Question 3 [5 Marks]

Consider the following relational schema:

```
Suppliers(sid:integer, sname:string, city:string, street:string)


Parts(pid:integer, pname:string, color:string)


Catalog(sid:integer, pid:integer, cost:real)
```

Consider the following relational query on the above database:

```
SELECT S.sname


     FROM Suppliers S


           WHERE S.sid NOT IN (SELECT C.sid


                                  FROM Catalog C


                                  WHERE C.pid NOT IN (SELECT P.pid


                                                         FROM Parts P


                                                         WHERE P.color<> 'blue'))
```

Assume that relations corresponding to the above schema are not empty. Which one of the following is the correct interpretation of the above query?

✗	Find the names of all suppliers who have supplied a non-blue part.
B	Find the names of all suppliers who have not supplied a non-blue part.
C	Find the names of all suppliers who have supplied only blue parts.
✓	Find the names of all suppliers who have not supplied only blue parts.
✓	None

Explanation

None option matched because given query returns suppliers who have *not supplied any blue parts*. That means it can include other than blue parts.

(A): False, as this may include blue parts and may not include "null" parts.

(B): Obviously false because it returning other than any blue part.

(C): Obviously false because it does not return this.

(D): Correct. Please try here: http://sqlfiddle.com/#!9/9ae12d/1/0
This explanation is contributed by **Archit Garg**.