

Athira, Souranil and many more developers have solved Geektrust coding challenges to find great jobs.

- \* Get feedback on your coding skills. Detailed, handcrafted feedback on your code.
- \* Get priority and be treated as a premium candidate to directly connect with decision makers at companies.
- \* **Get membership** and win an exclusive Geektrust <u>DEVELOPER t-shirt</u> given when you write good code.

What we look for in your code - It's not just about getting output, but how you get it. We care about how well modelled your code is, how readable, extensible, well tested it is. Have questions on the challenges or our evaluation? Ping us on the Geektrust Slack channel.

## GETTING STARTED

- Getting the output right is important, but clean code is more important.
   You should absolutely read this post on what we look for in your code, and how to get started with the coding challenge.
- 2. Optional: you could deploy your code to a public cloud instance & send us the link so that we (or potential employers) could see your final UI.
- 3. Add a readme with how to get your code working, and how to test your code.
- 4. If you have questions on the coding challenges, your evaluation, or on companies, you can ping us on our <u>Slack channel</u> or mail us at <u>devs@geektrust.in</u> saying "Add to slack".

### PROBLEM CONTEXT

Our problem is set in the planet of Lengaburu...in the distant distant galaxy of Tara B. After the recent war with neighbouring planet Falicornia, King Shan has exiled the Queen of Falicornia for 15 years.

Queen Al Falcone is now in hiding. But if King Shan can find her before the years are up, she will be exiled for another 15 years....



## VEHICLES



#### SPACE POD

units = 2 / max\_distance = 200 megamiles speed = 2 megamiles/hour



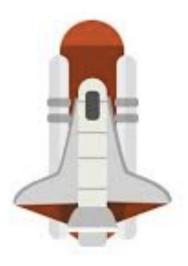
#### SPACE ROCKET

units = 1 / max\_distance = 300 megamiles speed = 4 megamiles/hour



#### SPACE SHUTTLE

units = 1 / max\_distance = 400 megamiles speed = 5 megamiles/hour



#### SPACE SHIP

units = 2 / max\_distance = 600 megamiles speed = 10 megamiles/hour

## POTENTIAL HIDEOUTS



DONLON

Distance - 100 megamiles



ENCHAI Distance - 200 megamiles



JEBING

Distance - 300 megamiles



SAPIR
Distance - 400 megamiles



LERBIN

Distance - 500 megamiles



PINGASOR Distance - 600 megamiles

The planets Al Falcone might be hiding in & the space vehicles available at King Shan's disposal

## PROBLEM 1: FINDING FALCONE

King Shan has received intelligence that Al Falcone is in hiding in one of these 6 planets - DonLon, Enchai, Jebing, Sapir, Lerbin & Pingasor. However he has limited resources at his disposal & can send his army to only 4 of these planets.

Your coding problem is to help King Shan find Al Falcone.

## WHAT YOU NEED TO DO

You need to build a UI (mockups available at the end of this PDF) through which King Shan can

- select 4 planets to search (out of the total 6)
- select which space vehicles to send to these planets
- see how much time it will take for the vehicles to reach their targets &
- show final result of success or failure

## WHAT WE GIVE YOU

- a planets API that list out the planets, and how far they are from Lengaburu (<a href="https://findfalcone.herokuapp.com/planets">https://findfalcone.herokuapp.com/planets</a>)
- a vehicles API that lists the types of space vehicle at your disposal, how many of each type you have, the maximum distance a vehicle can go (range), and their speed (<a href="https://findfalcone.herokuapp.com/vehicles">https://findfalcone.herokuapp.com/vehicles</a>)
- a FindFalcone API that returns whether you were successful in your search or not (we randomly assign a planet to AI Falcone) (<a href="https://findfalcone.herokuapp.com/find">https://findfalcone.herokuapp.com/find</a>)

### PLANETS API

https://findfalcone.herokuapp.com/planets

Request type: GET

- There are 6 planets. But King Shan can send vehicles to search in only 4 at a time
- All are at varying distances from Lengaburu

#### Sample response

```
"name": "Donlon",
"distance": 100
"name": "Enchai",
"distance": 200
"name": "Jebing",
"distance": 300
"name": "Sapir",
"distance": 400
"name": "Lerbin",
"distance": 500
"name": "Pingasor",
"distance": 600
```

## **VEHICLES API**

#### https://findfalcone.herokuapp.com/vehicles

Request type: GET

- There are 4 types of vehicles
- The units of each vehicle type vary (eg:- there are 2 space pods but only 1 space rocket)
- All have different ranges (maximum distance it can travel). If the range for a vehicle is lesser than the distance to the planet, it cannot be chosen for going to the planet
- All have different speed. Based on the distance to the planet and the speed of the vehicle, time taken for the complete search should be shown

#### Sample response

```
"name": "Space pod",
"total_no": 2,
"max_distance": 200,
"speed": 2
"name": "Space rocket",
"total_no": 1,
"max_distance": 300,
"speed": 4
"name": "Space shuttle",
"total_no": 1,
"max_distance": 400,
"speed": 5
"name": "Space ship",
"total no": 2,
"max_distance": 600,
"speed": 10
```

## FINDING FALCONE API (token)

1. You need to first get a token

https://findfalcone.herokuapp.com/token

Request type: POST

**Headers** 

Accept: application/json

Request body: empty

#### Sample response

```
{
  "token": "PlmVXHswGEQxKJIpWnKCBtNMepseniTM"
}
```

## FIND FALCONE API (request)

2. The final result is a game of luck. We will randomly assign a planet to Al Falcone (from the 6 available planets) and if the planet is in the list of 4 selected by the user, you get a success message

https://findfalcone.herokuapp.com/find

Request type: POST

#### **Headers**

Accept: application/json

Content-Type :application/json

#### **Request body:**

The request body is a json object which consists of a **token**, **planet\_names** and **vehicle\_names**. Value of the token is obtained from the previous API call (/ token).

planet\_names is a JSON Array which consists of the planet names you selected from the UI. vehicle \_names is also a JSON Array which consists of the vehicle names you have selected from the UI.

#### Sample request body

```
"token": "zWSOZUcQJOPUhweUgYklARgNbuNVCyin",
"planet_names": [
    "Donlon",
    "Enchai",
    "Pingasor",
    "Sapir"
],
"vehicle_names": [
    "Space pod",
    "Space rocket",
    "Space rocket",
    "Space rocket"]
```

# FINDING FALCONE API (responses)

#### Sample success response

```
{
  "planet_name": "Jebing",
  "status": "success"
}
```

#### Sample failure response

```
{
    "status": "false"
}
```

#### Sample error response

```
{
  "error": "Token not initialized. Please get a new token with the
/token API"
}
```

## WHAT WE LOOK FOR IN YOUR CODE

Ready to find Falcone? But remember that it is not just about getting the UI done but how you do it that matters more. We look for how modular is your code, how readable, extensible, how simple is the logic, do you have tests, how is your error handling, dependency management, how do you handle navigation, templates etc..

