

1. Find the aids of pilots certified for some Boeing aircraft.
2. Find the names of pilots certified for some Boeing aircraft.
3. Find the aids of all aircraft that can be used on non-stop flights from Bonn to Madras.
4. Identify the flights that can be piloted by every pilot whose salary is more than \$100,000.
5. Find the names of pilots who can operate planes with a range greater than 3,000 miles but are not certified on any Boeing aircraft.
6. Find the aids of employees who make the highest salary.
7. Find the aids of employees who make the second highest salary.
8. Find the aids of employees who are certified for the largest number of aircraft.
9. Find the aids of employees who are certified for exactly three aircraft.
10. Find the total amount paid to employees as salaries.

1.

```
SELECT C.aid FROM Aircraft A, Certified C
```

```
WHERE A.aid = C.aid AND A.aname = 'Boeing'
```

2.

```
SELECT E.ename FROM Aircraft A, Certified C, Employees E
```

```
WHERE A.aid = C.aid AND A.aname = 'Boeing' AND E.aid = C.aid
```

3.

```
SELECT A.aid FROM Aircraft A, Flights F
```

```
WHERE F.from = 'Bonn' AND F.to = 'Madrid' AND A.cruisingrange > F.distance
```

4.

```
SELECT E.ename FROM Aircraft A, Certified C, Employees E, Flights F
```

```
WHERE A.aid = C.aid AND E.aid = C.aid AND distance < cruisingrange AND salary > 100,000
```

5.

```
SELECT E.ename FROM Certified C, Employees E, Aircraft A
```

```
WHERE A.aid = C.aid AND E.aid = C.aid AND A.cruisingrange > 3000
```

AND E.eid NOT IN (SELECT C2.eid FROM Certified C2, Aircraft A2
WHERE C2.aid = A2.aid AND A2.aname = 'Boeing')

6.

SELECT E.eid FROM Employees E
WHERE E.salary = (Select MAX (E2.salary) FROM Employees E2)

7.

SELECT E.eid FROM Employees E
WHERE E.salary = (SELECT MAX (E2.salary) FROM Employees E2
WHERE E2.salary = (SELECT MAX (E3.salary) FROM Employees E3))

8.

SELECT Temp.eid FROM (SELECT C.eid AS eid, COUNT (C.aid) AS cnt, FROM Certified C
GROUP BY C.eid) AS Temp
WHERE Temp.cnt = (SELECT MAX (Temp.cnt) FROM Temp)

9.

SELECT C1.eid FROM Certified C1, Certified C2, Certified C3
WHERE (C1.eid = C2.eid AND C2.eid = C3.eid AND C1.aid = C2.aid AND C2.aid = C3.aid AND C3.aid =
C1.aid)
EXCEPT SELECT C4.eid FROM Certified C4, Certified C5, Certified C6, Certified C7,
WHERE (C4.eid = C5.eid AND C5.eid = C6.eid AND C6.eid = C7.eid AND C4.aid = C5.aid AND C4.aid =
C6.aid AND C4.aid = C7.aid AND C5.aid = C6.aid AND C5.aid = C7.aid AND C6.aid = C7.aid)

10.

SELECT SUM (E.salaries) FROM Employees E