

ASSIGNMENT-5

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CODE- for creating tables name sailor, Reserve, Boat respectively

```
create table sailor(  
    sid int(11), sname varchar(11), rating int(11), age real(11)  
);
```

```
insert into sailor(sid, sname, rating, age)values(1, "varun",9, 21);  
insert into sailor(sid, sname, rating, age)values(2, "karan",10, 20);  
insert into sailor(sid, sname, rating, age)values(3, "harsh",15, 19);  
insert into sailor(sid, sname, rating, age)values(4, "rahul",20, 22);
```

```
create table Reserve(  
    sid int(11), bid int(11), day date(11)  
);
```

```
insert into Reserve(sid, bid, day)values(2, 102, 1-2-12);  
insert into Reserve(sid, bid, day)values(3, 103, 4-12-12);  
insert into Reserve(sid, bid, day)values(1, 104, 5-6-12);  
insert into Reserve(sid, bid, day)values(4, 105, 6-3-12);
```

```
create table Boat(  
    bid int(11), bname varchar(11), color varchar(11)  
);
```

```

insert into Boat(bid, bname, color)values(102, "b1", "red");

insert into Boat(bid, bname, color)values(103, "b2", "yellow");

insert into Boat(bid, bname, color)values(104, "b3", "blue");

insert into Boat(bid, bname, color)values(105, "b4", "red");

```

1) --Write a relational algebra query to find all sailors with rating above 10.

QUERY ---- SELECT * FROM sailor where rating >10;

The screenshot shows the OnlineGDB web interface. The code editor contains the following SQL code:

```

21
22 create table Boat(
23 bid int(11), bname varchar(11), color varchar(11)
24 );
25
26 insert into Boat(bid, bname, color)values(102, "b1", "red");
27 insert into Boat(bid, bname, color)values(103, "b2", "yellow");
28 insert into Boat(bid, bname, color)values(104, "b3", "blue");
29 insert into Boat(bid, bname, color)values(105, "b4", "red");
30
31 --Write a relational algebra query to find all sailors with rating above 10.
32
33 SELECT * FROM sailor where rating >10;

```

The console output shows the results of the query:

```

3|harsh|15|19.0
4|rahul|20|22.0
...Program finished with exit code 0
Press ENTER to exit console.

```

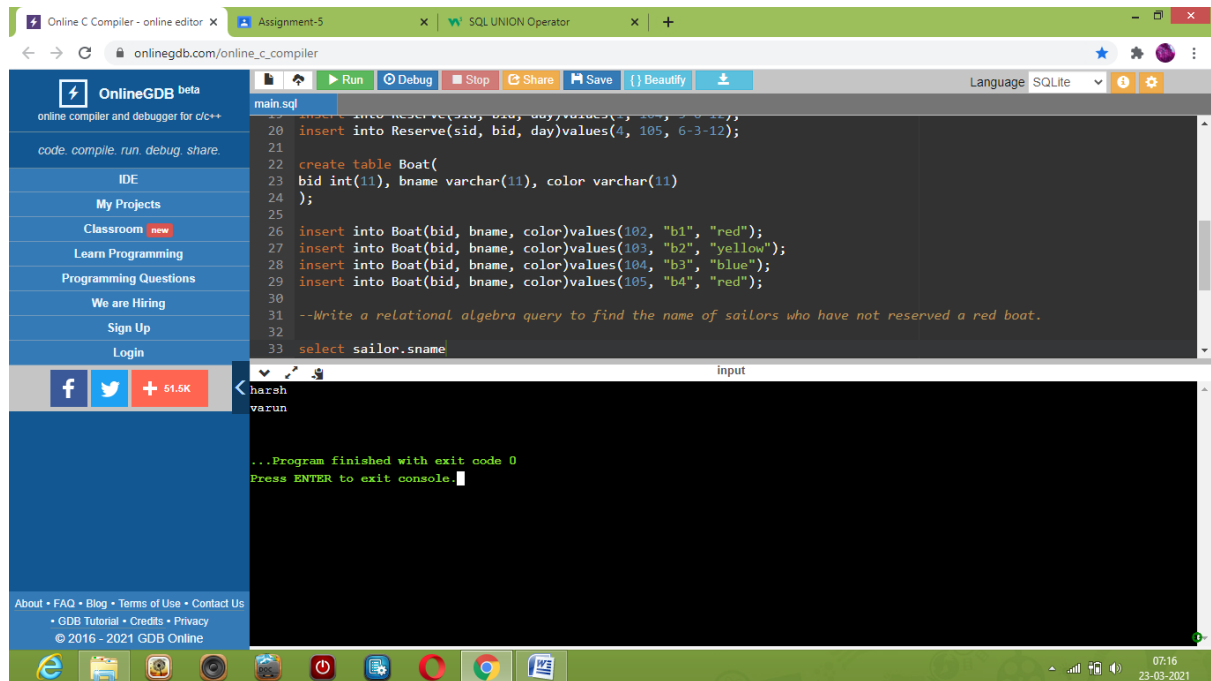
2) --Write a relational algebra query to find the name of sailors who have not reserved a red boat.

```

Select sailor.sname
from((sailor
inner join Reserve
ON sailor.sid=Reserve.sid)
inner join Boat
On Reserve.bid=Boat.bid)