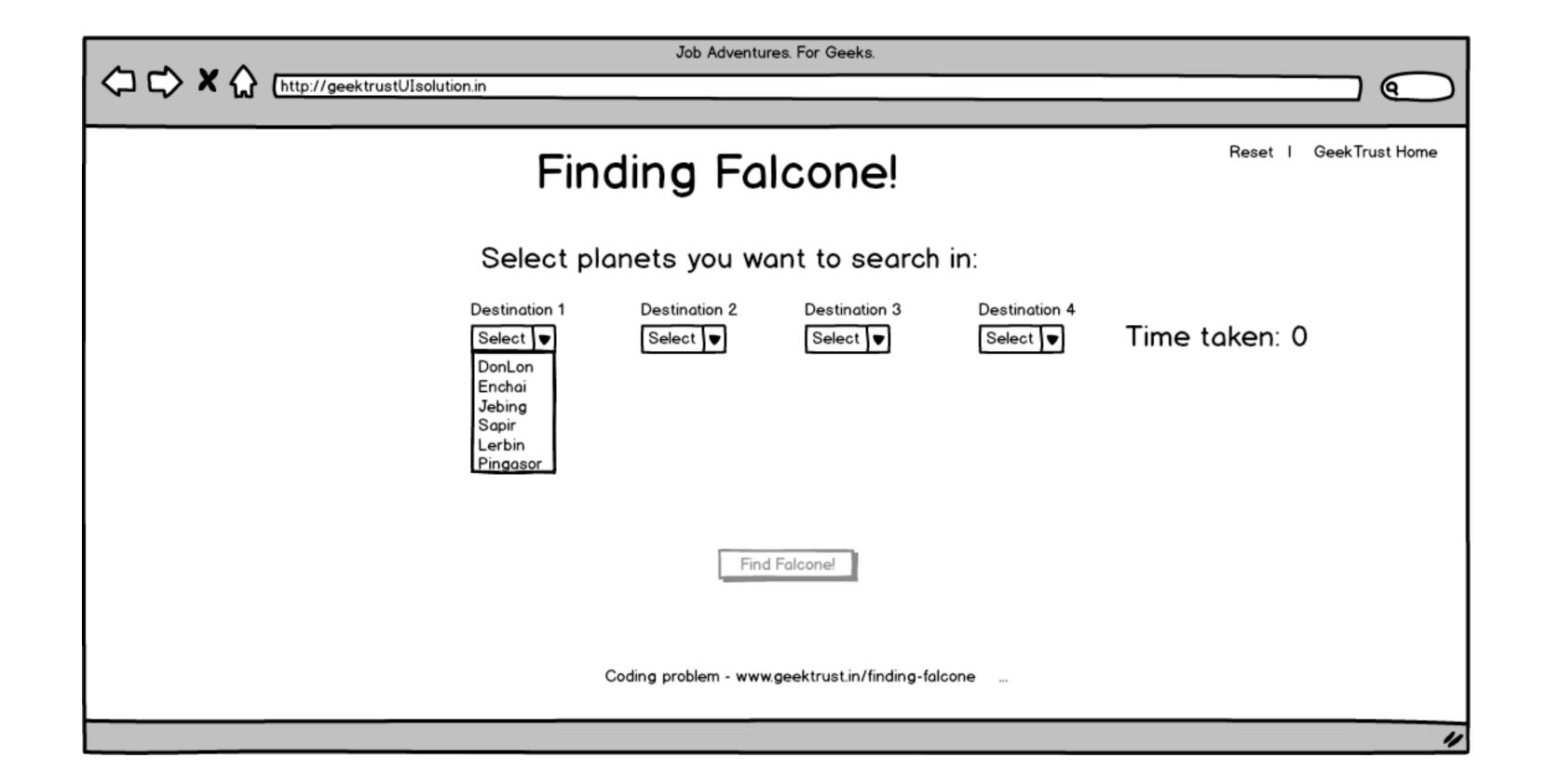
You can use plain javascript but extra points for using a client side framework such as Angular, Backbone or React.

## CHECK LIST - SUBMITTING CODE

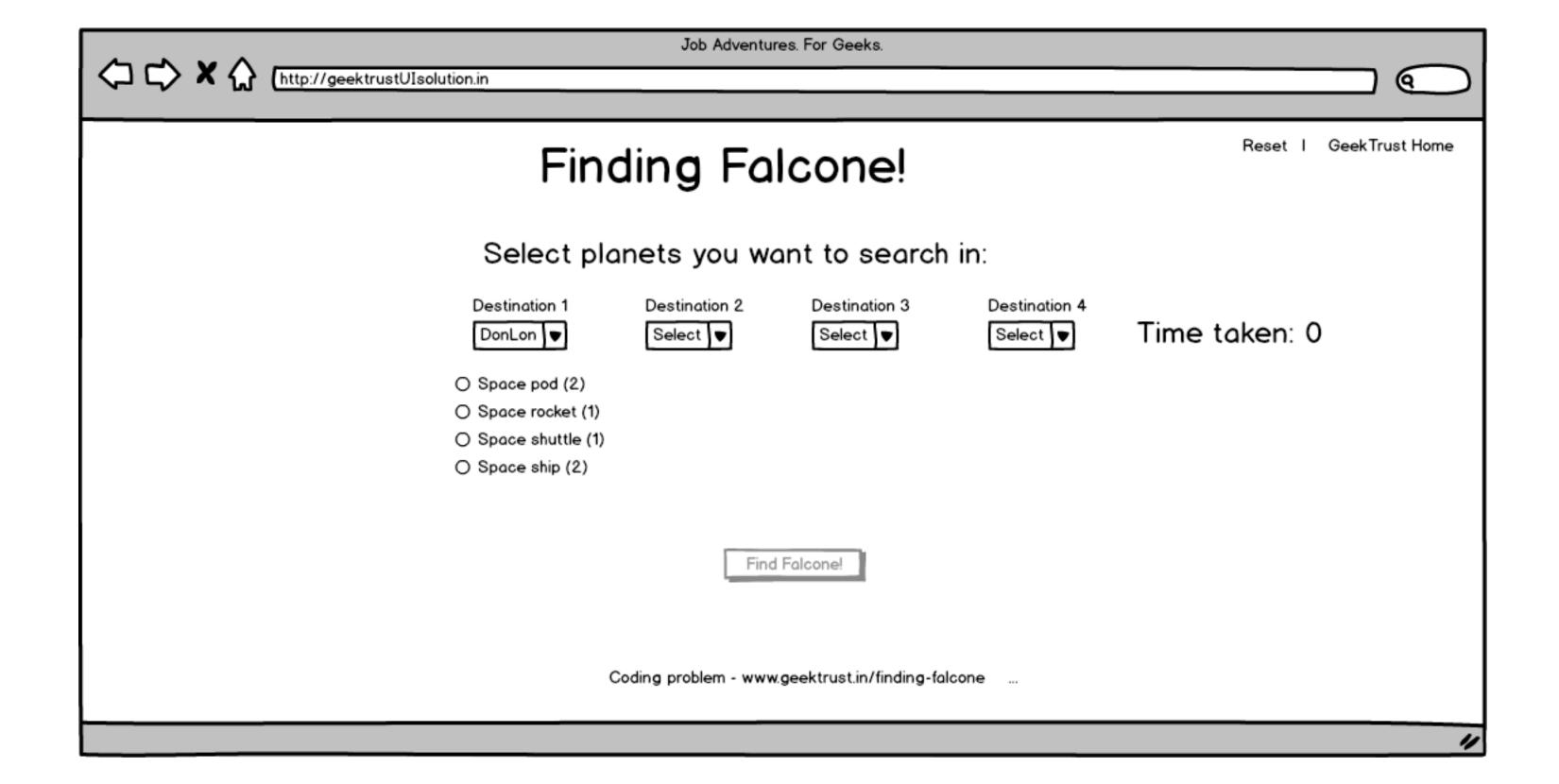
- 1. Please compress the file before upload. We accept .zip, .rar, .gz and .gzip
- 2. Name of the file should be FEproblem1.zip
- We advise not to put your personal details in your solution as we maintain your anonymity with a company until there is genuine interest from them.
- 4. Please upload only source files and do not include any libraries or executables or node\_modules folder.
- 5. You can expect your evaluation in 3-5 working days.
- 6. Yes, you can resubmit code based on our feedback. We accept 3 submissions in total. So do implement all feedback and make your submissions count!

