Date: 07/03/19

WEEK-4

Problem Statement-1: Find the names of sailors who have reserved boat 103.

SQL :

```
SQL> select sname from sailors
  2  where sid in
  3  ( select sid from reserves where bid=103);

SNAME
---------
Dustin
Lubber
Horatio
```

Problem Statement-2: Find the names of sailors who have reserved a red boat

SQL :

```
SQL> select sname from sailors
  2  where sid in
  3  ( select sid from reserves where bid in
  4  ( select bid from boats where color='red'));

SNAME
---------
Dustin
Lubber
Horatio
```

Problem Statement-3: Find the colours of boats reserved by Lubber

SQL :

```
SQL> select bname, color from boats
  2  where bid in
  3  ( select bid from reserves where sid in
  4  ( select sid from Sailors where sname='Lubber'));

BNAME      COLOR
--------- ------
Interlake red
Clipper   green
Marine    red
```

Problem Statement-4: Find the names of sailors who have reserved at least one boat

SQL :

```
SQL> select sid, sname from sailors
  2  where sid in ( select sid from reserves );
```

Name: Ranajit Roy, **Sec:** A, **Roll:** 47

```
       SID SNAME
---------- ---------
        22 Dustin
        31 Lubber
        64 Horatio
        74 Horatio
```

Problem Statement-5: How many sailors are there within the range of 40-60 who have reserved a red   boat?

SQL :
```
SQL> select count(*) from sailors
  2  where age>39 and age<61 and sid in
  3  ( select sid from reserves where bid in
  4  ( select bid from boats where color='red' ));

  COUNT(*)
----------
         2
```

Problem Statement-6: Find the names of sailors who have reserved a red or a green boat

SQL :
```
SQL> select sid, sname from sailors
  2  where sid in
  3  ( select sid from reserves where bid in
  4  ( select bid from boats where color in ('red', 'green')));

       SID SNAME
---------- ---------
        22 Dustin
        31 Lubber
        64 Horatio
        74 Horatio
```

Problem Statement-7: Find the name of sailors who have reserved a red and a green boat

SQL :
```
SQL> select sid, sname from sailors
  2  where sid in
  3  ( select sid from reserves where bid in
  4  ( select bid from boats where color='red'))
  5  and sid in
  6  ( select sid from reserves where bid in
  7  ( select bid from boats where color='green'));

       SID SNAME
---------- ---------
        22 Dustin
        31 Lubber
```

Problem Statement-8: Find the name of sailors who have reserved at least two boats

SQL :
```
SQL> select sid, sname from sailors
  2  where sid in
  3  ( select sid from reserves group by sid having count(sid)>1);

       SID SNAME
---------- ---------
        22 Dustin
        31 Lubber
        64 Horatio
```

Problem Statement-9: On which date, boat 102 was reserved by Dustin?

SQL :
```
SQL> select day from reserves
  2  where bid=102 and sid in
  3  ( select sid from sailors where sname='Dustin' );

DAY
---------
10-OCT-98
```

Problem Statement-10: How many sailors are there who have same rating?

SQL :
```
SQL> select sum(count(*)) from sailors
  2  group by rating
  3  having count(*)>1;

SUM(COUNT(*))
-------------
            7
```

Problem Statement-11: Find the sids of sailors with age over 20 who have not reserved a red boat

SQL :
```
SQL> select sid from sailors
  2 where age>20 and sid not in
  3 (select distinct sid from reserves where bid in
  4 (select bid from boats where color='red'));

       SID
----------
        29
        32
        58
        74
        85
        95

6 rows selected.
```

Problem Statement-12: How many months later Marine was booked from his first booking?

SQL :
```
SQL> select distinct months_between
  2 ((select day from reserves where bid in
  3 (select bid from boats where bname='Marine') and day not in
  4 (select min(day) from reserves group by bid having bid in
  5 (select bid from boats where bname='Marine'))),
  6 (select min(day) from reserves group by bid having bid in
  7 (select bid from boats where bname='Marine'))) as mon_gap
  8 from reserves;

MON_GAP
----------
5.03225806
```

Problem Statement-13: Find the names of sailors who have reserved all boats

SQL :
```
SQL> select sname from sailors where sid in
  2 (select sid from reserves group by sid
  3 having count(distinct bid)=(select count(*) from boats));

SNAME
----------
Dustin
```

Problem Statement-14: Find the names of sailors who have reserved all boats call Interlake

SQL :
```
SQL> select sname from sailors where sid in
  2 (select sid from reserves where bid in
  3 (select bid from boats where bname='Interlake')
  4 group by sid having count(distinct bid)=(select count(*)
  5 from boats where bname='Interlake'));

SNAME
----------
Dustin
Horatio
```