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NODE.JS BACKEND DEVELOPER APTITUDE TEST

TASK 1

Assuming you are working on the backend of a laundry company mobile app, users can select the number of times they want the laundry company to pick up their clothes in a month, create an API that:

- Accept pickup day (Monday - Saturday)
- Accept service recurrence (4 times, 2 times or once a month)
- Using today (current day) as the start date, generate the next pickup dates for the subscription
- Return the generated pickup dates in form of an array as the response

Example request object

```
{

   "pickup_day": "Saturday",

   "recurrence": 4

}
```

Example response object

```
{

   "pickup_dates": [

     {

        "date":"2021-07-24T22:41:50.219+00:00",

        "readable_date":"24 July 2021"

     },

     {
```

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```
      "date":"2021-07-31T22:41:50.219+00:00",

      "readable_date":"31 July 2021"

    },

    {

      "date":"2021-08-07T22:41:50.219+00:00",

      "readable_date:"7 August 2021"

    },

    {

      "date":"2021-08-14T22:41:50.219+00:00",

      "readable_date":"14 August 2021"

    }

  ]

}
```

TASK 2

Given a string, return the first recurring character in it, or null if there is no recurring character. For example, given the string **"acbbac"**, return **"b"**. Given the string **"abcdef"**, return **null**.

TASK 3

Given an array of integers, return a new array where each element in the new array is the number of smaller elements to the right of that element in the original input array. For example, given the array **[3, 4, 9, 6, 1]**, return **[1, 1, 2, 1, 0]**, since:

- There is 1 smaller element to the right of 3
- There is 1 smaller element to the right of 4
- There are 2 smaller elements to the right of 9
- There is 1 smaller element to the right of 6
- There are no smaller elements to the right of 1

TASK 4

Given a sorted list of integers, square the elements and give the output in sorted order. For example, given **[-9, -2, 0, 2, 3]**, return **[0, 4, 4, 9, 81]**.

SUBMISSION

1. Provide your solution in a public git repository, each task should be in a separate folder and should have a readme.md file stating the question and explain your approach to the solution (ensure you use a good commit message pattern).

2. We love clean code and understand the importance of unit testing, we hope you share the feeling.

3. For Task 1, publish the documentation of your API using postman and include the documentation link in your readme.md file.

4. Reply the email that sent the question with your public git repository link.