

# Node.JS – Final Project

You need to build a web site (or ONLY the server) for A Factory management :

The web site composed from a Node.JS + Express based server, a MongoDB DB, and HTML pages in the front (you can use native JS or jQuery or any other library)

- The Factory has employees
- Each employee belongs to a department
- Each employee works several shifts.
- Each shift compose from one or more employees
- ONLY registered users can work (log in to) with the web site

## **Each user has :**

- ID (PK, ObjectId)
- Full Name (string)
- Num Of Actions (int)

## **Each department has**

- ID (PK, ObjectId)
- Name (string)
- **Manager** ( reference to employee id)

## **Each employee has:**

- ID (PK, Objectid)
- First Name (string)

- Last Name (string)
- Start Work Year (int)
- DepartmentID (reference to department id)

#### **Each Shift has**

- ID (PK, ObjectId)
- Date (date time)
- Starting Hour (int)
- Ending Hour (int)

#### **Optional – Client Side**

The Web site has the following pages:

##### **Login Page**

- Only registered users can work on the system (They must log-in). Each User login with his username & email – Those credentials are verified against the <https://jsonplaceholder.typicode.com/users> REST API
- Once a user logged-in , his Full Name will be shown in EVERY page
- Every Page also has a “Log-Out” link which redirect the user back to the Log-In Page
- Each user has a limited actions per day. Each action a user request ( like getting the list of employees, create a new department etc..) will reduce from his credit (actions). When he reached to the maximum actions allowed, he will be redirected out of the system for that day.

## “Employees” Page

This page has:

- A Table with all Employees data. Each row presents : his FullName, Department, and a list of All his shifts (Date & Time) .
  - o Each Employee Full name is a link. A click on it will redirect to “Edit Employee” Page with all his personal data in a form to be edited.
  - o Each Department name is a link. A click on it will redirect to “Edit Department” Page with all the department data in a form to be edited.
- A button called “New Employee”. A click on it will Redirect to “Add Employee” Page
- A drop down with all “Departments”. Picking an item in that drop down will filter the employees table and presents only the employees in that chosen department.

## “Edit Employee” Page

This page has:

- A Form with the selected employee data to be edited.
- An “Update” button to save the update data in the server
- A “Delete” button to delete all employee’s data (and his related data, like shifts) from the server.
- A table with all his Shifts
- An option to register him to an EXISTING shift

### **“New Employee” Page**

This page has:

- An empty Form for creating a new Employee ( without shifts) including his department
- A “Save” button for saving the data in the server
- A “Cancel” button for redirecting back to the “Employees” page.

### **“Department” Page**

This page has:

- A Table with all Departments data. Each row presents : Department name, Department manager name, and a list of Employees names work in that department.
  - o Each Employee Full name is a link. A click on it will redirect to “Edit Employee” Page with all his personal data in a form to be edited.
  - o Each Department name is a link. A click on it will redirect to “Edit Department” Page with all the department data in a form to be edited.
- A button called “New Department”. A click on it will Redirect to “Add Department” Page

### **“Edit Department” Page**

This page has:

- A Form with The selected department data to be edited.
- An “Update” button to save the update data in the server
- A “Delete” button to delete all departments data from the server (including all department’s employees data)
- A Dropdown with all employees that NOT belong to that department, and a “Add” button. A click on “Add” button will allocate the selected employee to that department (instead of his previous one)

### **“New Department” Page**

This page has:

- An empty Form for creating a new Department ( without Employees)
- A “Save” button for saving the data in the server
- A “Cancel” button for redirecting back to the “Departments” page.

### **“Shifts” Page**

This page has an option for creating new shifts, and change existing shifts, and allocate employees to a given shift. Shifts Can NOT be deleted !!

### **“Users” Page**

This page has a table with all users data (can NOT be changed or deleted). Each row presents the user name. maximum actions allowed, and the CURRENT actions allowed today.

### System Users:

- Only registered users allow to Login to the web site. ALL users are pre-declared in advanced in a proper DB collection.
- Each “Action” user takes (like watching the “Employees” page, adding department, delete employee ,search by department etc) is logged in a JSON file at the server as follows :
-

```
{
  "actions" : [
    { "id":1, "maxActions" : 5, "date" : "1/03/2022", "actionAllowd" : 3 },
    { "id":1, "maxActions" : 5, "date" : "1/03/2022", "actionAllowd" : 2 },
    { "id":1, "maxActions" : 5, "date" : "2/03/2022", "actionAllowd" : 4 },
    { "id":2, "maxActions" : 7, "date" : "2/03/2022", "actionAllowd" : 6 },
    { "id":2, "maxActions" : 7, "date" : "2/03/2022", "actionAllowd" : 5 }
  ]
}
```

- A user can NOT take more actions per day than allowed to. When he reached the maximum actions allowed – He's been logged out until the following day!

#### Project Delivery:

The project will be delivered (with no due date limitations) by sending a link to your repository (git, google drive..) to the following email address :

[devprojects2000@gmail.com](mailto:devprojects2000@gmail.com) with the subject : "[Course Name] - [Your name] – Node.JS Final Project".

For example : Full Stack 32 – Ron Gabay – Node.JS Final Project

## Good Luck !!!