



Learning Path Backend

1. Tronco Común (2 semanas)
2. Python Basics (1.5 semanas)
 - a. What is python
 - b. Why python
 - c. Installation
 - d. First Python Program
 - e. DataTypes
 - f. Data Structures
 - g. Functions & Exceptions
 - h. File Handling
 - i. Objects & POO
 - j. Ejercicios
3. How the backend works (.5 semana)
 - a. Linux monitoreo
 - b. TCP/UDP and sockets
 - c. Application layer protocols (DNS, SMTP, POP, FTP, HTTP).
 - d. Network security: authentication, basics of public key and private key cryptography, digital signatures and certificates, firewalls.
 - e. Aplicaciones cliente servidor
4. Bases de Datos 1 (1.5 semanas)
 - a. SQL 1
 - i. Relational Databases
 - ii. SQL definition
 - iii. RDBMS
 - iv. Schemas
 1. Create, Alter, Delete
 - v. Tables
 1. Create, Alter, delete
 - vi. Query - Selecting data
 1. Simple select
 2. where
 3. and or
 - vii. Database Transaction

1. ACID
 2. Insert, update, delete
- viii. Relations
 1. One to one
 2. One to many
 3. Many to many
 - 4.
- b. NoSQL (mongodb)
 - i. Advantages / Disadvantages
 - ii. Databases
 - iii. Collections
 - iv. CRUD
5. Python 2 (1 semana)
 - a. Decorators
 - b. Regular Expressions
 - c. HTML Processing
 - d. Web Services
 - e. Unit Testing / TDD
 - f. Refactoring
 - g. Performance
6. Bases de Datos 2 (1 semana)
 - a. SQL 2
 - i. Views
 - ii. Store Procedures
 - iii. Triggers
 - iv. Joins / Union
 - v. Subqueries
7. Frameworks y Librerías
 - a. Qué es un framework / librería
 - b. Open Source
8. Flask (.5 semana)
9. Git 2 (.5 semana)
 - a. Branches
 - b. Tags
 - c. Merge
 - d. Unmerge
 - e. Cherry pick
 - f. Conflicts
 - g. Rebase
 - h. Pull requests
10. Deploy 1 (.5 semana)
 - a. Heroku
11. API's con Django (2 semanas)
 - a. Authentication
 - i. Basic
 - ii. Token
 - iii. JWT
12. Deploy 2 (.5 semana)
 - a. Nginx
 - i. installation
 - ii. config

iii. webserver

b. VPS

c.

13. Proyecto Final