IBU | International Burch University

CEN 308 SOFTWARE ENGINEERING

PROJECT DOCUMENTATION

University system

Prepared by:
Ilma Čengić
Merjem Kapo

Proposed to:
Nermina Durmić, Assist. Prof. Dr.
Aldin Kovačević, Teaching Assistant

21.6.2021.

Contents

1. Introduction

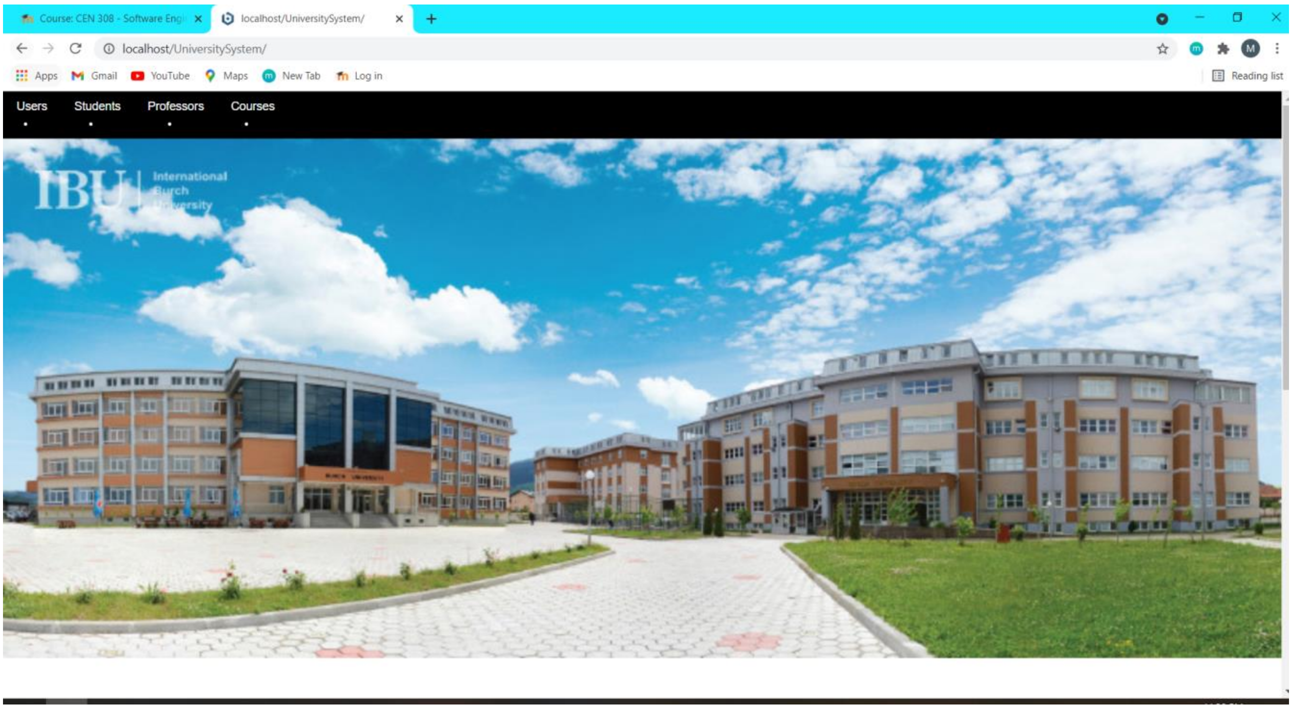
The topic of this paper is education center. For more effective content, we focused on the faculty as an educational center. The goal of this project is to create an web application for the same. The accompanying documentation, as a mandatory part of this project, aims to explain in a simple and effective way its basic structure and how to use it. Before starting the implementation of the application, we need to thoroughly analyze all the details that need to be considered for the best possible validation so that users can manage the application as easily as possible. This application covers various mechanisms related to the various segments required for the smooth operation of a faculty, such as users, professors, reviewing activity schedules, homework materials, courses, etc. All of this is made easy for the user to use, which is a priority.

