



UNIVERSIDAD  
**NACIONAL**  
DE COLOMBIA

# Prototype 1

## Simple Architectural Structure

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Software Architecture

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### 1. Objective

The objective of the first delivery of the project is to build a **vertical prototype** of a software system, based on an **initial architectural design**.

### 2. Requirements

#### 2.1. Functional Requirements

- The domain and the functional approach for the software system must be defined by the team.
- The functional scope of the prototype must be defined by the team.

#### 2.2. Non-Functional Requirements

- The software system must follow a **distributed** architecture.
- The software system must include at least one **presentation-type component** (a web front-end).
- The software system must include at least two **logic-type components**.
- The software system must include at least two **data-type components** (a relational database and a NoSQL database).
- The software system must include at least two different types of **HTTP-based connectors**.
- The software system must be built using at least two different general-purpose programming languages.
- The deployment of the software system must be **container-oriented**.

### 3. Delivery

#### 3.1. Artifact

- Team
  - Name (1a, 1b, ..., 2a, 2b, ...)
  - Full names of the team members.
- Software System
  - Name
  - Logo
  - Description
- Architectural Structures
  - Component-and Connector (C&C) Structure
    - C&C View
    - Description of architectural styles used.
    - Description of architectural elements and relations.
- Prototype
  - Instructions for deploying the software system locally.

### 3.2. Submission Format

- The deliverable must be submitted via GitHub
- Steps:
  - Use the branch **prototype\_1**.
  - In the folder **project/prototype\_1**, create an **X** folder (where X = the team name [1a, 1b, ..., 2a, 2b, ...]), which must include:
    - The **artifact** in a README.md file.
    - The source code (and other configuration files) of the prototype.