

Practical test - DjangoREST

Main objective

- Measure the level of knowledge and use of the framework.
- Evaluate autonomy and efficiency when executing a complex task.
- Test creativity and ingenuity when facing great challenges.
- Evaluate the ability to maintain a clear image of the final product objective for extended periods of development.

Introduction

About the test

Technologies/Frameworks

In order to perform the test, the use of the Django and DjangoREST frameworks on Python 3.7 is mandatory, however, the use of PostgreSQL as a database engine is suggested, and can only be replaced by MySQL.

Resources

Attached to this document you will find four files in JSON format which will be used during the development of this test.

Deliver

The recommended period of time to perform the test will be between 2 to 7 days starting from the moment you received this document. If the test is sent after this recommended period, the test won't be evaluated and the process of recruitment will be closed for the candidate.



The candidate should deliver the finalized test using a link to a public repository in which the project code will be hosted. The provider of the version manager will be at the developer's discretion.

The repository must contain a README file in which you specify the instructions to deploy your project in a local environment.

Evaluation

The test evaluation method will be as follows; The code provided by the developer will be downloaded and will be deployed locally. Once deployed, a battery of tests designed for this project will be run, in addition, a previously developed project in Angular will be configured to make use of each of the requested services.

The code will be reviewed to evaluate internal documentation and styles.

If necessary, arrangements will be made where possible to make the project work and have a better perspective of the final product, but each of these arrangements will have an impact on the final evaluation.

Note: It should be taken into account that at the time of deployment for evaluation, this will be done in a virtual environment. Thus it is strongly recommended to make use of one at the time of development.

About the theme

Pokémon, also known as Pocket Monsters in Japan, is a Japanese media franchise managed by The Pokémon Company, a company founded and with shares divided between Nintendo, Game Freak, and Creatures. The franchise copyright and Japanese trademark are shared by all three companies, but Nintendo is the sole owner of the trademark in other countries. The franchise was created by Satoshi Tajiri in 1995 and is centered on fictional creatures called "Pokémon", which humans, known as Pokémon Trainers, catch and train to battle each other for sport. The English slogan for the franchise is "Gotta Catch 'Em All". Works within the franchise are set in the Pokémon universe... [Wikipedia](#)

This test will be aimed at developing an API that will feed a Frontend application that simulates navigation between Regions, Locations and Areas of this universe, finally giving rise to finding wild Pokemon, capturing them and forming your own party of six



individuals. You can capture additional Pokemon that you can remotely store and replace at any time with members of your current party.

Test

Requirements

Attached to this document are four additional documents that contain the resources necessary to build the initial database for this exercise.

- Regions.json
- Locations.json
- Areas.json
- Pokemons.json

Services

Below are the services that will be tested upon the delivery of this exercise.

Login

Url

```
['POST'] /login/
```

Description

Login description

Authentication

AllowAnonymous

Body

```
{  
  "username": "pedro",
```



```
"password": "strong_password"
}
```

Response

Status code 200

```
{ 'token' : '9944b09199c62bcf9418ad846dd0e4bbdfc6ee4b' }
```

Pokemon specie detail

Url

```
[ 'GET' ] /pokemons/<int:pk>/
```

Description

This service will aim to present the full details of a Pokemon species. The id of the requested species will be in the Url

Authentication

AllowAnonymous

Response

Status code 200

```
{
  "id": 2,
  "abilities": [
    "chlorophyll",
    "overgrow"
  ],
  "capture_rate": 45.0,
```



```
    "color": "green",
    "flavor_text": "There is a bud on this Pokémon's back. To support its weight,\nIvysaur's legs and trunk grow thick and strong.\nIf it starts spending more time lying in the sunlight,\nit's a sign that the bud will bloom into a large flower soon.",
    "height": 10.0,
    "moves": [
      "swords-dance",
      "cut",
      "bind",
      "vine-whip",
      "headbutt",
      "tackle",
      "body-slam",
      "natural-gift",
      "worry-seed",
      "seed-bomb",
      ...
    ],
    "name": "ivysaur",
    "sprites": {
      "back_shiny":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/back/shiny/2.png",
      "back_female": null,
      "front_shiny":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/shiny/2.png",
      "back_default":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/back/2.png",
      "front_female": null,
      "front_default":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/2.png",
      "back_shiny_female": null,
```

```
    "front_shiny_female": null
  },
  "stats": [
    {
      "name": "speed",
      "value": 60
    },
    {
      "name": "special-defense",
      "value": 80
    },
    {
      "name": "special-attack",
      "value": 80
    },
    {
      "name": "defense",
      "value": 63
    },
    {
      "name": "attack",
      "value": 62
    },
    {
      "name": "hp",
      "value": 60
    }
  ],
  "types": [
    "poison",
    "grass"
  ],
  "weight": 130.0
}
```



Pokemon Storage

Url

```
[ 'GET' ] /pokemons/own/
```

Description

This service returns the complete list of Pokemon that you have captured, including those that are in your party.

