01UDFOV/01TXYOV Applicazioni Web I / Web Applications I [2024/2025]

Lab 1: Getting Started with Node.js

In this lab, you will become familiar with JavaScript by putting into practice what you have seen in the last lectures in your selected topic.

0. Preparation

Before starting, make sure that Node.js has been installed on your computer. If not, you can download version 22.x (LTS) from https://nodejs.org/en/.

1. Create a collection of your objects

In this exercise, you will analyze your selected topic to identify the main objects, properties, and relationships, and then implement them in JavaScript.

Begin by examining the text of your chosen topic. From it, identify the main objects that need to be modeled. Then, for each object, list all required properties (including a unique id) with their default values where applicable.

After identifying the objects, implement the following:

1. Create constructor functions for each main object type.
2. Implement a container object (as a list of multiple objects) to store collections of your objects with all the needed methods.
3. Add at least one method for each of these:
    - Add new objects to your collection.
    - Retrieve objects based on specific criteria.
    - Manipulate the collection as needed for your specific track (e.g., sorting on specific properties, changing properties of multiple objects, test if the collection respects some constraints).
    - Delete a specific object from the collection.

Hint: You may use the day.js library to create and handle the dates, if needed.

Hint: To implement the required functionalities you may use the functional programming paradigm to manipulate arrays.

2. Populate and display

Populate your object collection with at least 5 sample items that make sense for your track.