```

WHERE NOT color="red";



The screenshot shows the OnlineGDB IDE interface. The main editor displays a SQL script in a dark-themed editor. The script includes a table definition for 'Boat' and several insert statements. A comment indicates the task is to write a relational algebra query to find sailors who have not reserved a red boat. The query is partially visible at the bottom of the editor. The console output shows the program finished with exit code 0. The sidebar on the left contains navigation links for IDE, My Projects, Classroom, Learn Programming, Programming Questions, We are Hiring, Sign Up, and Login. The bottom status bar shows the time as 07:16 on 23-03-2021.

```
main.sql
19 insert into Reserve(sid, bid, day) values(1, 105, 6-3-12);
20 insert into Reserve(sid, bid, day) values(4, 105, 6-3-12);
21
22 create table Boat(
23   bid int(11), bname varchar(11), color varchar(11)
24 );
25
26 insert into Boat(bid, bname, color) values(102, "b1", "red");
27 insert into Boat(bid, bname, color) values(103, "b2", "yellow");
28 insert into Boat(bid, bname, color) values(104, "b3", "blue");
29 insert into Boat(bid, bname, color) values(105, "b4", "red");
30
31 --Write a relational algebra query to find the name of sailors who have not reserved a red boat.
32
33 select sailor.sname
```

input

harsh
varun

...Program finished with exit code 0
Press ENTER to exit console.

3) -Write relational algebra query to find sailors who have reserved boat number 105.

