



Projeto Segurança Informática em Redes e Sistemas

THE CORK, GROUP A57

96902 | Pedro Gomes | 6 de dezembro de 2022

100740 | João Salgueiro

105688 | Tiago Figueiredo

1. Infrastructure Report

I. BUSINESS CONTEXT

TheCork is a service that allows its users to taste the best food and wines in town by enabling easy restaurant reservations via a very user-friendly mobile application that integrates seamlessly with the restaurants' calendars.

TheCork offers a mobile app to its customers to display the list of restaurants available at the user's location. It also allows them to book a table for a specific number of people if the restaurant still has free tables. There is also a website that provides the same functionality.

TheCork also provides back-office for the restaurants which is used to manage the schedule and to approve or deny the customers reservations.

II. INFRASTRUCTURE OVERVIEW

The group decided to implement an infrastructure in OS Ubuntu v22.04. It consists of two VM's and one virtual network switch. VM CORK-DB has one network interface connected to the local network and works as a database server. CORK-WEB will work as a web application server being the service provider. CORK-WEB has two network interfaces, one configured for the local network, the other NATed to host computer network card. The switch emulates the network 192.168.0.0/24. CORK-WEB will also work as the firewall using Ubuntu built-in software firewall.

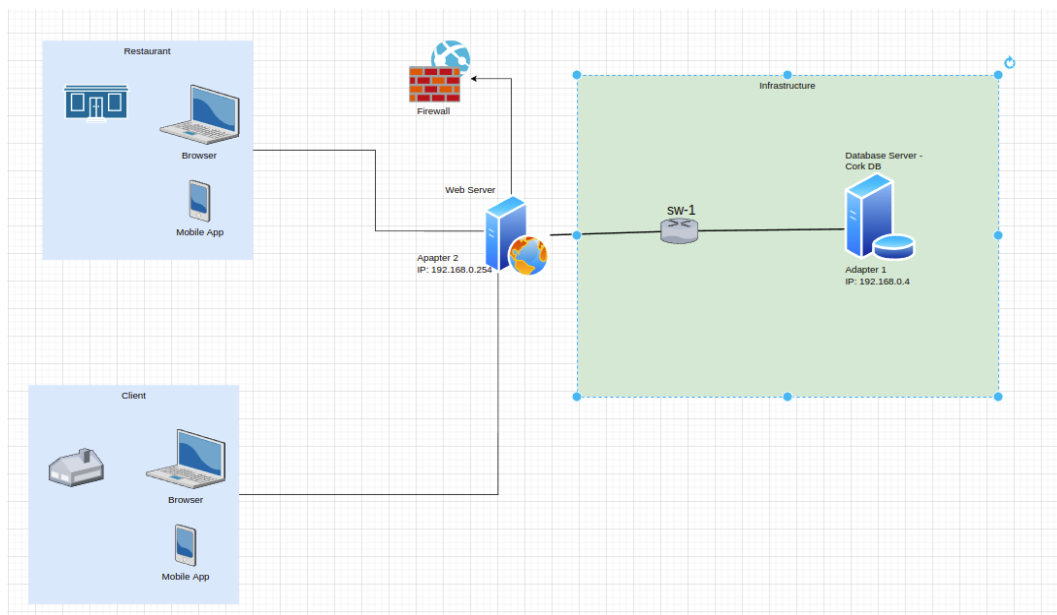


Figure 1 - Network diagram

For the database server, MySQL was installed, and an instance called cork was created, with it's own admin user "corkadmin". That instance will hold all the Tables for this project, as seen below.

To ease operation of the database server, the GUI MySQL Workbench was also installed.

