grade and tens position in the deptno same.**
16. **List employee name,deptname and dept location of those employees having any of these three same length**
17. **List names of employees having month number of hiredate and grade same**
18. **List names of clerks who are reporting to analyst.**
19. **List emp names and thrie manager names having same grade.**
20. **List emp names of employees who joined before their manager’s joining date.**

***SPJ DATABASE***

Structure of the database(Suppliers-Parts-Projects database):

S: (S#,SNAME,STATUS,CITY)

PRIMARY KEY (S#)

P: (P#,PNAME,COLOR,WEIGHT,CITY)

PRIMARY KEY(P#)

J: (J#,JNAME,CITY)

PRIMARY KEY(J#)

SPJ: (S#,P#,J#,QTY)

PRIMARY KEY(S#,P#,J#)

FOREIGN KEY(S#) REFERENCES S

FOREIGN KEY(P#) REFERENCES P

FOREIGN KEY(J#) REFERENCES J

Tables of the above database

|  |  |  |  |
| --- | --- | --- | --- |
| S | SNAME | STATUS | CITY |
| S1 | Smith | 20 | London |
| S2 | Jones | 10 | Paris |
| S3 | Blake | 30 | Paris |
| S4 | Clark | 20 | London |
| S5 | Adams | 30 | Athens |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| P | PNAME | COLOR | WEIGHT | CITY |
| P1 | Nut | Red | 18 | London |
| P2 | Bolt | Green | 17 | Paris |
| P3 | Screw | Blue | 17 | Rome |
| P4 | Screw | Red | 14 | London |
| P5 | Cam | Blue | 12 | Paris |
| P6 | Cog | Red | 19 | London |

|  |  |  |
| --- | --- | --- |
| J | JNAME | CITY |
| J1 | Sorter | Paris |
| J2 | Display | Rome |
| J3 | OCR | Athens |
| J4 | Console | Athens |
| J5 | Raid | London |
| J6 | EDC | Oslo |
| J7 | Tape | London |

**SPJ TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| **S#** | **P#** | **J#** | **QTY** |
| S1 | P1 | J1 | 200 |
| S1 | P1 | J4 | 700 |
| S2 | P3 | J1 | 400 |
| S2 | P3 | J2 | 200 |
| S2 | P3 | J3 | 200 |
| S2 | P3 | J4 | 500 |
| S2 | P3 | J5 | 600 |
| S2 | P3 | J6 | 400 |
| S2 | P3 | J7 | 800 |
| S2 | P5 | J2 | 100 |
| S3 | P3 | J1 | 200 |
| S3 | P4 | J2 | 500 |
| S4 | P6 | J3 | 300 |
| S4 | P6 | J7 | 300 |
| S5 | P2 | J2 | 200 |
| S5 | P2 | J4 | 100 |
| S5 | P5 | J5 | 500 |
| S5 | P5 | J7 | 100 |
| S5 | P6 | J2 | 200 |
| S5 | P1 | J4 | 100 |
| S5 | P3 | J4 | 200 |
| S5 | P4 | J4 | 800 |

***LABSHEET-1***

#### SQL

**(Query exercises on the database(Suppliers-Parts-Projects))**

1. **Get full details of all projects.**
2. **Get full details of all Projects in London**
3. **Get supplier numbers for Suppliers who supply Project J1.**
4. **Get all shipments where the quantity is in the range 300 to 700.**
5. **Get all part-color/part-city combinations.**

**Note: Here and in subsequent exercises, the term “all” is to be taken to**

**mean“all currently represented in the Database”, not “all possible”.**

1. **Get all Supplier-number/part-number/Project-number triples such that the indicated Supplier part and Project are collocated.**
2. **Get all supplier-number/part-number/project-number triples such that the indicated supplier, part and project are not all collocated.**
3. **Get all supplier-number/part-number/ project-number triples such that the indicated supplier, part and project are collocated.**
4. **Get part numbers for parts supplied by a supplier in London.**
5. **Get part numbers for parts supplied by a supplier in London to a project in London.**
6. **Get all pairs of city names such that a supplier in the first city supplies a project in the second city.**
7. **Get part numbers for parts supplied to any project by a supplier in the same city as that project.**
8. **Get project numbers for projects supplied by atelast one supplier not in the same city.**
9. **Get all pairs of part numbers such that some supplier supplies both the indicated parts.**
10. **Get the total number of projects supplied by supplier S1.**
11. **Get the total quantity of part P1 supplied by suppliers S1.**
12. **For each part being supplied to some project get the part number, the project numbers and the corresponding total quantity.**
13. **Get part numbers of parts supplied to some project in an average quantity of more than 320.**
14. **Get project names for projects supplied by supplier S1.**
15. **Get colors of parts supplied by supplier S1.**
16. **Get parts numbers for parts supplied to any project in London.**
17. **Get project numbers for projects using atleast one part available from supplier S1.**
18. **Get supplier numbers for suppliers supplying atleast one part supplied by atelast one supplier who supplies atleast one red part.**
19. **Get supplier numbers for suppliers with a status lower than that of supplier S1.**

**25. Get project numbers for projects whose city is first in the alphabetic list of**