

# Challenge Project: Web

## Project Description / Requirements

- Relevant concepts
  - Django
    - Django ORM and Admin
    - RESTful using Django REST Framework
    - Automated testing
    - Relational Databases (only MySQL or SQLite)
- Task 1: Based on the provided usage scenario, design database schema, write REST API and enable Django Admin
  - Usage scenario
    - “We currently provide food delivery services for 2 restaurants. One of them is a burger restaurant, the other is a fried chicken restaurant.”
    - “The burger restaurant requires that the customer specify the (number of burgers), (meat type - ‘beef’, ‘chicken’, fish’) and (comments).”
    - “The fried chicken restaurant requires that the customer specify the (number of chicken parts ordered), (chicken flavor - ‘original’ or ‘extra crispy’) and (comments).”
    - “Our food delivery app is to support many kinds of restaurants. Hence please design the backend and the REST calls to be scalable.”
    - “Our app needs to be able to create an order”
    - “Our app needs to be able to retrieve all orders from all restaurants sorted by created date” (for delivery team)
    - “Our app needs to be able to retrieve all orders for a specific customer” (for customer records)
    - “Our app needs to be able to retrieve a specific order”
    - “Our app needs to display the delivery cost for all orders for a specific restaurant”
    - “Our app needs to display the average number of burgers ordered by a customer for the burger restaurant”
  - [ACTION] Write Rest API
    - Please create REST calls required to support usage scenario above
    - The purpose of these web-services is to provide an end-point for a mobile-based client to interact with the backend web server
    - For authentication, please use the package:  
<https://github.com/GetBlimp/django-rest-framework-jwt>
    - For rest calls, please use package: <http://www.django-rest-framework.org/>
  - [ACTION] Enable Django Admin for all models
    - Ensure that all list pages in Django Admin are useful
  - **Please ensure that we would be able to re-create the project on our end**
    - Provide a requirements.txt ([https://pip.pypa.io/en/stable/user\\_guide/](https://pip.pypa.io/en/stable/user_guide/) )
    - Ensure that Django migrations works
    - Provide a data dump using Django  
(<https://docs.djangoproject.com/en/2.1/ref/django-admin/> - dumpdata)

- Document rest calls using <https://www.getpostman.com/> , export the collection and send it to us.
- Task 2: Write a test
  - Write **ONE** meaningful automated test testing one of the rest calls in Task 1
- Task 3: Writeup
  - Provide concise Instructions on how to setup the project (for Task 1 and 2)
  - Tell us, in a concise manner, how the requirements are met.
  - After completing the project, do short writeup on what improvements can be performed in future
- Expected timeline: 1-2 weeks
- The goal here is to evaluate your technical as well as effective communication skills in a real-world environment

### Development Requirements

- **Must use**
  - Python 3
  - Django 2+
  - Django REST Framework with djangorestframework-jwt
  - MySQL (or SQLite)
- Code comments where appropriate

### Project Communication

- For all challenge project communications, please kindly send via your challenge project channel on Slack. You should receive a separate email invitation to join that channel.
- Your assigned challenge project reviewer will receive your feedback & questions via the above Slack channel and communicate with you accordingly
- Key communication checkpoints include (but not limited to):
  - Setup a project plan (ie. divide the project into short manageable sprints and estimate the time required for each) and discuss with your challenge project reviewer
  - Feel free to communicate with your reviewer with any questions you may have on the project .. it's much better to clarify any doubts you may have upfront rather than to spend time implementing a feature that is not 100% well thought out
  - Update your reviewer at the completion of each sprint
  - If you're unable to complete any sprint for any reason (eg. unexpected technical challenges, new issues discovered, personal reasons), please kindly update your reviewer and possibly discuss the new timeline / path moving forward
- Remember, your ability to communicate well is as important to us as your technical skills. Both are vital to your success!!