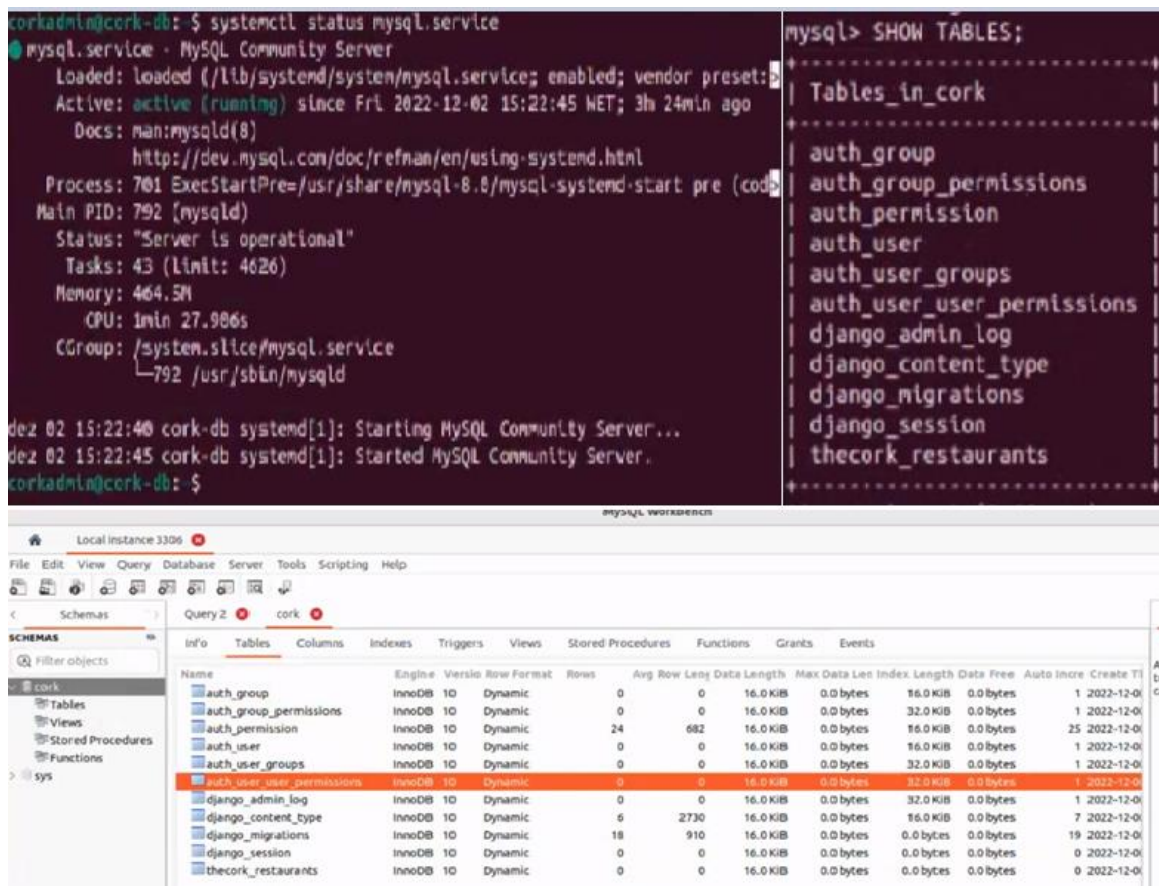


Figure 2 – Database details

To implement the Web App, the group decided to use a framework called Django. That framework uses Python as a programming language and is structured on a design pattern called MVT (Model-View-Template) while providing a lot of custom built in administration tools for user management along with the multitude of Python libraries which could prove necessary for this project.

