Middle East Technical University

Department of Computer Engineering

CENG 495

Cloud Computing
Spring 2021–2022
HW - 1

Due date: 2022-04-14 23:59

1 Introduction

In this homework, you will develop an application and deploy it onto the cloud Platform-as-a-Service (PaaS) Heroku. The application will be a weekly scheduler, allowing the user to explicitly fill out timeslots as well as pick bonus slots in which the application can suggest various activities using external APIs.

2 Heroku - Start Here

- Sign up to Heroku or use your existing account. Heroku allocates 550 generous free hours for your app each month some of which we kindly ask you to use for this course.
- Pick a language from the list of languages supported by Heroku and follow its tutorial. You can complete this homework by using any of those 8 languages available.

3 Weekly Scheduler

Design a web application that lets the user fill out a weekly schedule with user inputs for timeslots or allow the user to select bonus/wildcard timeslots for your application to fill.

The frontend can look like the course schedulers such as `https://www.theuniversityscheduler.com/` or `https://sekizkirk.io/`.

For inspiration, you can use this list: `https://github.com/public-apis/public-apis`. Some wildcard slots you can offer are:

Game recomm, a movie to watch, or something from netflix, book to read, etc

- Use GitHub's API to fetch user's repositories and suggest an issue to work on.
- Use Bored to suggest recreational activities.
- Use SeatGeek to suggest events to attend to.

This list is in no way conclusive and we suggest you to come up with your own wildcards. You must have at least 3 wildcard options.

Apart from wildcard options, you can use APIs like colormind to offer a colour scheme for the final result.

Finally, allow the user to export their weekly schedule by using an image upload service (e.g. Imgur), exporting the schedule there using a supported image format and giving a permalink back to the user.

You are free to & encouraged to use frameworks and libraries while building your application. However, the overall project should be your own work.

4 Submission

- Deploy your application to Heroku and submit the source code of your application to our ODTUClass page. Archive your project as a `.tar.gz` file and name it as "firstname_lastname.tar.gz". Your submission must include a `README` file that includes your design decisions and the URL of your Heroku deployment.
- Your README can include: why you chose the programming language you did, which frameworks you have chosen and why and a short user guide among other points you deem fit.
- This is an individual assignment. You can discuss your ideas with your peers but using implementation specific code that is not your own is strictly forbidden and constitutes as cheating. This includes but not limited to friends, previous homeworks, CENG homework repositories on GitHub, or the Internet in general. The violators will get no grade from this assignment and will be punished according to the department regulations.

5 Grading

Your submissions will be graded primarily on the usability of your web applications and the correctness of your API usage. A small portion of the grade is reserved for your README files. Black-box testing will not (cannot) be employed for this homework so I will use each application and read every submission in it's entirety for grading.