BeGOOD™

Tasks for
Software Engineering Internship

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1. Required Technology to Be Used

Component	Choice of Technology
Frontend	if you choose to develop a Mobile App use Flutter / React Native **"or"** If you choose to develop a WEB App use React.js / Next.js
Backend	Spring Boot / Express.js / Socket.io / Laravel / Firebase
Database	Any database of your choice
API Technique	REST / GraphQL
Source Control	Git (GitHub, GitLab, etc.)

2. Time Duration

- On or before 7 days from the date of submission
- Deadlines could be extended for valid reasons

3. Notes

- You only have to develop/code the Frontend, as a Mobile Application "**or**" a WEB Application. **You don't need to do both**.
- You can choose any technology from the List of Choices provided in the above table to develop the said solution.

4. Expected Outcome

- Working code is expected, need to understand the approach to the design and development of the scenario
- Series of scenarios that the solution will support and a series of scenarios that it will not support is expected
- Both the Backend & Frontend Solution is required

5. Prerequisites

(Use of search engines and other references are allowed)

- Requires some knowledge of the technologies mentioned above
- Requires some research into regular expressions

6. Problem

You are developing the frontend and the backend for a vehicle registration application (Mobile or WEB), based in Sri Lanka. Your only customers are Sri Lankan vehicle owners, and one field is the license plate of the vehicle that they own.

The vehicle license plate can be in many forms:
- Vintage: 13 ශ්‍රී 9999
- Old: 250-9999, 19-9999
- Modern: WP GA-9999, CAR-9999

For each input, there may be a variable amount of whitespace (for instance, 250 – 9999 and 250-9999 are both valid). Dashes may be replaced by a space.

6.1   Task 1

For any plate number that is entered, write a function in the backend that determines the type (vintage, old or modern). Your function will take a String input and return one of the three options to be handled by the frontend of your choice (Mobile or WEB). For this function, assume that every input is a valid license plate.

6.2   Task 2

Write a function to validate a string as a valid license plate number. Your function should take any String and return _True_ or _False_ depending on the license plate validity. (This exercise will require some knowledge of regular expressions).

Your answer should be accompanied by both positive (example license plates that will work) and negative (example license plates that shouldn't be valid).

6.3   Task 3

Basic CRUD (Create, read, update and delete) operations of vehicle registrations from the Frontend sent via selected API technique to the Backend and stored in the Database of your choice.

The application shall facilitate the user
- to create new vehicle registrations
- to get all created vehicle registrations
- to edit/update a created vehicle registration, and
- to delete a created vehicle registration

7. Conclusion

Please email the Frontend & Backend solution public Git repository URLs.