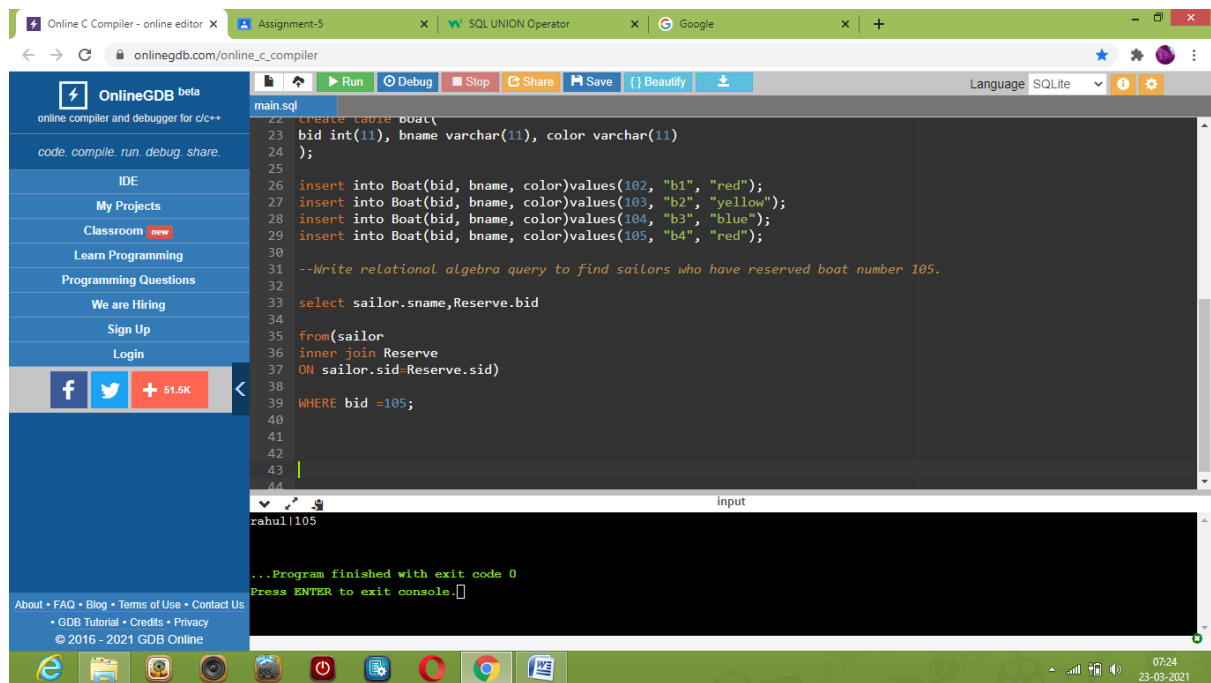
select sailor.sname, Reserve.bid

from(sailor

inner join Reserve

ON sailor.sid=Reserve.sid)

WHERE bid =105;



4) --Write relational algebra query to find the sid of sailors who have reserved red or yellow boats

select sailor.sid

from((sailor inner join Reserve

ON sailor.sid=Reserve.sid)

inner join Boat On

Reserve.bid=Boat.bid)

WHERE color="red" or color="yellow";

The screenshot shows the OnlineGDB IDE interface. The main editor contains the following SQL code:

```

18 insert into Reserve(sid, bid, day)values(3, 103, 4-12-12);
19 insert into Reserve(sid, bid, day)values(1, 104, 5-6-12);
20 insert into Reserve(sid, bid, day)values(4, 105, 6-3-12);
21
22 create table Boat(
23 bid int(11), bname varchar(11), color varchar(11)
24 );
25
26 insert into Boat(bid, bname, color)values(102, "b1", "red");
27 insert into Boat(bid, bname, color)values(103, "b2", "yellow");
28 insert into Boat(bid, bname, color)values(104, "b3", "blue");
29 insert into Boat(bid, bname, color)values(105, "b4", "red");
30
31 --Write relational algebra query to find the sid of sailors who have reserved red or yellow boats
32
33 select sailor.sid
34 from((sailor inner join Reserve
35 ON sailor.sid=Reserve.sid)
36 inner join Boat ON
37 Reserve.bid=Boat.bid)

```

The output console shows the message: "...Program finished with exit code 0. Press ENTER to exit console."

5) --Write relational algebra query to find the name of sailors who have reserved at least one boat

The screenshot shows the OnlineGDB IDE interface. The main editor contains the following SQL code:

```

13 create table Reserve(
14 sid int(11), bid int(11), day date(11)
15 );
16
17 insert into Reserve(sid, bid, day)values(2, 102, 1-2-12);
18 insert into Reserve(sid, bid, day)values(3, 103, 4-12-12);
19 insert into Reserve(sid, bid, day)values(1, 104, 5-6-12);
20 insert into Reserve(sid, bid, day)values(4, 105, 6-3-12);
21
22 create table Boat(
23 bid int(11), bname varchar(11), color varchar(11)
24 );
25
26 insert into Boat(bid, bname, color)values(102, "b1", "red");
27 insert into Boat(bid, bname, color)values(103, "b2", "yellow");
28 insert into Boat(bid, bname, color)values(104, "b3", "blue");

```

The output console shows the message: "...Program finished with exit code 0. Press ENTER to exit console."