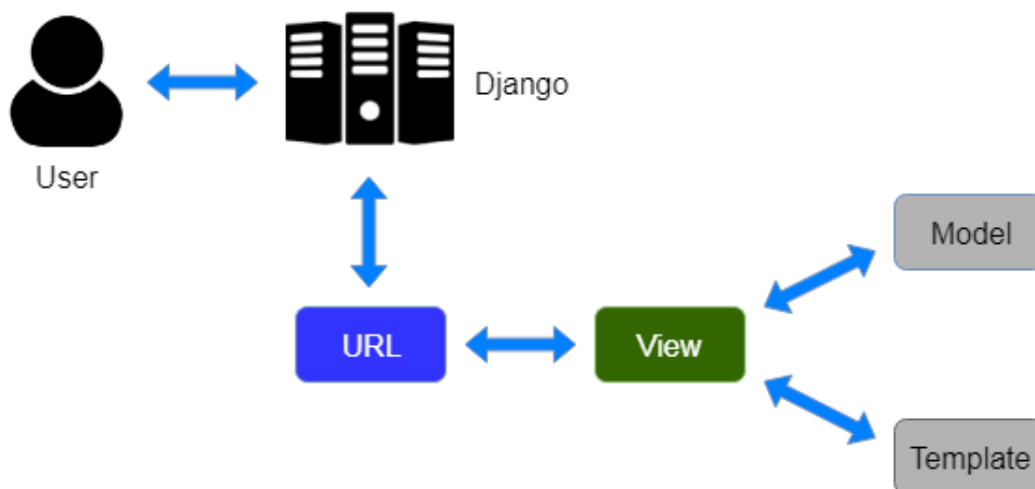


Figure 3 - MVT Pattern

The template part handles the user interface using html pages, the view executes all the logic and interacts with the model to carry data and the model handles the relational structure implemented in the database.

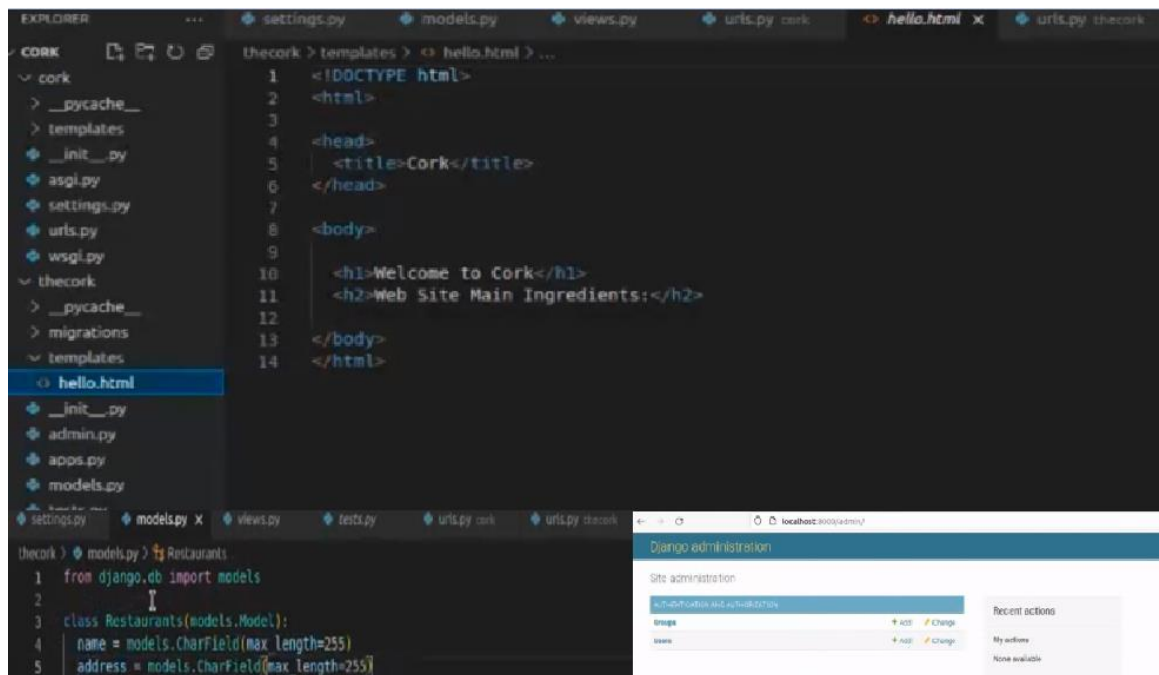


Figure 4 - Django Overview