

## CODE CHALLENGE

Using the provided data (tickets.json and users.json and organization.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.
- Where the data exists, values from any related entities **MUST** be included in the results, i.e.
  - Searching **organization** **MUST** return its **ticket subject** and **users name**
  - Searching **users** **MUST** return his/her **assignee ticket subject** and **submitted ticket subject** and his/her **organization name**
  - Searching **tickets** **MUST** return its **assignee name**, **submitter name**, and **organization name**.
- 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 empty values, e.g. where description is empty.
- Search can get pretty complicated pretty easily, we just want to see that you can code a basic search application.

## EVALUATION CRITERIA (IMPORTANT)

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. We prefer **Unit Test** without testing the json file, please **mock** them.
4. **Performance** - should gracefully handle a significant increase in amount of data provided (e.g 10000+ users).
5. **Robustness** - should handle and report errors. If you have any questions about this criteria please ask.

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## SPECIFICATIONS

- Python
- Include a README with (accurate) usage instructions.

## 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 us.

## HELP

We made a simple program and compile them into binary named as ‘**challenge**’, please feel free to run it and refer to it to see the expectation.

## SAMPLE

### Search

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

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

1
Select 1) Users or 2) Tickets or 3) Organizations
1
Enter search term
_id
Enter search value
71
```

external_id	c972bb41-94aa-4f20-bc93-e63dbfe8d9ca
name	Prince Hinton
alias	Miss Dana
created_at	2016-04-18T11:05:43 -10:00
active	true
verified	false
shared	false
locale	zh-CN
timezone	Samoa
last_login_at	2013-05-01T01:18:48 -10:00
email	danahinton@flatonic.com
phone	9064-433-892
signature	Don't Worry Be Happy!
organization_id	121
tags	["Davenport", "Cherokee", "Summertown", "Clinton"]
suspended	false
role	agent
organization_name	Hotcakes
ticket_0	A Catastrophe in Micronesia
ticket_1	A Drama in Wallis and Futuna Islands
ticket_2	A Drama in Australia

Screen Shot 2016-08-11 11:11:11 AM

Created Today, 3:11 PM

Modified Today, 3:11 PM

## No result

```
Select 1) Users or 2) Tickets or 3) Organizations
1
Enter search term
_id
Enter search value
3333
Searching users for _id with a value of 3333
No results found
```

## List of Searchable fields

```
-----
Search Users with
_id
url
external_id
name
alias
created_at
active
verified
shared
locale
timezone
last_login_at
email
phone
signature
organization_id
tags
suspended
role
-----
Search Tickets with
_id
url
external_id
created_at
type
subject
description
priority
status
recipient
submitter_id
assignee_id
organization_id
tags
has_incidents
due_at
via
requester_id
-----
Search Organizations with
_id
url
external_id
name
domain_names
created_at
details
shared_tickets
tags
```