# Phase 1 – Take-home exercise

The purpose of this exercise is to give us an understanding of your capabilities around API integration and data modelling, and to have a project that we can collaborate on during the on-site portion of the interview. We do this so we have a chance to work together with you on something you’re already familiar with.

There’s no time limit, but we’d prefer you don’t spend more than 4-5 hours on it; we’re happy to discuss anything you didn’t get to doing in the on-site portion.

## The Project

WE Charity held several successful outreach events after a major holiday of campaigning. Several employees have gotten information for a couple thousand new contacts to follow up with who has given in person donations. All this information needs to be put in the database as it will later be used to mail out letters of acknowledgement and/or tax receipts. Unfortunately due to natural human errors much of the information contains undeliverable addresses. Your task is to process the data, identify and correct common errors and flag entries that need additional care. Each undeliverable letter is a loss of $0.90 on average, your job is to minimize the cost and format the addresses that is appealing to our stakeholders.

## Task:

1. Create a developer sandbox: <https://developer.salesforce.com/signup>
2. Import a small sample set of contacts (see second file)
3. Write a simple C# script to run locally, that parses the contact info and formats the names and addresses as Proper Case, and looks for very obvious address mismatches of State/Province and Country.
4. Please provide the script, and output of addresses which you’ve deemed obviously mismatched, and the newly formatted proper ones.

## Appendix:

Example of a good address:

Craig Kielburger

233 Carlton Street

Toronto, ON M3K 1L3

Canada

Example of a bad address:

Craig KielBUrger

233 carlton St.

TORONTO, Ontario M3K 1L3

USA

# Phase 2 – On-site

When you get to the office, we will do a pair programming session on a variety of tasks using the code base that you submitted. Here are some sample things you could expect:

* Code walkthrough – walk us through your code and the thinking behind the code. Answer a few questions
* Extend your code with a new problem – this gives us an insight into your problem solving skills

Please bring your own laptop as you will be more successful on a laptop with your own tools. Otherwise, we will work with you on a laptop with Ubuntu Desktop installed in our office.