

# Advanced Programming

## Season 2024-I

### Workshop No. 3 — Front-End

Eng. Carlos Andrés Sierra, M.Sc.  
Computer Engineering  
Universidad Distrital Francisco José de Caldas

I am very proud of you, hope you learn a lot, and you are ready to start with the next workshop.

In this case, you must to create the front-end of the application you have been working on. It means, you are walking to become a *full-stack* engineer.

As follows are the requirements for the next workshop:

1. You must deliver a technical report with next specifications:
  - (a) Refine/update the user stories you consider for the project.
  - (b) Refine/update activity diagrams in order to add steps you feel are pending, and thinking more in the interaction of user with the UI.
  - (c) You must create the **IU prototypes** for the *web ui* based on next specifications:
    - i. The user needs a form to add a *new engine* to the application.
    - ii. The user needs a form to add a *new vehicle* to the application.
    - iii. The user needs a page to *see all engines* in the application.
    - iv. The user needs a page to *see all vehicles* in the application.
  - (d) Design the communication data structures (JSON) to communicate information between the front-end and the back-end.
  - (e) Design the web services required from the front-end to the back-end. It means: **HTTP Method, URL, Request, Expected Response, Name.**
2. You must create the UI for the application. It means, you must create the **HTML** and **CSS** files for the application.
3. You must create the **Web RESTful API** for the application. Not all the backend, just the **web services** required for the front-end.

---

Carlos Andrés Sierra, Computer Engineer, M.Sc. on Computer Engineering, Titular Professor at Universidad Distrital Francisco José de Caldas.

Any comment or concern related to this document could be send to Carlos A. Sierra at e-mail: *cavir-guezs@udistrital.edu.co*

With the technical report, you must to upload the code of the front-end to the repository you have been working on. You must deliver a repository in *GitHub* where you must have a folder called **workshop-3**. There, you should let your *code* in a folder *src*, a simple *README* file as description of the folder, and a *technical report* in pdf format.

Into the **technical report** all *UML diagrams* of your solution should be provided. Also, you must write about technical concerns and decisions you make to create the architecture of your proposed solution. Remember to think in the *MTV* pattern.