艾法諾科技 - PHP面試考題

應試人：

面試日期：

主考官：

分數：

考題

請將答案另外寫在空白紙上

PHP

1. Write a function that takes a string as input and returns the string reversed.

   Example:
   Given s = “hello”, return “olleh”.

2. Given a string, find the first non-repeating character in it and return it’s index. If it doesn’t exist, return -1.

   Examples:

   ```
   s = "leetcode"
   return 0.

   s = "loveleetcode",
   return 2.
   ```

   Note: You may assume the string contain only lowercase letters.

   Solution:

PHP

```php
class Solution {
    /**
    * @param String $str Input string
    *
    * @return int The index of first non-repeating ch
    */
    class Solution {
        public function firstUniqChar($str) {

        }
    }
}
```

3. You are given an n x n 2D matrix representing an image.

   Rotate the image by 90 degrees (clockwise).

   Note:
   You have to rotate the image in-place, which means you have to modify the input 2D matrix directly. DO NOT allocate another 2D matrix and do the rotation.

   Example 1:

```
Given input matrix =
[
  [1,2,3],
  [4,5,6],
  [7,8,9]
],

rotate the input matrix in-place such that it becomes
[
  [7,4,1],
  [8,5,2],
  [9,6,3]
]
```

Example 2:

```
Given input matrix =
[
  [ 5, 1, 9,11],
  [ 2, 4, 8,10],
  [13, 3, 6, 7],
  [15,14,12,16]
],

rotate the input matrix in-place such that it becomes
[
  [15,13, 2, 5],
  [14, 3, 4, 1],
  [12, 6, 8, 9],
  [16, 7,10,11]
]
```

Solution:

Java

```
class Solution {
    /**
    * @param array $matrix 2D matrix
    *
    * @return array Rotated 2D matrix by 90 degrees(c
    */
    public function rotate(array $matrix) {

    }
}
```

DATABASE

1. Table: `Person`

```
+-------------+---------+
| Column Name | Type    |
+-------------+---------+
| PersonId    | int     |
| FirstName   | varchar |
| LastName    | varchar |
+-------------+---------+
PersonId is the primary key column for this table.
```

Table: `Address`

```
+-------------+---------+
| Column Name | Type    |
+-------------+---------+
| AddressId   | int     |
| PersonId    | int     |
| City        | varchar |
| State       | varchar |
+-------------+---------+
AddressId is the primary key column for this table.
```

Write a SQL query for a report that provides the following information for each person in the Person table, regardless if there is an address for each of those people:

```
FirstName, LastName, City, State
```

2. Write a SQL query to delete all duplicate email entries in a table named `Person`, keeping only unique emails based on its smallest Id.

```
+----+------------------+
| Id | Email            |
+----+------------------+
| 1  | john@example.com |
| 2  | bob@example.com  |
| 3  | john@example.com |
+----+------------------+
Id is the primary key column for this table.
```

For example, after running your query, the above Person table should have the following rows:

```
+----+------------------+
| Id | Email            |
+----+------------------+
| 1  | john@example.com |
| 2  | bob@example.com  |
+----+------------------+
```