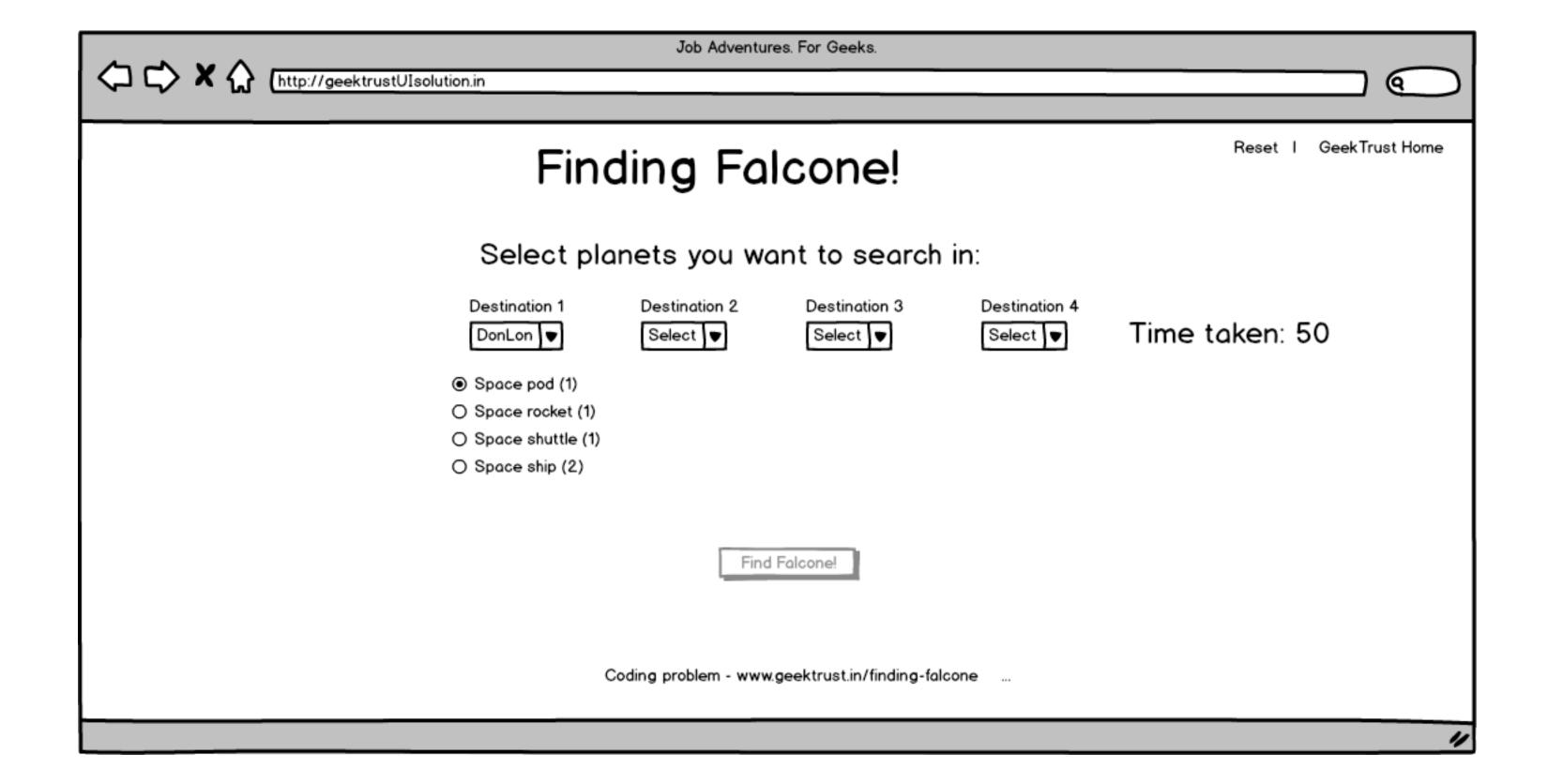
## SAMPLE MOCKUP

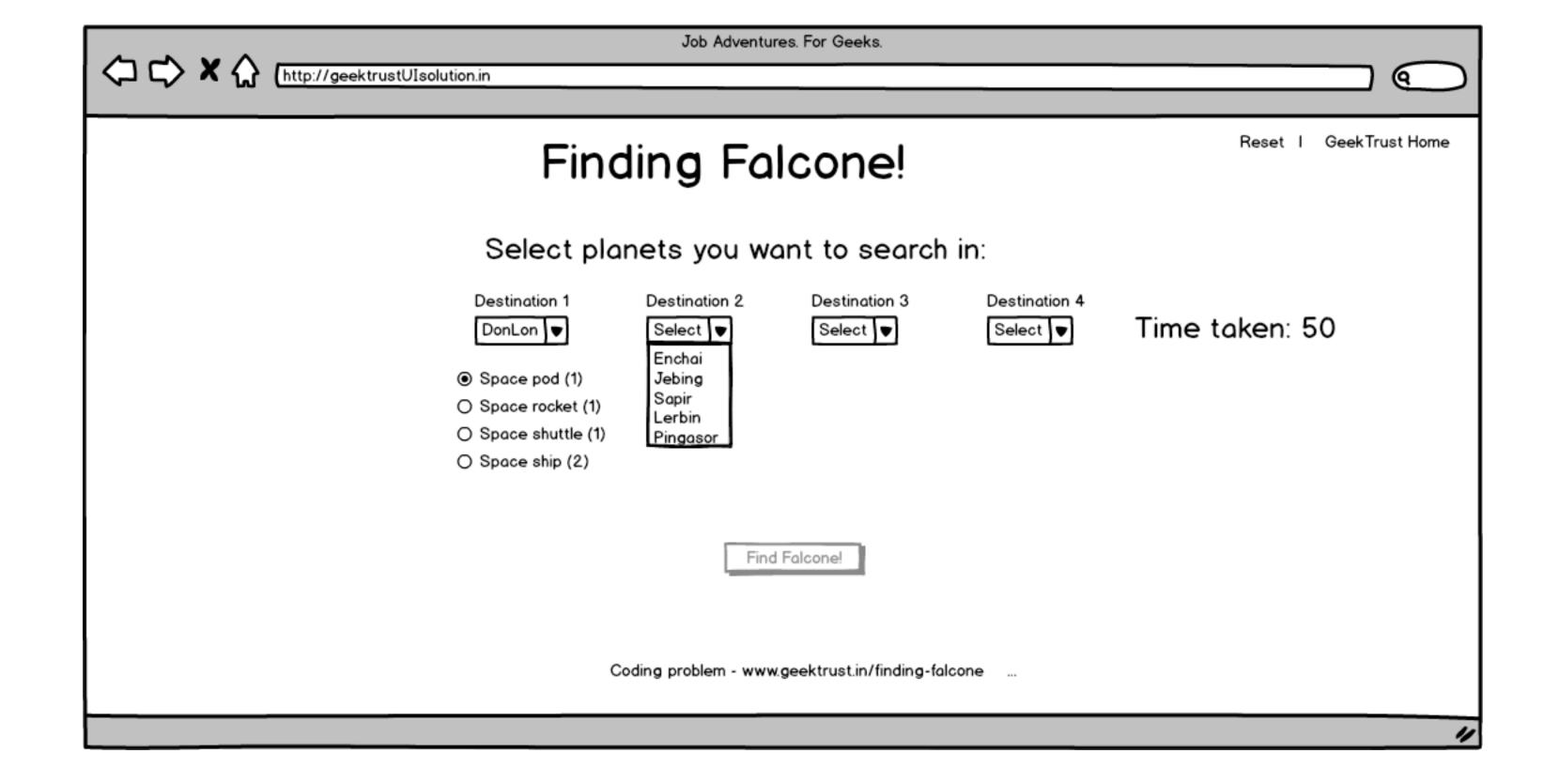
- As the heading suggests, this is only a sample mockup so that you have an indication of what is expected from you.
- You could choose to go with a completely different user experience. But you will need to ensure
  - all requirements mentioned in the problem are covered
  - you have a header menu bar at the top and a footer at the bottom
  - the final result should be shown on a new page & there should be navigation between atleast 2 screens

