



HOCAM NEREDE

## **Implementation Plan**

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# 1 Overview

This document contains the Software Project Plan for the Hocam Nerede system that will be produced spring semester. The schedule for this project starts in October 2018 and ends in May 2019. Students taking Senior Project SE4910 will develop this project. The members of this team are as follows:

Egehan Tütüncü  
Ercan Kot  
Emre Dönmez

The system is aiming to bring together students and people who want to give private course. There are 2 account types. These are student and teacher. Teachers determine their own lesson price. Users can rate and comment their tutors after private lesson. To ensure that some notifications will be shown to users at the finish time of lesson. Teachers will be sorted according to their rate. Teachers can show their profession and department in their own profile. Students sign in to the system then choose their location and lesson of interest and after that choose their tutor.

The project scope for the Hocam Nerede product will be to include Android, IOS and Web UI based interface and database enabled for persistent storage.

Hocam Nerede mobile app will be include JavaScript, CSS(React Native) language. Web app will be including JavaScript, HTML, CSS and PHP languages. We aim to be compatible with all of the browser variants for Web app and we aim to compatible with IOS and Android device for mobile app.

In Hocam Nerede project, we will use Scrum, an agile software method. The requirements are applied to the management of complex.

## **2 High level functionality**

Hocam Nerede project offers two different user options. These options are teacher and student. The people who want to be a teacher must applied to the app according to their working field and teacher will normally sign up to the app with their e-mail. There will be several course categories from instruments to college lessons. Student can choose any of those categories by their will and choose their teacher, students can rate and comment their teachers on app. Teachers can fill their profile information about themselves.

## **3 Project Staffing**

### **3.1 Assignment staff**

The effort for each part of this assignment is listed below:

- Software Project Plan – Egehan tütüncü, Ercan Kot and Emre Dönmez
- Requirements Document – Egehan tütüncü, Ercan Kot and Emre Dönmez
- Hocam nerede Design Diagram – Egehan tütüncü, Ercan Kot and Emre Dönmez
- Implementation Plan – Egehan tütüncü, Ercan Kot and Emre Dönmez
- Test Plan – Egehan tütüncü, Ercan Kot and Emre Dönmez
- Presentation – Egehan tütüncü, Ercan Kot and Emre Dönmez

### **3.2 Requirements**

The Hocam Nerede system will provide to bring together who want to teach and learn.

The participants in the group will be:

- Egehan Tütüncü – lead
- Ercan Kot
- Emre Dönmez

### **3.3 Design**

The design of the Hocam Nerede system will incorporate many of the design principle

- Egehan Tütüncü
- Ercan Kot
- Emre Dönmez

### **3.4 Iteration 1**

Iteration 1 will be initial phase of the database configuration that is up to iteration 2. This is basic step of the application. Because everything has to be stored in the database.

The participants in the group will be:

- Egehan Tütüncü – Developer
- Ercan Kot - Developer
- Emre Dönmez - Developer

### **3.5 Iteration 2**

All of the team participants will code Web API to facilitate the development of mobile applications and to increase security.

The participants in the group will be:

- Egehan Tütüncü – Developer
- Ercan Kot - Developer
- Emre Dönmez - Developer

### **3.6 Iteration 3**

Iteration 3 will split the coding between two groups.

#### **3.6.1 Web Application Coding Group**

The participants in this team will be:

- Ercan Kot – Developer

#### **3.6.2 Mobile Application Coding Group**

The participants in this team will be:

- Egehan Tütüncü – Developer
- Emre Dönmez – Developer

### **3.7 Testers**

The participants in this group will be:

- Egehan Tütüncü, for iterations 1, 2, and 3
- Ercan Kot, for iterations 1, 2, and 3
- Emre Dönmez, for iterations 1, 2, and 3

## **4 Software Process**

We plan to use an iterative development cycle with three iterations for development of the Hocam neredde software.

The three iterations are as follows:

### **4.1 Iteration 1**

We will create database of our system, classes will be determined according to requirements in this step.

### **4.2 Iteration 2**

This iteration will be performed by one part:

- Web API implementation
  - ASP.NET Core

### **4.3 Iteration 3**

This iteration will be performed by three parts and these parts will be held synchronized.

- PART I – Web interface implementation
  - Complete the Web interface
    - JavaScript
    - HTML
    - CSS
    - PHP
- PART II – Mobile interface implementation
  - Complete the mobile app implementation
    - JavaScript
    - CSS
    - React Native
- PART III – Connection to database
  - We will connect to the backend database in the formation of the system.
    - MySQL
  - We will use certain protocols (SSL) in order to able to carry out all kinds of security.

