Professional experience.

The following projects have been developed by myself over my career as a web developer whether as a freelancer developer as well as part of a development team in a company.

Profile:

Fullstack web developer since 2017 mostly in mercadolibre.com.mx using the following java stack tools: Java 8, Spring Boot, Spring Boot, Oracle 11g y JavaScript. Also, helping myself by using design patterns as well as object oriented programming in order to develop web services oriented applications exposing and consuming SOAP and REST APIs.

Project 1: Web service to expose an online store resources like electronic devices, products, etc. to be consumed by an android app client.

Place: Freelance

Spot: Fullstack web developer

Date range: Dec, 2017 – Feb, 2018

Activities:

- Using spring data jpa to stablish and manage the conection to the online store database which contains all the registers regarding user information, orders and products for sale, as well as letting the application to read and write data into the database, managing such information using java POJOs.
- Create a class for each database table to map the fields from such tables into class properties inside java, as well as using annotations like @Entity to turn the classes into entities, @column to specify attributes from the field like: name of the field in the database table, length, etc. And @ManyToOne @OneToManyt @JoinColumn for foreign keys mapping.
- Create interfaces extending JPARepository to have the basic CRUD repository operations over the entities.
- If needed: Create JPQL queries inside Java or stored procedures inside the database to gain more control over the complexity of the reading/writing operations over the registers.
- Create a Rest Controller for each entity in the data model to perform CRUD operations over the database tables making use of @RequestMapping annotation to map the url to the handler method of Get, Post, Put and Delete.
- Create a Rest Controllar which contains the handler methods to perform shopping cart operations like: get the products from the cart, modify the elements, add more elements and remove elements from the cart.
- Create a Rest Controller to perform orders related operations such as: Calculate total cost, get the orders, and submit the order setting up a 3 days limit to picku up the products, otherwise the order will expire.
- Using Spring Security module to create a class extending from WebSecurityConfigurerAdapter to configure user authentication and authorization over

the enpoints, as well as creating instances of UserDetailService and BcryptPasswordEncoder so Spring security can compare the credentials from the login form with the credentials persisted inside of the database (encrypting the password before persisting).

- To develop an android front end client to consume the micro service to perform the log in and log out operations.
- To deploy the project in .war format to host it inside of Apache tomcat 8 at the hosting service.

Achievements:

- To get a better understanding of requirements survey and requirements analisis inside of a software project.
- To gain more experience regarding the comunication with the customer.
- To get a better understanding of the overall operation of an online shop in the back end perspective.
- Get my first Java and Spring Boot project.

Technologies used:

- Java 8
- Spring Boot
- Spring data jpa
- Spring Security
- Oracle 11g
- Android Studio

Project 2: Web Service to implement a live chat modulo for the preceding online shop app

Place: Freelance at mercadolibre.com.mx online platform

Spot: Fullstack web developer.

Date range: Aug 2018 – Oct 2018

Activities:

- Using DDL commands to add create new tables to the existing online shop database schema to store data related to message exchanging, chat session management, etc.
- Using Spring data JPA to stablish and manage the database conection which contains data regarding users, orders, products for sale, and the new tables for this project, as well as letting me read and write such data using POJOs
- Create a class for each database table to map the fields from such tables into class properties inside java, as well as using annotations like @Entity to turn the classes into

entities, @column to specify attributes from the field like: name of the field in the database table, length, etc. And @ManyToOne @OneToManyt @JoinColumn for foreign keys mapping.

- Creating the new interfaces extending JPARepository to be able to perform the CRUD operations over the recently added entities
- If needed: Create JPQL queries inside Java or stored procedures inside the database to gain more control over the complexity of the reading/writing operations over the registers.
- To create a Res Controller which contains the handler methods to perform instant messaging receiving, storage and delivery.
- Using spring security to add authentication and authorization functionality to access the new chat module.
- Adding new android screens and chat functionality to the android front end.
- To deploy the project updates in .war format to host it inside of Apache tomcat 8 at the hosting service.

Achievements:

- To get a better understanding on hardware and software resource management in a chat application.
- Gaining more experience on continous comunication with the customer.

Technologies used:

- Java 8
- Spring Boot
- Spring data jpa
- Spring Security
- Oracle 11g
- Android Studio

Project 3: Web service to implement a real time GPS based delivery android app for a building material online store.