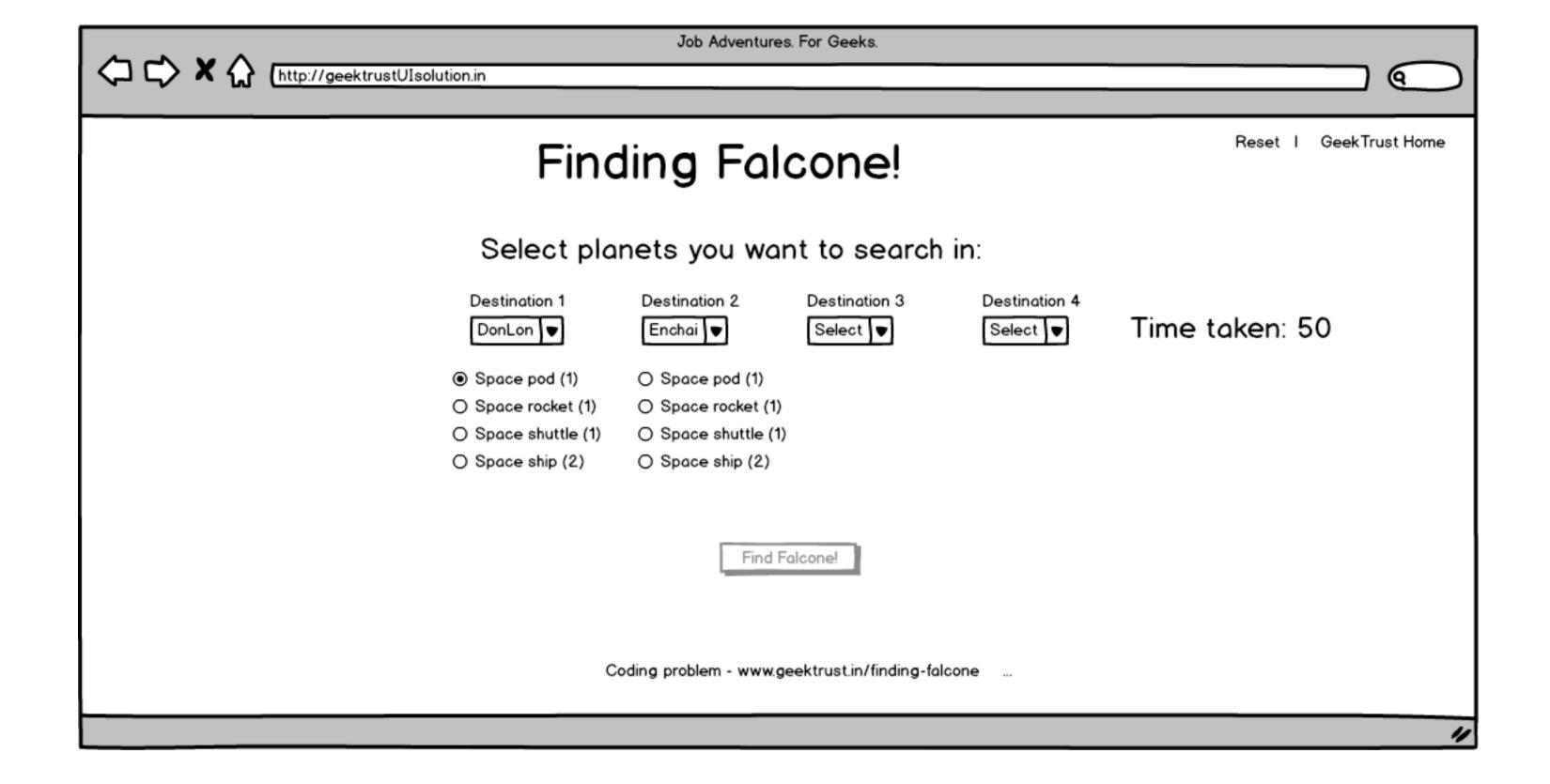


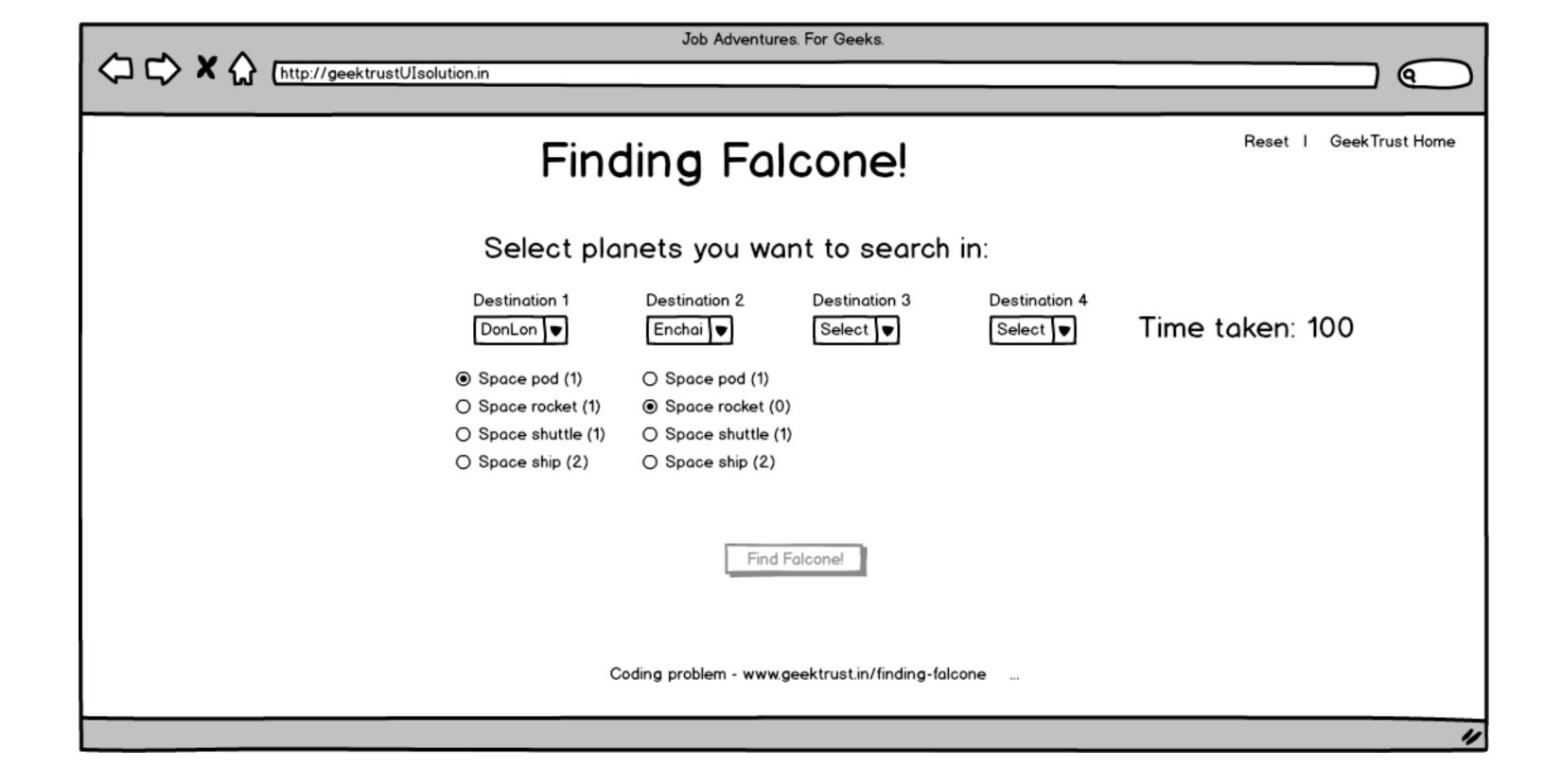
extra points for implementing auto-complete in the dropdown!

