

# Exercise: T9 phone book

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## Project

The task is to code a phone book application, which provides a search T9 cell phones did. Each entry consists of the properties last name, first name and phone number.

To trigger a search, the user is required to type in a series of numbers which are representing the letters of the first or the last name of the user respectively.



Examples:

688 → **OT**To and **NUT**zer

724 → **SCH**midt and **RAH**men

The search should be work case insensitive and is required to perform well even with > 1 million data rows.

## Scope

- Build a eligible database structure (use SQLite or MySQL and provide a setup script or an initial database dump including the "Create-Table"-Commands)
- Build a demo application providing the following use-cases:
  - Inserting a new entry by form (ignore user authentication)
  - Querying the database by form which accepts a number and output of the results through standard html table
- If you have experience in writing unit tests: Write proper unit tests for your application

## Notes

- The solution should be minimal and easy to understand
- Don't use CSS, JavaScript or any unnecessary metatags/markups ...

- Don't use frameworks like Zend, Symfony, ... (If you write unit tests, you can use PHPUnit of course)
- Write Code which runs on PHP 5.3 or higher and `error_reporting = E_ALL|E_STRICT`
- Write clean, object oriented and well-structured code
- Use meaningful and speaking names for all descriptors
- Use PHPDoc to document parameters and return values
- If it's reasonable for you, use comments to provide us with information about your solution
- Consider security issues

## Time target

In our opinion, you should be able to solve the exercise it in less than 2 hours.