Authentication

IsAuthenticated (Login Required)

Headers

Authorization: Token 9944b09199c62bcf9418ad846dd0e4bbdfc6ee4b

Response

Status code 200

```
[
  {
    "id": 1,
    "nick_name": "jack",
    "is_party_member": false,
    "specie": {
      "id": 151,
      "name": "mew",
      "sprites": {
        "back_shiny":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/back/shiny/151.png",
        "back_female": null,
        "front_shiny":
```

```
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/shiny/151.png",
  "back_default":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/back/151.png",
  "front_female": null,
  "front_default":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/151.png",
  "back_shiny_female": null,
  "front_shiny_female": null
}
},
{
  "id": 5,
  "nick_name": "Onion",
  "is_party_member": true,
  "specie": {
    "id": 3,
    "name": "venusaur",
    "sprites": {
      "back_shiny":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/back/shiny/3.png",
      "back_female":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/back/female/3.png",
      "front_shiny":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/shiny/3.png",
      "back_default":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/back/3.png",
      "front_female":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/female/3.png",
```



```
    "front_default":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/3.png",
    "back_shiny_female":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/back/shiny/female/3.png",
    "front_shiny_female":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/shiny/female/3.png"
  }
}
},
{
  "id": 6,
  "nick_name": "Tony",
  "is_party_member": true,
  "specie": {
    "id": 6,
    "name": "charizard",
    "sprites": {
      "back_shiny":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/back/shiny/6.png",
      "back_female": null,
      "front_shiny":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/shiny/6.png",
      "back_default":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/back/6.png",
      "front_female": null,
      "front_default":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/6.png",
      "back_shiny_female": null,
      "front_shiny_female": null
    }
  }
}
```



```
    }  
  }  
]
```

Pokemon catch

Url

```
[ 'POST' ] /pokemons/own/
```

Description

This service will be used to simulate catching a Pokémon, that is, taking a species of Pokémon and turning it into a Pokemon instance in your storage.

Note: In this service it is especially important to remember that your party has a maximum size of six (6) members.

Authentication

IsAuthenticated (Login Required)

Headers

Authorization: Token 9944b09199c62bcf9418ad846dd0e4bbdfc6ee4b

Body

```
{  
  "specie": 93,  
  "nick_name": "Pedro",  
  "is_party_member": true  
}
```



Response

Status code 201

```
{
  "id": 7,
  "nick_name": "Pedro",
  "is_party_member": true,
  "specie": 93
}
```

Pokemon rename

Url

```
['PUT', 'PATCH'] /pokemons/own/<int:pk>/
```

Description

This service will serve to rename Pokemons that are in your storage or at your party.

Authentication

IsAuthenticated (Login Required)

Headers

Authorization: Token 9944b09199c62bcf9418ad846dd0e4bbdfc6ee4b

Body

```
{
  "nick_name": "Timmy"
}
```



Response

Status code 200

```
{
  "id": 7,
  "nick_name": "Timmy",
  "is_party_member": true,
  "specie": 93
}
```

Pokemon release

Url

```
[ 'DELETE' ] /pokemons/own/<int:pk>/
```

Description

This service will serve to set free a Pokemon that is in your storage or at your party.

Authentication

IsAuthenticated (Login Required)

Headers

Authorization: Token 9944b09199c62bcf9418ad846dd0e4bbdfc6ee4b

Response

Status code 204



Pokemon party

Url

```
[ 'GET' ] /pokemons/own/party/
```

Description

This service returns the list of your party of Pokemons, it can have from zero (0) elements to a maximum of six (6).