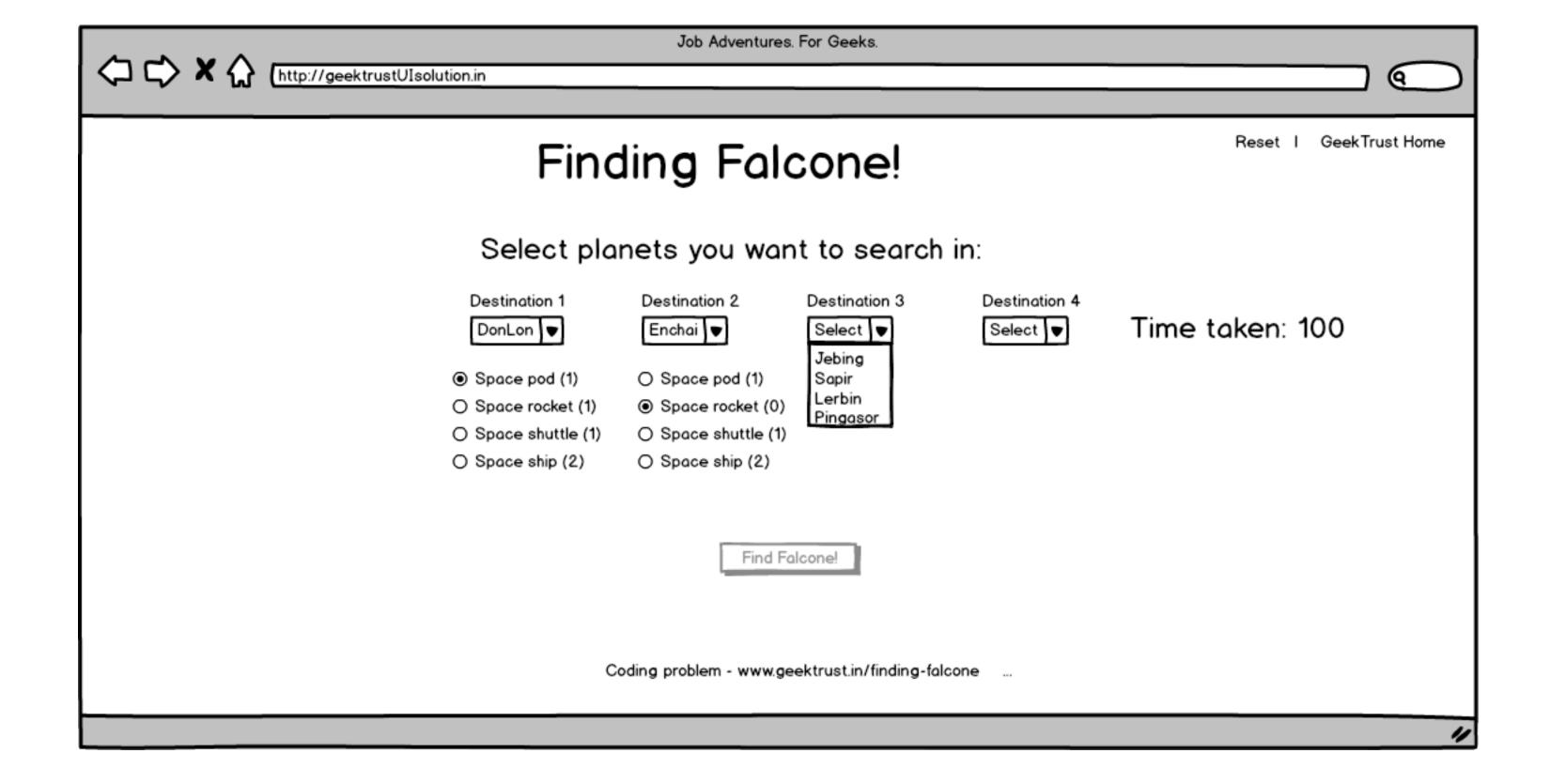


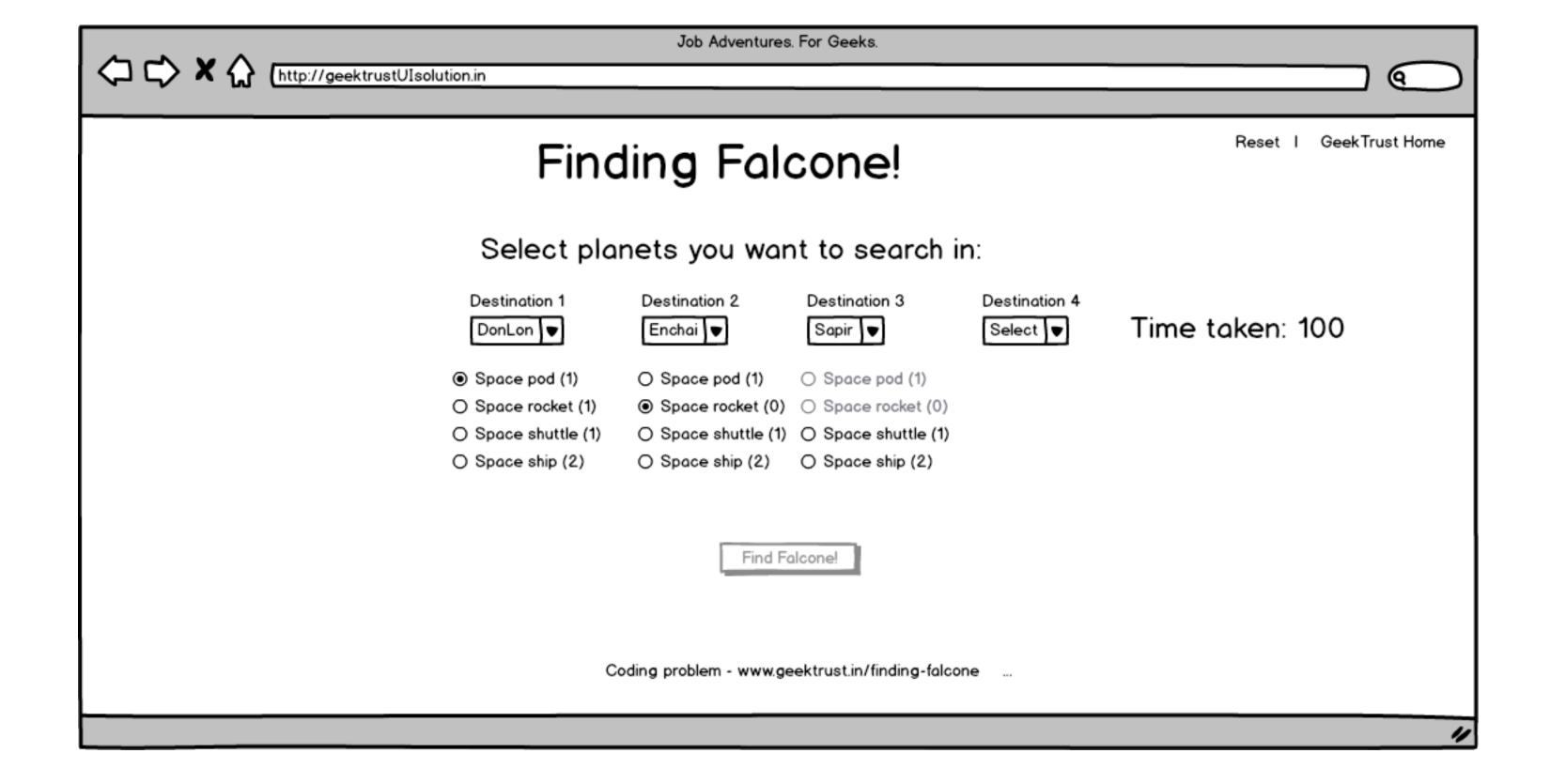


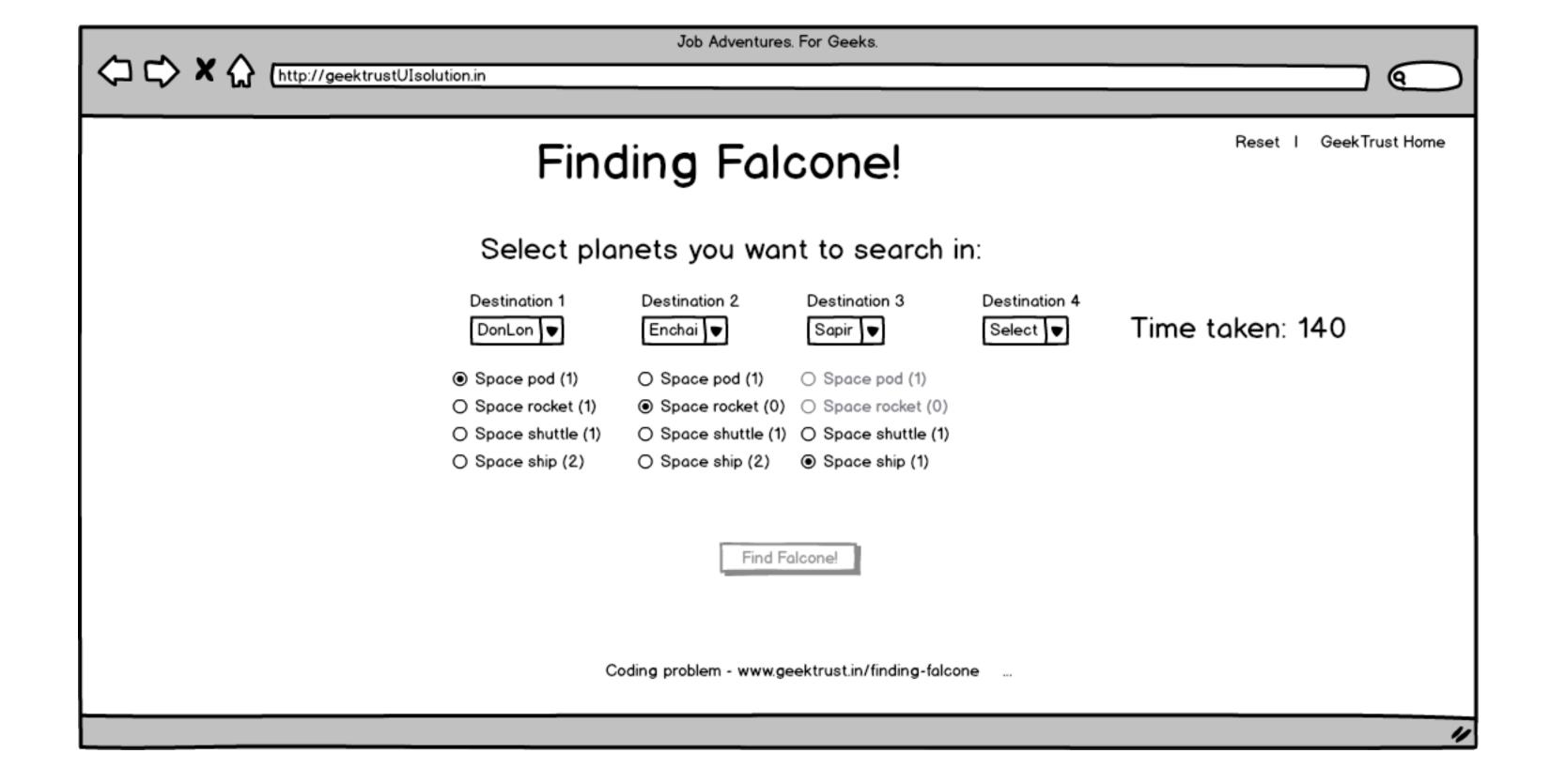