Place: Freelancer at mercadolibre.com.mx platform.

Spot: Fullstack web developer.

Date range: April 2018 – July 2018

Activities:

- Using spring data jpa to stablish and manage the conection to the online store database which contains all the registers regarding user information, orders and building materials for sale, as well as letting the application to read and write data into the database, managing such information using java POJOs.

- Create a class for each database table to map the fields from such tables into class properties inside java, as well as using annotations like @Entity to turn the classes into entities, @column to specify attributes from the field like: name of the field in the database table, length, etc. And @ManyToOne @OneToManyt @JoinColumn for foreign keys mapping.
- Create interfaces extending JPARepository to have the basic CRUD repository operations over the entities.
- If needed: Create JPQL queries inside Java or stored procedures inside the database to gain more control over the complexity of the reading/writing operations over the registers.
- Create a Rest Controller which contains handler methods to perform GPS coordinates receiving operations from the delivery people client smartphones as well as delivery operation to the order owner so they can check the order real time location.
- Using spring security to add authentication and authorization functionality to let the users to check the real time location of their order.
- To develop an android front end client to consume the location micro service to show the location inside a google maps frame on the costumer side, and to send the real time coordinates to the service in order to deliver it to the customer android client.
- To deploy the project in .war format to host it inside of Apache tomcat 8 at the hosting service.

Achievements:

- To get a better understanding on hardware and software resource management in a real time message exchanging application.
- Learning how to use the google maps API

Technologies used:

- Java SE
- Spring Boot
- Spring data jpa
- Spring Security
- Oracle 11g
- Android Studio

Project 4: Soap web services tester

Place: Huawei Technologies México

Spot: Tester

Date range: Oct. 2019 – Dec. 2019

Activities:

- Testing the Huawei's Business Enabling System web services for Telcel
- Sending and receiving HTTP requests in XML format using the SOAP UI testing software to enabling/disabling sms, voice, and mobile data services on testing lines to verify the provisioning module works.

Achievements:

- Learned that the SOAP web services have a WSDL file that describes in depth how the ws is structured, what models it has, etc. With such file, we can automatically generate proxy classes inside a SOAP client to perform the ws operations.
- Learned that SOAP ws can require and store authentication inside the headers of the message.

Technologies used:

- SOAP UI

Project 5: ASP .NET MVC and SQL Server developer

Place: Certifac

Spot: ASP .NET MVC and SQL Server developer

Date range: April 2020 – October 2020

Activities:

- Customer requirements analisis and abstracttion to perform updates and new software modules development to their electronic tax receipts web portal
- To perform and host meetings with the customers for software modules delivery and feedback
- Perform customer's tax receipts web portal front end modification and corrections using HTML5, CSS 3 and Javascript.
- New software modules desing and development for the customer's tax receipts web portal, payroll management web system and statistic reporting tool, using ASP .net MVC, Entity Framework y Web Forms.
- Using T-SQL (Stored procedures, iterations, if, for, etc.) to query data, clean it and generate views to generate statistic reports regarding user's tax receipts, payrolls, trouble tickets, etc.

Achievements:

- Gettting familiar with enterprise accounting and financial processes.
- Getting familiar with the relation between a business and the SAT (Sistema de Administracion Tributaria, Mexico's tax collector).

- Getting familiar with the management of the services and products a PAC (Proveedor Autorizado de Certificacion, Tax Receipt Authorized Certification Provider) can offer.

Technologies used:

- ASP .NET MVC, Web Forms, SQL Server, T-SQL

Project 6: Business Intelligence, sales analytics and stock management system development for a mercado libre store

Spot: Freelancer developer at Mercado Libre platform

Spot: Fullstack web developer (using Spring Boot, Oracle DB and Angular)

Date range: November 2020 – April 2020

Activities:

- Customer's requirements analisis and abstraction for development and maintenance of the web app.
- Organize and manage meetings with the customers for software delivery and feedback
- Abstraction and creation of database schema inside Oracle 11g
- Design and development of classes of type entity, repository and service for data persistence in Oracle DB inside Spring Boot using Spring Data JPA
- Rest Controllers design and development to manage the interaction between the user and the resources such as creating new resources, updating, deleting, fetching and report generation regarding sales, income, total makings, stock management, etc.
- Executable Jar file containing a batch process which fetches the sales information from mercadolibre. This batch process gets configured inside the Cron Tab in Ubuntu server to be executed everyday at 11:30pm and persist the data into the database.
- PL/SQL Stored procedures and functions development for data query, cleaning and formatting to be presented in the form o an HTML table or Google Charts generator in the front end.
- Using Spring Security module for access control via JWT (JSON Web Token).
- Hosting the microservices on Ubuntu Server VPS.
- Angular 11 (Typescript) front end application development in order to use the spring boot microservices to interact with the resources and present the information in the form of an HTML table and Google Charts

Achievements:

- Getting familiar with Google Charts API
- Getting familiar with the way mercado libre manages and present the product's information

Technologies used:

• Spring boot Rest Controllers, Spring Data JPA, Spring Security, Json Web Token, Ubuntu Server, Bash files, Cron Jobs.

Proyecto 7: Batch Developer

Place: Totalplay (Fintech and Internet provider)

Date: April 2021 to September 2021

Spot: Batch developer.

Activities:

- Analysis of requirements by the business area for the implementation of microservices and software modules for the new functionalities of the totalplay app and the core of its new credit platform.
- PL/SQL stored procedures development for extraction an data preparation regarding purchases made by the totalplay ecommerce and food delivery service to be sent to the financial area via REST endpoint.
- Oracle database jobs development for daily data collection about the behavior of sales performed on the ecommerce and food delivery services to be sent to the accounting area for analysis.
- Development and maintenance for REST microservices using Spring Boot to interface between the totalplay payment module and Banco Azteca (Azteca Bank) to perform monetary transactions for the purchases made in the totalplay ecommerce.
- Using Docker to containerize the developed microservices for later deployment to Google Cloud Run.
- Develop microservices for saving images of logos, products, etc. dynamically to Google Cloud Storage.
- Using Git for microservices version control. Using tools like Pub/sub and Google cloud workflows to create reactive ETL workflows

Acheivements:

Learning the overall Fintech workflows and features

Tools

Google Cloud Storage, Google Cloud Run, Git, Pub/Sub, Apigee, Spring Boot, Oracle, PL/SQL, Docker

Proyecto 8: Cloud native microservices developer

Place: Walmart Mexico and Central America hired by Softtek

Date:October 2021 - present

Puesto: Cloud native microservices developer

Activities:

- Create library projects for storing entity type POJOs, interfaces inheriting from JPARepository and service POJOs to interact with the SQL Server database.
- Develop microservices to insert and retrieve information from HR team applications using Spring boot, Spring data JPA and Azure SQL Server as database engine.
- To Develop a microservice to generate notification emails and send them to the system admin users. Here the Microsoft Graph API was used to send the mail and the Freemarker templating library to create and fill the HTML templates with the dynamic content for the email.
- To Develop a microservice that receives a document in base64 format to save it in to Azure storage bucket.
- To develop a microservice that fetches all the files attatched to a saved HR team application from the azure storage bucket, merges them all in one single pdf file (the applications only accept pds and images) and returns this generated file in base64 format to make it available for displaying and downloading.
- To develop a microservice that fetches the HR Team Applications stored in the database based on certain filters and application statuses, generates an Excel file with the extracted information and returns it in base64 format for display and downloading on front end.
- To develop of microservice that receives information from the RPA module and delivers it to the Camunda orchestrator via POST Https request to continue the workflow.
- To develop a microservice that receives a pdf document in base64 format, extracts the the data necessary for the HR team application and finally persists the information to the database.

- To develop a microservice that connects to a remote server via SFTP, extracts the files found in a dedicated folder and saves these files in the Azure storage bucket (this service runs every day at 5am).
- To develop a microservice that fetches business rules from the ODM module via HTTPS requeststst to the endpoints provided by the rule developer. Once the rules are fetched, the microservice uses them to perform decisions on whether the info from the HR application coming from the front end is valid to persist or invalid.

Acheivements

Learning to deploy to Kubernetes, learning to generate and use SSL certificates to authenticate to the Microsoft Graph API.

Tools

Spring boot, Github Actions, Sql Server, Rest template, CI/CD pipes, Microsoft Graph Api, Azure Storage, Apache POI