### **4.4 Iteration 4**

In this iteration all errors found in the system will be removed, we will make sure that all errors will be removed before the delivered date.



## **5 Software Engineering Methods**

This section will provide an overview of what methods we will use to create this product and how we will perform quality assurance testing.

### **5.1 Coding standard verification**

We will perform code checks to verify that the code meets the coding standard and catalog and fix any standards violations.

### **5.2 Code reviews**

As a team, we will meet every other week to conduct code reviews.

### **5.3 Coding Standard**

We will follow a coding standard for this project that will increase readability and maintainability.

### **5.4 Object Oriented Design**

We will use the object-oriented method for program design and keep this design updated with fixes for any potential problems we may catch. We will also perform design reviews throughout the project to ensure that the existing design will meet the criteria for the product.

## **6 Schedule and Effort**

### **6.1 Schedule**

Please see the attached schedule for the specifics of the schedule. We plan to have the following milestones:

#### **6.1.1 Iteration 1**

December 2018

#### **6.1.2 Iteration 2**

January 2019

#### **6.1.3 Iteration 3**

Web Interface Implementing

February 2019

Mobile App Implementing

February 2019

#### **6.1.4 Iteration 4**

May 2019

## **7 Measurements**

We plan to track the following measurements:

- Categorized Developer time
  - Coding – Time Spent programming
  - Designing – Time spent doing design and re-design
  - Testing – Time spent testing
  - Email – Time spent communicating with the group
- Code metrics
  - Source lines
  - Number of Classes
  - Number of Methods

## **8 Project Risks**

The risks associated with this project are:

- Incomplete understanding of the requirements
  - The requirement for the Hocam Nerede system are believed to be well known, but there exists the possibility that the managers of shift employees are performing duties relating to the scheduling that cannot be easily simulated by a computer. In this case, we would need to provide a limited functionality product.
- Mis-configuration of the software tools due to inexperience
  - If the tools that we chose to use are very complex and the setup of the tools results in lost data or lost time due to software issues, that could put us behind schedule to complete the product on time. If the problem were severe enough to warrant a tool change in the middle of development, we could be faced with even more time lost as a result of having to learn how to use a new tool.
- Steep learning curve for the new technologies included with the project
  - The Web and mobile are new technologies for most members of the team. If the API is difficult to learn and interact with, this could lead to time lost trying to get the interaction to work correctly.
- Team inexperienced with website and mobile design
  - Most members of the team have not had extensive experience programming with the Mobile and Web design and significant productivity issues may be the result. This issue could become extremely serious if the learning curve for the technology is too steep for the programmers to master in a short time.

## **9 Software Tools**

We plan to use the following tools:

### **9.1 Tools**

#### **9.1.1 Visual Studio**

Generate the Web API

#### **9.1.2 MySQL**

Create the database

#### **9.1.3 ATOM**

To write PHP,HTML,CSS,JavaScript

#### **9.1.4 Android Studio**

To coding for android app

#### **9.1.5 Visual Studio Code**

To coding for Mobile app

#### **9.1.6 Web Browser**

Provides Internet Explorer, Chrome, Mozilla, Safari etc. for testing

#### **9.1.7 FileZilla**

Provides remote access to files for the Linux build system.

#### **9.1.8 Termius**

Cross-platform terminal with built-in SSH client

## **10 Hardware Support**

We plan to make use of the following hardware:

- Android Phone
  - We will need an Android phone to test our app
- IOS Phone
  - We will need an IOS phone to test our application
- Remote Server
  - We will need a server on which to run our app

## **11 Software Support**

We will require the following software:

- ATOM
  - Source code control interface
- Android Studio
  - Windows compiler for Android phone
- Visual Studio Code
  - Compiler for mobile app development
- PhpMyAdmin
  - It allows to create the database. It is necessary for the connection stage with the application and website's database.
- FileZilla
  - It can run on Windows, Linux and Mac OS X operating systems. FTP, SFTP, FTPS support are available

## **12 Personnel Support**

The Hocam Nerede team will require support from the following personnel:

- Mehmet Süleyman Ünlütürk
  
- Egehan Tütüncü
  - Coding and testing Android app, Web API and database
- Ercan Kot
  - Coding and testing Web Interface, Web API and database
- Emre Dönmez
  - Coding and testing IOS app, Web API and database