DBT Problem Solving - Set - 005

Feb19/ DBT-PS/ 005

Database Technologies

Diploma in Advance Computing

February 2019

**Location Table: Hobby Table:**

|  |  |
| --- | --- |
| **HOBBYID** | **HOBBYNAME** |
| 1 | Windsurfing |
| 2 | Fishing |
| 3 | Swimming |
| 4 | Shopping |
| 5 | Bowling |
| 6 | Reading |
| 7 | Dancing |
| 8 | Travelling |
| 9 | Bungee Jumping |
| 10 | Horse Riding |
| 11 | Bowling |
| 12 | Astrology |

|  |  |
| --- | --- |
| **LOCATIONID** | **LOCATIONNAME** |
| 1 | New York |
| 2 | Dallas |
| 3 | Chicago |
| 4 | Boston |
| 5 | California |
| 6 | Florida |
| 7 | Indiana |
| 8 | Maryland |
| 9 | Nevada |
| 10 | London |
| 11 | Geneva |
| 12 | Roma |

**DEPT Table:**

|  |  |  |
| --- | --- | --- |
| **DEPTNO** | **DNAME** | **LOCATIONID** |
| 10 | Accounting | 1 |
| 20 | Research | 2 |
| 30 | Sales | 3 |
| 40 | Operations | 4 |
| 50 | Purchase | 5 |
| 60 | Production | 6 |
| 70 | Controls | 7 |
| 80 | Operations Research | 8 |
| 90 | Finance | 1 |
| 100 | IT | 2 |
| 110 | IT Support | 3 |
| 120 | Shipping | 4 |
| 130 | IT Helpdesk | 1 |
| 140 | Retail Sales | 2 |
| 150 | IT Network | 3 |
| 160 | Public Relations | 4 |
| 170 | Materials Science | 1 |
| 180 | Career Services | 2 |
| 190 | Commercial | 5 |
| 200 | Economics | 6 |
| 201 | HRD | 5 |

**EMP Table:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** | **HOBBY**  **ID** |
| 1000 | Alice | manager | 7839 | 1983-08-12 | 9000 |  | 10 | 1 |
| 1001 | Victor | assistant manager | 1000 | 1983-12-25 | 8000 |  | 10 | 4 |
| 1002 | Jack | assistant | 1001 | 1983-12-25 | 7000 |  | 20 | 3 |
| 1003 | William | assistant | 1001 | 1984-12-30 | 7000 |  | 30 | 2 |
| 1004 | Rose | assistant manager | 1000 | 1985-01-30 | 8000 |  | 150 | 7 |
| 1005 | Kate | assistant analyst | 7388 | 1985-01-30 | 3000 |  | 160 | 9 |
| 1006 | William | salesman | 7388 | 1980-02-13 | 23700 | 1200 | 160 | 10 |
| 1007 | Matthew | salesman | 1005 | 1980-02-28 | 4700 | 1200 | 160 | 12 |
| 1008 | Mai | salesgirl | 1000 | 2001-12-25 | 8000 | 10000 | 150 | 1 |
| 1009 | Zaria | salesgirl | 1001 | 2002-12-25 | 7000 | 555 | 150 | 7 |
| 1010 | Maya | salesgirl | 1001 | 2003-12-30 | 7000 | 120 | 140 | 4 |
| 1011 | Rose | salesgirl | 1000 | 2004-01-30 | 18000 | 250 | 150 | 3 |
| 1012 | Kate | salesgirl | 7388 | 2005-01-30 | 3000 | 900 | 160 | 8 |
| 1013 | Tina | salesgirl | 7388 | 2006-02-13 | 13700 | 2400 | 160 | 10 |
| 1014 | Mary | salesgirl | 1005 | 2007-02-28 | 20000 | 1550 | 90 | 11 |
| 1015 | Tessa | salesgirl | 1005 | 2008-02-28 | 14700 | 1100 | 160 | 12 |
| 1016 | Steven | assistant | 1004 | 1983-01-12 | 9500 |  | 40 | 2 |
| 2099 | Sherlock | clerk | 8009 | 1982-01-23 | 1600 |  | 40 | 6 |
| 2877 | Stephen | assistant | 7788 | 1983-01-12 | 1100 |  | 40 | 4 |
| 3000 | Aaron | salesman | 7877 | 1981-11-17 | 4500 | 1200 | 60 | 8 |
| 3001 | Alexander | manager | 7369 | 1981-05-01 | 2950 |  | 90 | 7 |
| 3002 | Brooke | clerk | 5002 | 1981-06-09 | 2222 |  | 50 | 6 |
| 3003 | Bruce | personal assistant | 5002 | 1981-04-02 | 4975 |  | 120 | 9 |
| 3189 | Eli | personal assistant | 3001 | 1981-12-03 | 5400 |  | 30 | 8 |
| 3244 | Shelley | manager | 7839 | 1981-12-03 | 6000 |  | 170 | 6 |
| 3267 | Clive | assistant | 5002 | 1981-02-20 | 3600 |  | 50 | 4 |
| 3467 | Christopher | personal assistant | 7844 | 1981-09-28 | 4250 |  | 190 | 1 |
| 3598 | Dirk | assistant | 7698 | 1981-09-08 | 1500 |  | 60 | 3 |
| 3745 | Ely | assistant | 7788 | 1981-02-22 | 5250 |  | 150 | 5 |
| 4934 | Sherlock | clerk | 8009 | 1982-01-23 | 1600 |  | 40 | 10 |
| 5001 | Aaron | salesman | 7902 | 1981-11-17 | 4500 | 1200 | 60 | 11 |
| 5002 | Alexander | manager | 7369 | 1981-05-01 | 2950 |  | 70 | 12 |
| 5003 | Brooke | clerk | 5002 | 1981-06-09 | 2222 |  | 100 | 12 |
| 6001 | Bruce | personal assistant | 5002 | 1981-04-02 | 4975 |  | 80 | 10 |
| 6002 | Christopher | personal assistant | 7844 | 1981-09-28 | 4250 |  | 180 | 11 |
| 6003 | Clive | assistant | 7698 | 1981-02-20 | 3600 |  | 120 | 1 |
| 6342 | Joel | clerk | 8009 | 1982-01-23 | 1600 |  | 50 | 7 |
| 6345 | Jay | analyst | 8009 | 1982-12-09 | 3100 |  | 50 | 8 |
| 6774 | Joe | assistant | 7788 | 1983-01-13 | 1100 |  | 190 | 2 |
| 6843 | Matthew | assistant | 7788 | 1983-01-12 | 1100 |  | 100 | 3 |
| 6980 | Louis | clerk | 8009 | 1982-01-23 | 1600 |  | 30 | 2 |
| 7005 | DIRK | assistant | 7698 | 1981-09-08 | 1500 |  | 60 | 3 |
| 7006 | ELI | personal assistant | 7521 | 1981-12-03 | 5400 |  | 70 | 5 |
| 7007 | ELY | assistant | 7788 | 1981-02-22 | 5250 |  | 140 | 4 |

