Exam Preparation - TODO List

You have been tasked to create a simple **TODO List** application. The application should hold **`tasks`**, which are the main **entities**.

The functionality of the application should support **`creating`**, **`listing`** and **`deleting`** tasks.

The application should **`persist`** the data into a **`database`**.

Overview

Your application should be built on **each one** of the **following technologies**:

PHP

- **Symfony** as the **Framework**
- **Twig** as the **View engine**
- **MySQL** as the **Database**

JavaScript

- **NodeJS** + **ExpressJS** as **Frameworks**
- **Handlebars.js** as the **View engine**
- **MongoDB** as the **Database**

Java

- **Spring** as the **Framework**
- **Thymeleaf** as the **View engine**
- **MySQL** as the **Database**

C#

- **ASP.NET** as the **Framework**
- **Razor** as the **View Engine**
- **MSSQL Server** as the **Database**

Model

The **`Task`** entity holds **3 properties**:

- **`id` (technology-dependent (`ObjectID` for JavaScript, `int` for all other technologies))**
- **`title` (string)**
- **`comments` (string)**, which can hold **any ASCII character**

Skeleton

You will be given the application's **`Skeleton`**, which holds about **90%** of the logic. You'll be given some **files** (**controllers**, **models** etc.). The files will have **partially implemented logic**, so you'll need to write some code in order for the application to **function properly**.

The application's views will be given to you fully implemented. You only need to include them in your business logic.

Each technology will have its **own skeleton**, and the **different skeletons** may **differ** in **terms** of **what is given to you** and **what is to be implemented**.

Everything that has been given to you inside the skeleton is **correctly implemented** and if you write your code **correctly**, the application should work just fine. You are free to change anything in the Skeleton on your account.

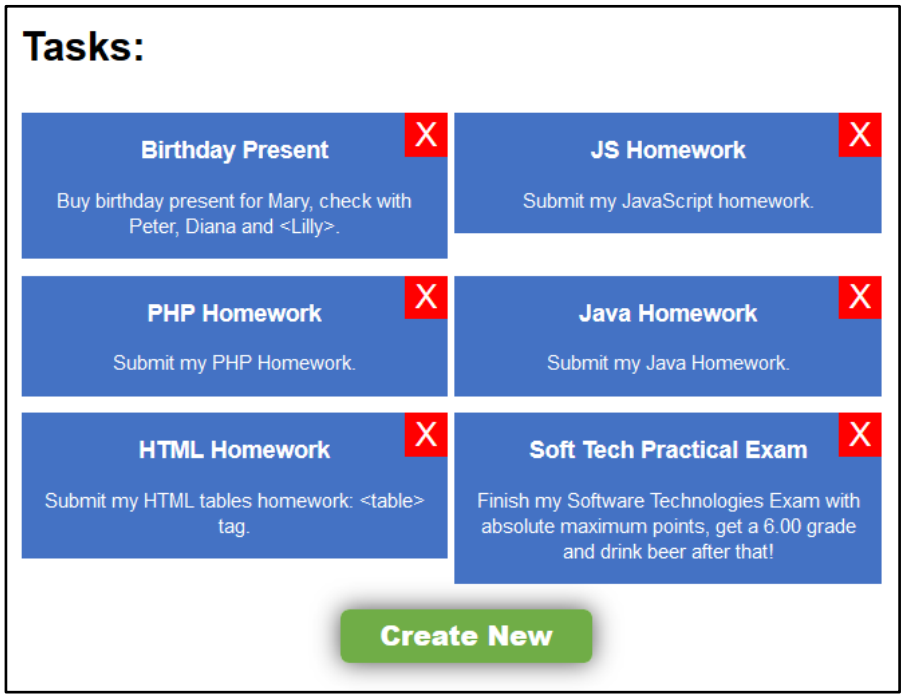
User Interface

This is the user interface or how the application's pages should look in their final form (fully implemented).

You have 3 pages:

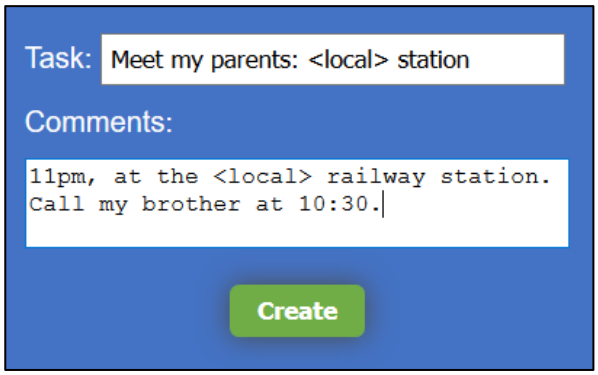
Index page

Route: "/"



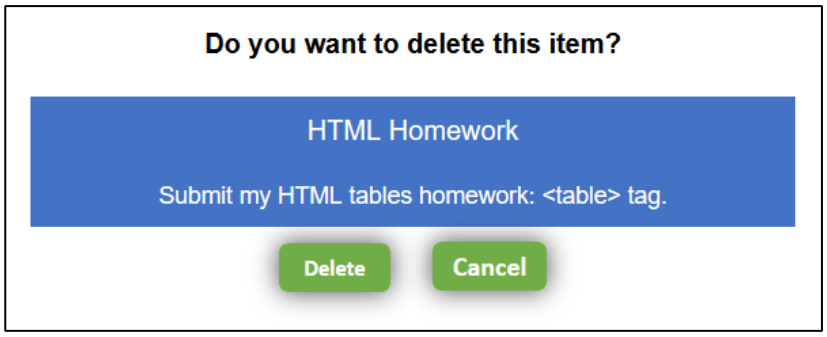
Create Page

Route: "/create"



Delete Page

Route: "/delete/{id}"



Problem

As you can see the different pages are on different routes. Most of the routing logic will be given to you in the **Skeleton**, but you should make sure that the application **works properly**.

Implement the **`TODO List application`** on all **`4 technologies`**.

Setup

Before you start working, make sure you **download all the dependencies** (packages) required for each technology and **set up** the **databases**! Below are instructions on how to do this:

PHP

1. Go into the **root directory** of the project (where the **`bin`** folder resides)
2. Make sure you've started your **MySQL server** (either from **XAMPP** or standalone)
3. Open a **command prompt/PowerShell** window in that directory (shift + right click ➔ open command window here)
4. Enter the "**`php composer.phar install`**" command
5. Enter the "**`php bin/console doctrine:generate:database`**" command
6. Done!

JavaScript

1. Go into the **root directory** of the project (where the **`bin`** folder resides)
2. Make sure you've started your **MongoDB server** (**`mongod.exe --dbpath path/to/db/directory`**)
3. Open a **command prompt/PowerShell** window in the **root directory** (shift + right click ➔ open command window here)
4. Enter the "**`npm install`**" command
5. Done!

C# and Java

C# and Java automatically resolve their dependencies when project is built.