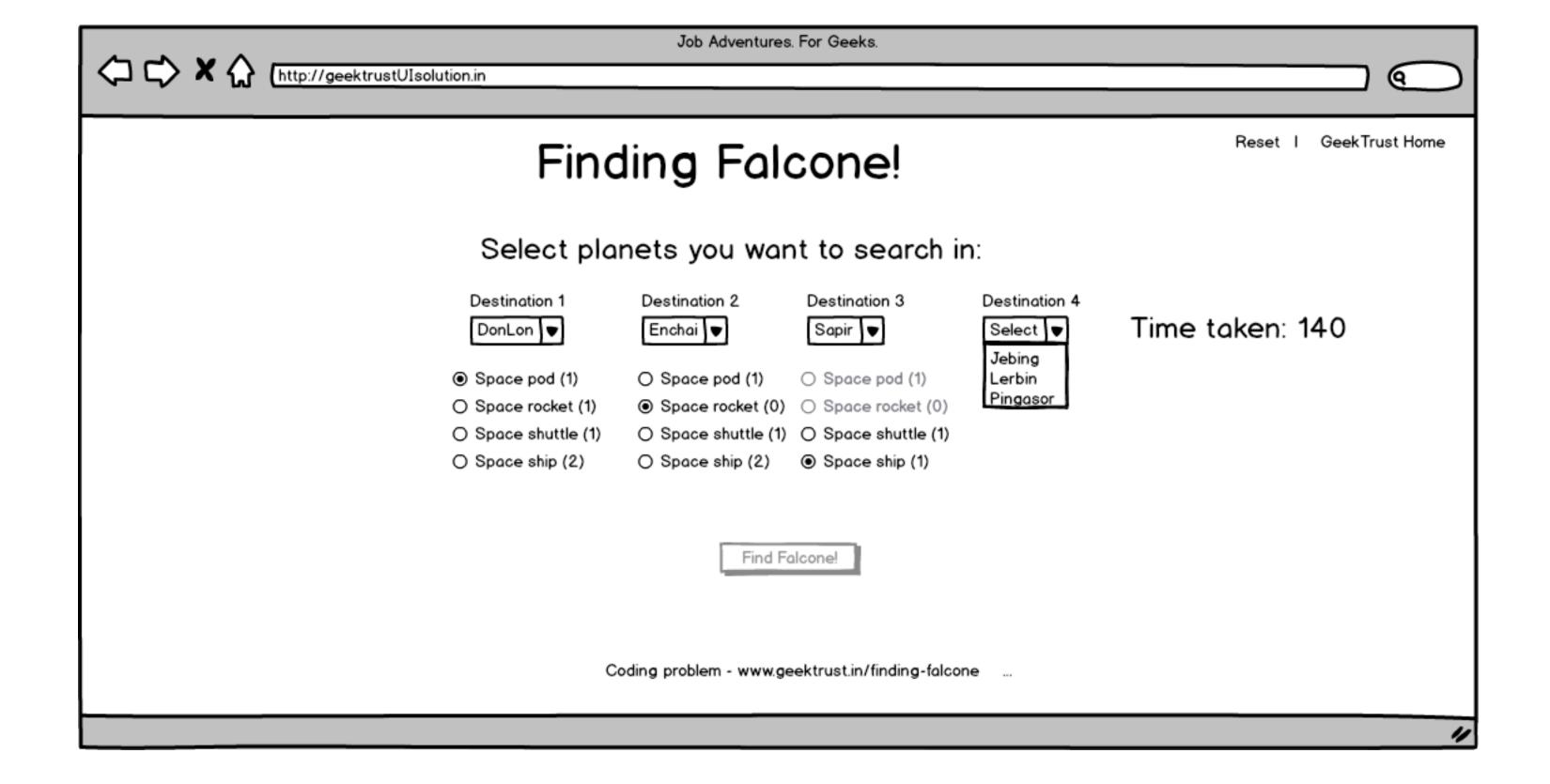


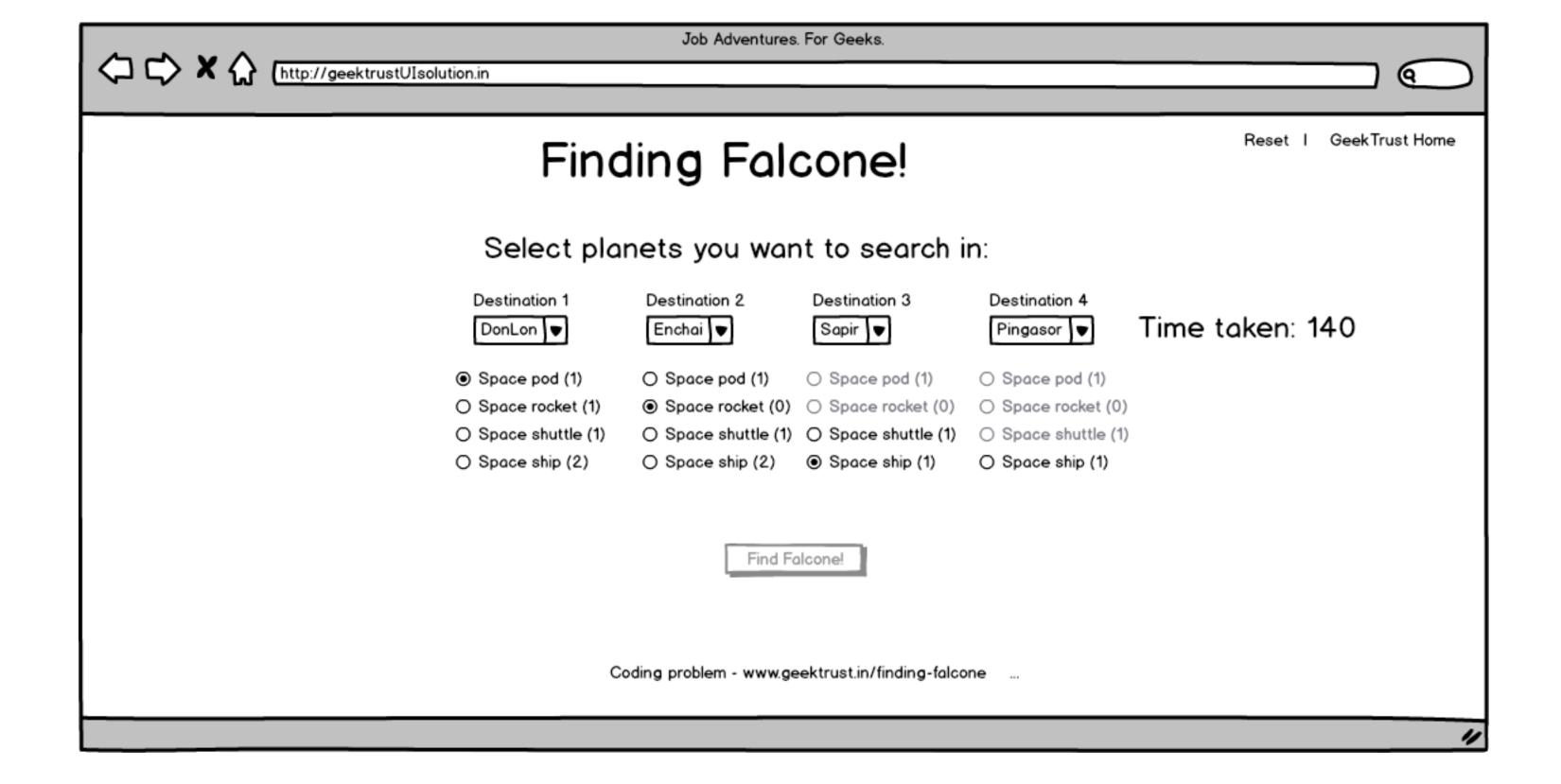


