

We are strong believers in object-oriented programming. So this task is focused on your ability to implement a CRUD (create, read, update & delete) application using OOP.

## Task

We need an application for a teacher to assign students to groups for a project. Please read the requirements below and implement a solution that meets them. You will also find a mockup of a project status page that you can follow when implementing your design.

## Technical requirements

1. Include a README file that contains a short description of your solution and technical decisions.
2. Project must be stored in a publicly accessible git repository in GitHub or BitBucket.
3. All data should be stored in MySQL database. You must provide a script to create an initial schema for the database.
4. Task must be implemented as a web application using OOP principles with PHP, Java or Python programming languages for the backend. JavaScript and CSS can be used for front-end.

## Functional requirements

1. On first visit a teacher should create a new project by providing a title of the project and a number of groups that will participate in the project and a maximum number of students per group. Groups should be automatically initialized when a project is created.
2. If the project exists, a teacher can add students using the "Add new student" button. Each student must have a unique full name.
3. All students are visible on a list.
4. Teacher can delete a student. In such a case, the student should be removed from the group and project.
5. Teacher can assign a student to any of the groups. Any student can only be assigned to a single group. In case the group is full, information text should be visible for a teacher.

## Bonus requirements

1. Make information on the status page to automatically update every 10 seconds.
2. Implement functional requirement #2 using RESTful API.
3. Add automated test for functional requirement #4.

Status page mockup

Project: **Winter Photoshoot**

Number of groups: **5**

Students per group: **2**

Students

Student	Group	Actions
Ada Lovelace	Group #2	<a href="#">Delete</a>
Grace Hopper	Group #1	<a href="#">Delete</a>
Margaret Hamilton	-	<a href="#">Delete</a>
Joan Clarke	Group #2	<a href="#">Delete</a>

Add new student

Groups

Group #1

Grace Hopper

Assign student▼

Group #2

Ada Lovelace

Joan Clarke

Group #3

Assign student▼

Assign student▼

Group #4

Assign student▼

Assign student▼

Group #5

Assign student▼

Assign student▼