**Giver the above tables solve the following queries.**

1. **Write a query to all the employees whose job type is 'personal assistant'.**

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1. **Write a query to display all employees whose name starts with a letter 'S' and must have at least 6 characters.**

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1. **Write a query to display top 5 highest paid salaries.**

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1. **Write a query to display all department details where no employees are working.**

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1. **Write a query to display all the employees who don’t have any hobby.**

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1. **Write a query to display employee names and his hobby.**

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1. **Write a query to display hobby name and count how many employees are there for every hobby.**

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1. **Write a query to find the highest salary whose hobby is 'Horse Riding';**

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1. **Write a query to display employee name, department name and his location name.**

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1. **Write a query to display department name and sum of salary who are working in 'IT network' department.**

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1. **Write a query to display the difference between the sum of salaries between 'Manager' and 'Assistant Manager'.**

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1. **Write the query to display hobby name of the employees whose location name is 'California'.**

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**ANS.**

1. **select \* from emp where job = "personal assistant"**
2. **select \* from emp where ename like 'S%' and length(ename) >= 6;**
3. **select sal from emp group by sal order by sal desc limit 5;**
4. **select \* from dept where not exists (select \* from emp where emp.deptno = dept.deptno);**
5. **select \* from emp where hobbyID is null;**
6. **select ename, hobby from emp, hobby where emp.hobbyid = hobby.hobbyid;**
7. **select hobbyname, count(\*) from emp, hobby where emp.hobbyid = hobby.hobbyid group by hobbyname;**
8. **select max(sal) from emp, hobby where emp.hobbyid = hobby.hobbyid and hobbyname = 'Horse Riding';**
9. **select ename, dname, locationname from emp, dept, location where emp.deptno = dept.deptno and dept.locationid = location.locationid;**
10. **select dname, sum(sal) from emp, dept where emp.deptno = dept.deptno and dname = 'IT network';**
11. **select (select sum(sal) from emp where job = 'Manager' ) - (select sum(sal) from emp where job = 'Assistant Manager') as "Difference";**
12. **select hobbyname from emp, dept, location, hobby where emp.deptno = dept.deptno and dept.locationID = location.locationID and emp.hobbyid = hobby.hobbyid and locationname = 'California'**
13. **Q**
14. **Q**
15. **Q**