Authentication

IsAuthenticated (Login Required)

Headers

Authorization: Token 9944b09199c62bcf9418ad846dd0e4bbdfc6ee4b

Response

Status code 200

```
[
  {
    "id": 5,
    "nick_name": "Onion",
    "is_party_member": true,
    "specie": {
      "id": 3,
      "name": "venusaur",
      "sprites": {
        "back_shiny":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/back/shiny/3.png",
        "back_female":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/back/female/3.png",
```



```
    "front_shiny":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/shiny/3.png",
    "back_default":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/back/3.png",
    "front_female":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/female/3.png",
    "front_default":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/3.png",
    "back_shiny_female":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/back/shiny/female/3.png",
    "front_shiny_female":
    "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/shiny/female/3.png"
    }
  },
  {
    "id": 6,
    "nick_name": "Tony",
    "is_party_member": true,
    "specie": {
      "id": 6,
      "name": "charizard",
      "sprites": {
        "back_shiny":
        "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/back/shiny/6.png",
        "back_female": null,
        "front_shiny":
        "https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/p
okemon/shiny/6.png",
        "back_default":
```



```
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/back/6.png",
  "front_female": null,
  "front_default":
"https://raw.githubusercontent.com/PokeAPI/sprites/master/sprites/pokemon/6.png",
  "back_shiny_female": null,
  "front_shiny_female": null
}
}
```

Swap party member

Url

```
[ 'POST' ] /pokemons/own/swap/
```

Description

This service is an interface to exchange, add or remove Pokemons from your party. Remember that your party can only support a maximum of six (6) members.

Authentication

IsAuthenticated (Login Required)

Headers

Authorization: Token 9944b09199c62bcf9418ad846dd0e4bbdfc6ee4b

Body

```
{
  "entering_the_party": 1,
```



```
"leaving_the_party": 2
}
```

```
{
  "entering_the_party": 2,
  "leaving_the_party": null
}
```

```
{
  "entering_the_party": null,
  "leaving_the_party": 2
}
```

Response

Your updated full party

Status code 200

```
[
  {
    "id": 5,
    "nick_name": "Onion",
    "is_party_member": true,
    "specie": {
      "id": 3,
      "name": "venusaur",
      "sprites": {
        ...
      }
    }
  },
  {
    "id": 6,
```




```
    "nick_name": "Tony",
    "is_party_member": true,
    "specie": {
      "id": 6,
      "name": "charizard",
      "sprites": {
        ...
      }
    },
    ...
  ]
```

Regions list

Url

```
['GET'] /regions/
```

Description

This service returns the list of Regions with their respective names and id's.

Authentication

AllowAnonymous

Response

```
[
  {
    "id": 1,
    "name": "kanto"
  },
  {
    "id": 2,
    "name": "johto"
  },
  ...
]
```



```
...  
]
```

Regions detail

Url

```
[ 'GET' ] /regions/<int:pk>/
```

Description

This service returns a Region with a list of Locations with their respective names and identifiers.

Authentication

AllowAnonymous

Response

```
{  
  "id": 1,  
  "locations": [  
    {  
      "id": 1,  
      "name": "celadon-city"  
    },  
    {  
      "id": 2,  
      "name": "cerulean-city"  
    },  
    ...  
  ],  
  "name": "kanto"  
}
```



Location detail

Url

```
[ 'GET' ] /location/<int:pk>/
```

Description

This service returns a Location with a list of Areas with their respective names and identifiers, in addition to returning the number of Pokémon species that can be found in that Area.

Authentication

AllowAnonymous

Response

Status code 200

```
{
  "id": 2071,
  "areas": [
    {
      "id": 1867,
      "name": "celadon-city-area",
      "pokemon_count": 9,
      "location": 2071
    }
  ],
  "name": "celadon-city",
  "region": 22
}
```



Area detail

Url

```
[ 'GET' ] /areas/<int:pk>/
```

Description

This service returns an Area with a list of Pokemon species with their respective names, identifiers and sprites.

Authentication

AllowAny

Response

Status code 200

```
{
  "id": 1987,
  "pokemon_count": 3,
  "pokemons": [
    {
      "id": 66,
      "name": "machop",
      "sprites": {...}
    },
    ...
  ],
  "name": "hoenn-route-112-area",
  "location": 2251
}
```



Going the extra mile

A word of advice before you go any further in this section:

Be sure that you completed our main objective and have not left any of our awesome functionality behind. If you've done so, then you may go on and release the overachiever inside of you and set it free.

We have a few ideas to share with you, but be as creative as you want to and don't fear to take a risk.

Extra features

1. Design a clever way to manage evolutions
2. Use Catch Rate to success or fail during catching request
3. Design a clever way to manage shiny Pokemons

In case of doubts

[Unknown:] If you don't struggle, you don't improve.

If you have any questions regarding this quest, you may contact:

- Jacobo Martínez: jacobo@turpialdev.com
- Nestor Bracho: nestor@turpialdev.com