# Search through Contacts

## Guidelines

- You can use any programming language to solve this.
- Give references for parts of code not owned by you.
- If you make any assumptions mention them explicitly at the beginning of your code in comments.

## Evaluation Criteria

We will evaluate your code on the following points:

- Structure of code
  - You've written clean, re-usable functions
  - Your code is well-documented
  - You have used appropriate data-structures to solve the problem
- Your code passes our test cases
- (BONUS) You have written test-cases for the code
- (BONUS) You have written a Makefile for the code
- (BONUS) You have handled user-input errors in your code.

## Problem:

You have to make a Contacts application which supports following *two* operations:

- Add contact
- Search Contact

Contact is defined as `firstName` and/or `lastName` separated by `space`. Some examples of valid contacts are:

- Chris Harris
- Chris Cairns
- Harry Potter
- Chris

Add contact should take the name and add it to contact list so that it becomes searchable.

Search contact should match the contacts for a given search string.

## Expected Program Run:

```
1) Add contact 2) Search 3) Exit
1
Enter name: Chris Harris
1) Add contact 2) Search 3) Exit
1
Enter name: Chris
1) Add contact 2) Search 3) Exit
2
Enter name: Ch
Chris Harris
Chris
1) Add contact 2) Search 3) Exit
2
Enter name: Chris
Chris
Chris Harris
1) Add contact 2) Search 3) Exit
3
Happy Searching
```

*Each contact can be upto 50 characters.*

**BONUS Points**:

1) If you rank exact matches higher than other matches i.e. in the above run when we searched for `Chris`, `Chris` was printed before `Chris Harris.`

2) If you allow searching by last name, In the above example If `Ha` is searched then `Chris Harris` should be the printed.

3) If exact match is not there for the searched string *then order **doesn't** matter.*


## How to submit task:

* Submit your code as a tarball via email or link to your github repo.
* Provide clear instructions to run your program. We will exactly follow the same steps. Be succinct in this step.


Best of Luck!