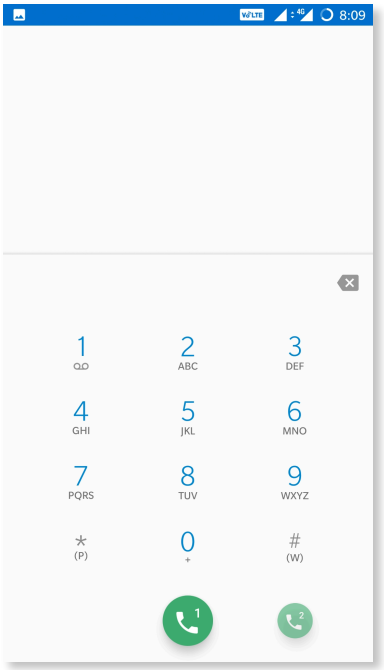
Thursday, 5 July 2018

Mix and Match!

The problem is to model the interaction behaviour of an android dialler - yes, where you have all the 26 characters reachable on 12 keys - Look at the picture in case you have not seen the android dialler. Model the keyboard in software(no GUI required) to capture interaction with the keyboard and output best matches and possible suggestions.



Generate the dictionary - Your dictionary consists of all possible 3 letter words that you can create from the 26 characters such that the resultant 3 letters have at-least one vowel and has no duplicate characters. Eg words - ARE, ASD, ERF, EAR, BAY, etc….

Generating the dictionary is part of the challenge and **you have model storage using an RDBMS and save the dictionary in the RDBMS** (open source - postgres, mysql, etc).

Execution

The program should accept any 3 digits(duplicates allowed) string and generate a best match and possible combinations. The best match is the string with the max number of vowels followed by an ascending order in case of equality.

Sample Execution Logs

Case 1: 223 Best match -> ABE, matches -> ABD, ABE, ABF, ACD, ACE, ACF, BCE, BAD, BAE, BAF, CAD, CAE, CAF, CBE
Case 2: 222 Best match -> ABC, matches -> ACB, CAB, CBA, BCA, BAC
Case 3: 779, best match -> None, matches -> None

Tech stack

Use any language that you like, you code should be buildable and runnable on Linux. Your application stack should connect to the RDBMS. **No usage of stored procedures or triggers are allowed**. All application logic should be coded in the application tier using the programming language of your choice.

Bonus Points

Test Coverage, DevOps