

# Full Stack Project 1 – WebAPI with HTML

You need to build a web site for A Factory management :

- The Factory has employees
- Each employee belongs to a department
- Each employee works several shifts.
- Each shift compose from one or more employees
- All The users will be pre-defined in the system

## **1. The Schema of the Data Base :**

### **User Table**

- ID (PK)
- Full Name
- User Name
- Password
- Num Of Actions (int)

### **Department Table**

- ID (PK)
- Name
- Manager (FK to Employee.ID)

### **Employee Table**

- ID (PK)
- First Name
- Last Name
- Start Work Year
- DepartmentID (FK to Department.ID)

### **Shift Table**

- ID (PK)
- Date (date time)
- Start Time (int)
- End Time (int)

### **EmployeeShift Table**

- ID (PK)
- EmployeeID (FK to Employee.ID)
- ShiftID (FK to Shift.ID)

## 2. General :

- Only registered users can work on the system (They must log-in)
- Each user has a limited number of actions can be done per day.
- 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.

## 3. Controllers :

You have 4 controllers :

- Log in
- Department
- Employee
- Shift

## 4. Pages

“Login” controller”

- “Log-In” page with user and password and “Login” button.  
Only authenticated users will be redirect to “HomePage” page
- “HomePage” with 3 links to Employees, Departments and Shifts Menus.

“Department” controller”

“Departments” page – A page with a table with all the departments data. Each Row will Will have a “edit” and “delete” links.

- o Click on “edit” will redirect to a “Edit Department” page.
- o Click on “delete” will delete the department.
- o The page has a “Add Department” button. A click on it will redirect to “New Department” creation Page.

**Important : The “delete” link in each row will be presented ONLY if there is no employee in that department**

### "Employee" controller

"Employees" page – A page with a table with all the departments Employees data. Each row in the table will be present the employees personal data **and a list of his Shifts (date + time)**. Each row has a "edit" and "delete" and "add shift" link.

- A click on "edit" will redirect to a "Edit Employee" page. The "Edit Employee" page will have a form for editing the data. The "department" of the employee will be selected from a drop down list.
- A click on "delete" will delete the employee data from the "employee" table and all his shifts from the related table.
- A click on "Add Shift" link will redirect him to a "Add Shift To Employee" page
- The "employees" page has also a search box for searching employees by their first name, last name or department. A click on "Search" button will redirect to a "Search results" page. That page will have a "back" button that will redirect back to the "Employees" page

### "Shift" controller

"Shifts" page – A page with a table will all shifts. Each row will also present a list of the names of the employees registered to that shift. Each name will be a link.

- A click on that link will redirect to "Edit Employee" page.
- Shifts can NOT be changed (edited) nor deleted
- The page has a "Add Shift" page which will redirect to a "Add Shift" page.

**REMEMBER : Each action must be counted as part of the user's allowed actions per day!**

### Project Delivery:

1. Delivery date: until 12/2/2022
2. The project files (with out the DB) must be uploaded to YOUR repository (git, google drive...) and the link to that repository must be sent to : [technionwd23@gmail.com](mailto:technionwd23@gmail.com)  
With the following manner in the email subject :  
[Full Name] – Project 1. For example : Yaniv Arad – Project 1