Zendesk Melbourne - Coding Challenge

OVERVIEW

Using the provided data (tickets.json and users.json) write a simple command line application to search the data and return the results in a human readable format.

* Feel free to use libraries or roll your own code as you see fit. However, please do not use a database or full text search product as we are interested to see how you write the solution.

* Where the data exists, values from any related entities should be included in the results, i.e. searching tickets should return their assigned user and searching users should return their assigned tickets.

* The user should be able to search on any field. Full value matching is fine (e.g. "mar" won't return "mary").

* The user should also be able to search for missing values, e.g. where a ticket does not have an assignee_id.

Search can get pretty complicated pretty easily, we just want to see that you can code a basic but efficient search application. Ideally, search response times should not increase linearly as the number of documents grows. You can assume all data can fit into memory on a single machine.

EVALUATION CRITERIA

We will look at your project and assess it for:

1. Extensibility - separation of concerns.
2. Simplicity - aim for the simplest solution that gets the job done whilst remaining readable, extensible and testable.
3. Test Coverage - breaking changes should break your tests.
4. Performance - should gracefully handle a significant increase in the amount of data provided.
5. Robustness - should handle and report errors.

6. Usability - Should provide installation instructions and how easy it is to use the application
7. General technical skills - Demonstrate proficiency in the chosen language and strong attention to details

If you have any questions about this criteria please ask.

SPECIFICATIONS

- Use the language in which you are strongest.
- Include a README with (accurate) usage instructions.
- Document the assumptions and tradeoffs you've made.

SUBMISSION

Github is the preferred option (a public repo is fine) but we will also accept a .zip file if necessary. Email your solution to your Recruiter.

HINT

One of the assessors wrote How To Pass A Coding Test.

SAMPLE OUTPUT

Note: This output is not prescriptive. Do not spend too much time making it look perfect. Feel free to use libraries for CLI interactions.

CLI - Display Results

```
Welcome to Zendesk Search
Type 'quit' to exit at any time, Press 'Enter' to continue


        Select search options:
         * Press 1 to search Zendesk
         * Press 2 to view a list of searchable fields
         * Type 'quit' to exit

1
Select 1) Users or 2) Tickets
1
Enter search term
_id
Enter search value
71
Searching users for _id with a value of 71
_id                 71
name                Prince Hinton
created_at          2016-04-18T11:05:43-10:00
verified            false
tickets             [A Catastrophe in Sierra Leone]
```

```
Select 1) Users or 2) Tickets
2
Enter search term
_id
Enter search value
8ea53283-5b36-4328-9a78-f261ee90f44b
Searching tickets for _id with a value of 8ea53283-5b36-4328-9a78-f261ee90f44b

_id               8ea53283-5b36-4328-9a78-f261ee90f44b
created_at        2016-03-07T03:00:54-11:00
type              task
subject           A Catastrophe in Sierra Leone
assignee_id       71
tags              [Washington,Wyoming,Ohio,Pennsylvania]
assignee_name     Prince Hinton
```

CLI - No Search Result

```
Select 1) Users or 2) Tickets
1
Enter search term
_id
Enter search value
3333
Searching users for _id with a value of 3333
No results found
```

CLI - List Searchable Fields

```
------------------------------
Search Users with
_id
name
created_at
verified
------------------------------
Search Tickets with
_id
created_at
type
subject
assignee_id
tags
```