Internet Programming 2

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KZN – Possible implementation of new VRN system

Let's investigate the vehicle registration number (VRN) system that has recently been implemented in KwaZulu-Natal.

The old system used a "code" starting with "N" [representing the old "Natal" Province], followed by "D" [which stood for Durban], followed by an Integer in sequence [000001 to 999999] – I suspect you are familiar with this system. Through observation, the Integer part of the VRN system used 6 digits meaning that the total possible unique combinations stood at 999999 and this was an allocation merely for the Durban area.

The new system is implemented across the Province implement a single allocation system for the entire Province – it may be possible to assign "lots" of numbers to different areas, and also possible that the VRNs could be randomly generated, when they are being assigned – this will provide "Variety" in the allocated numbers (from a Look point of view), but has its own challenges – we will revisit this possibility later. For now, we ignore these two possibilities in our implementation (which, through my observation) appears to be what the authorities have done.[VRN appear to have started with BB and it appears they have been assigned in some sequence]. Notwithstanding, let us develop our approach to this problem situation – in the first draft, we ignore the fact that Vowels are left out in the system (we will use all 26 characters and 10 digits in the first implementation) and make amendments later to accommodate additional rules. First let's problem solve this situation. In essence, we need to bring some order to how we implement (or interpret) the system.

You are requested to attempt to problem solve this situation – as a starting point, keep in mind our objective is to generate the next VRN, given the current one. Actually, the solution will be implemented in code by writing a PHP function, similar to the below:

```
function getNextVRN(current){

/* given a number in the format XXNNXX, this function determines and returns the next VRN in the sequence by applying a set of rules pertaining to the formulation of the VRN  */

}
```

Good Luck.