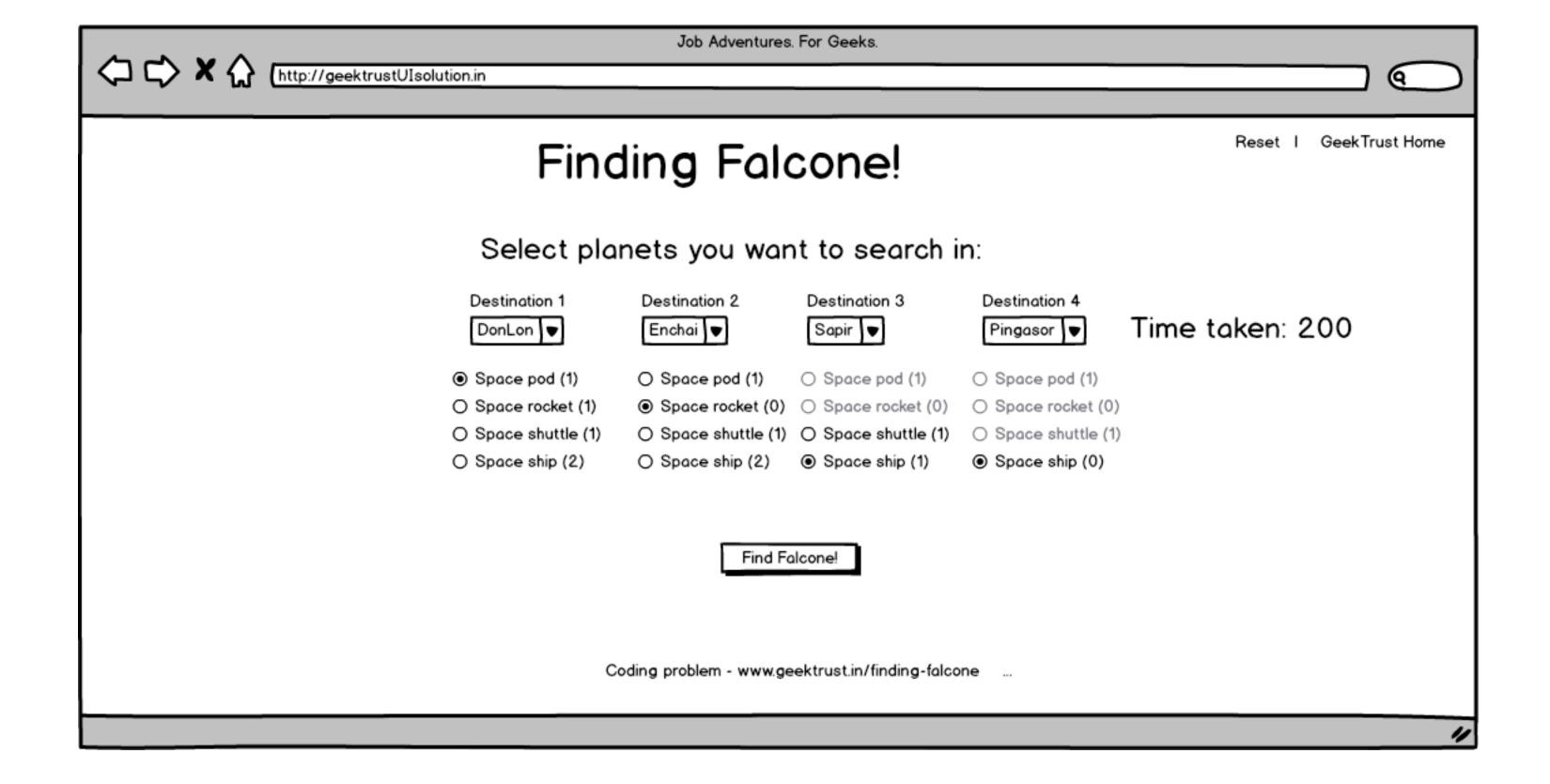


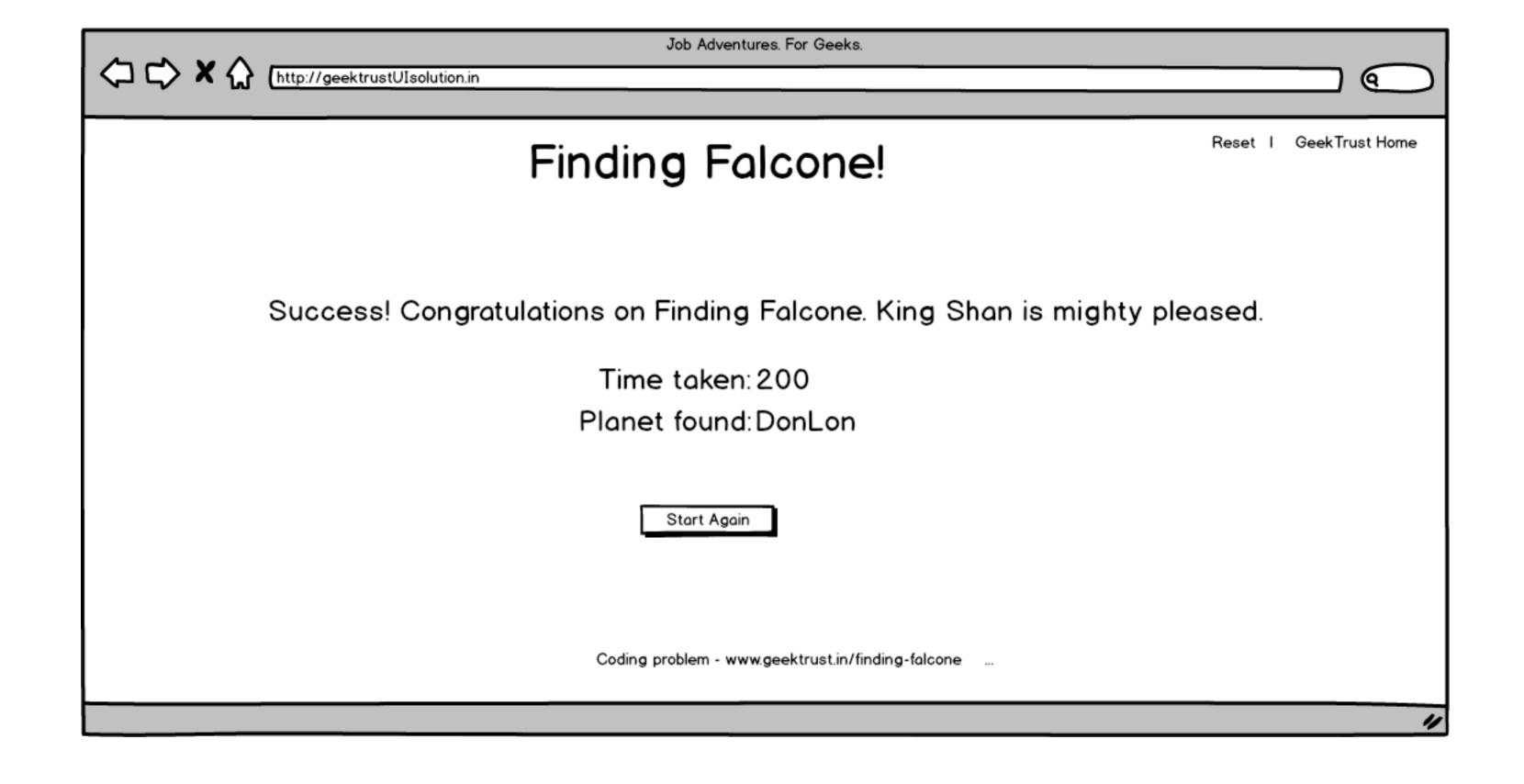












## WHAT NEXT?

### A few good developers

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Review options, interview & find the right job for you