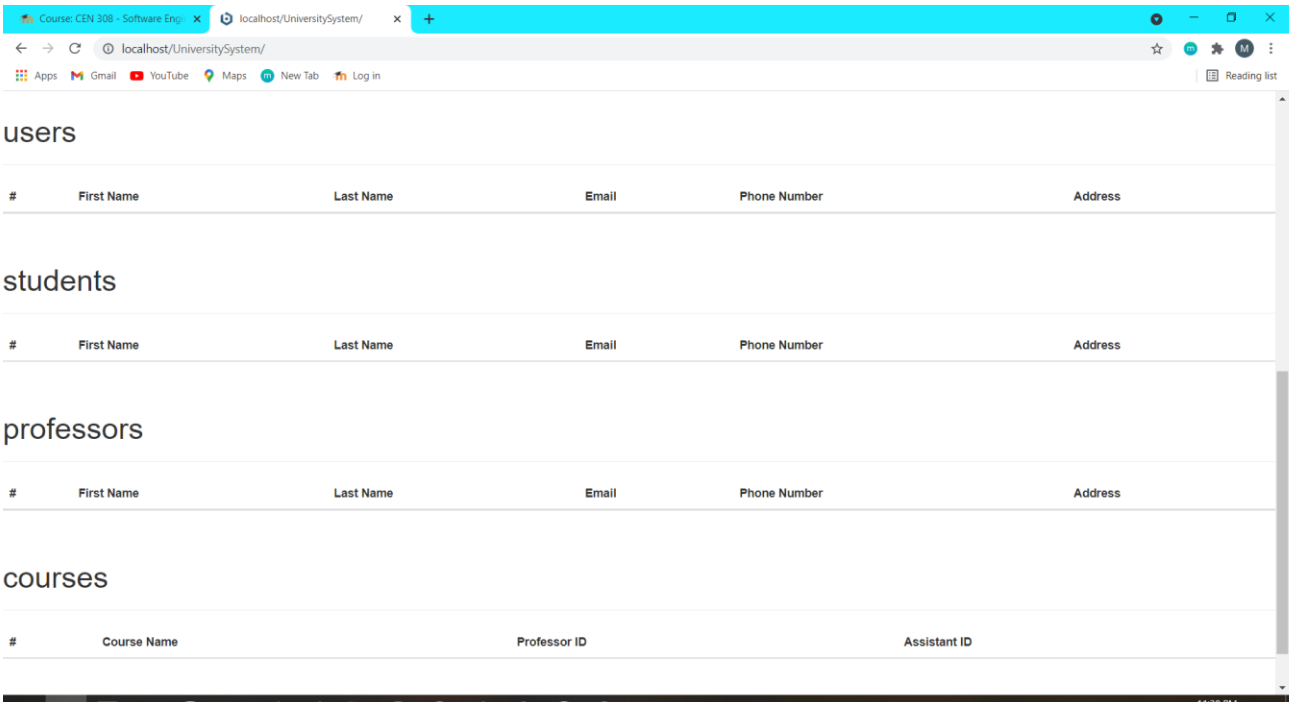
1.1. About the Project

We are creating this application because we want to help students and University employees to communicate easier with each other. Students to have better insight into their grades, attendance, finances, courses, exams and notifications. And for professors to have better control over students responsibilities and insight into students grades, attendance, courses, exams and notifications.

1.2. Project Functionalities and Screenshots

- Grades overview
- Homework submission
- Courses overview
- Professors overview
- Students overview




Course: CEN 308 - Software Engi
localhost/UniversitySystem/
localhost/UniversitySystem/
Apps
Gmail
YouTube
Maps
New Tab
Log in
Reading list

users

#	First Name	Last Name	Email	Phone Number	Address

students

#	First Name	Last Name	Email	Phone Number	Address

professors

#	First Name	Last Name	Email	Phone Number	Address

courses

#	Course Name	Professor ID	Assistant ID

UNIVERSITY SYSTEM

Merjem Kapo & Ilma Cengic

2. Project Structure

2.1. Technologies

We work this project in IntelliJ IDEA 2020.3.1. For backend, frontend and database we use:

- HTML,
- CSS,
- JavaScript,
- PHP
- phpMyAdmin

2.2. Database Entities

List of *tables* we have in our database/schema:

- Courses
- Enrollments
- Exams
- Finances
- Homework
- Professors
- Quiz
- Students
- Users

2.3. Architectural Pattern

The Architectural Pattern that we used is Model-View-Controller.

The model-view-controller (MVC) pattern and its relatives HMVC and MVVM lets our break up code into logical objects that serve very specific purposes. Models serve as a data access layer where data is fetched and returned in formats usable throughout our application. Controllers handle the request, process the data returned from models and load views to send in the response. And views are display templates (markup, xml, etc.) that are sent in the response to the web browser.

MVC is the most common architectural pattern used in the popular PHP frameworks.

HMVC can have more than one controller, combining with many triads. Allowing the reuse of existing code, it makes the testing of disparate parts of the systems easier while ensuring the enhancement of the application.

MVVM, the view is the entry point to the Application. MVVM is easy for separate unit testing, and code is event-driven.

3. Conclusion

In this project we want to make easier for students, professors and other users to communicate easier with each other, and to have better insight to their grades, finances, courses, homework, etc. We learned some new things working on this project. In the future, we will keep working on this project and keep adding some new features to make this website better.