

## Group Project – Developing Apps using emerging Web APIs

Due Date: Week 14.

Purpose: The purpose of this project is to:

- Design and code web apps using emerging Web APIs
- Build a Rest API using an emerging web framework
- Build an MVC front end that utilizes the Rest API
- Apply responsive design principles

References: Read the textbook, lecture slides, and class examples. This material provides the necessary information that you need to complete the exercises.

Be sure to read the following general instructions carefully:

- This Project **may be completed in groups of 3-4 students**.
- You will have to **demonstrate your solution in Week 14** and upload the solution on eCentennial through the project link in dropbox folder, as well as **publish it on Microsoft Azure Cloud or other cloud platform**.
- **You VS project name should be named “YourGroupNameCOMP308Project” and should be zipped in a file YourFullNameCOMP308Project.zip.**

### Project Specifications

Your client needs an application to help nurse practitioners to monitor patients during the first weeks of their release from hospital and also helps the patients to monitor their daily activities. Develop a responsive app that implements the following functionalities:

1. User registers/login
2. If user is a **nurse**:
  - a. Allow the user to enter vital signs: *body temperature, heart rate, blood pressure, or respiratory rate*.
  - b. Allow the user to access information captured during a previous clinical visit, vital signs: *body temperature, heart rate, blood pressure, or respiratory rate*.
  - c. Allow the user to send daily motivational tips to the patient (by storing them in database and providing a daily tips page for the patient to view, etc.).
3. If user is a **patient**:
  - a. Allow user to create and send an emergency alert to first responders (by emailing them, etc.)
  - b. Allow user to run video or games to motivate patients to do their physical exercises at home.
  - c. Allow user to enter daily information as specified by the doctor/nurse practitioner.
  - d. Allow user to use a checklist of common signs and symptoms, to generate a list of possible medical conditions and advice on when to consult a health care provider.

Use MongoDB for storing the information.

Apply **MVC** and **responsive** web design principles. Use CSS to create a nice look and feel of your app. Display the logo for the application, other images, game objects, etc.

(100 marks)

**Some choices for Rest API frameworks:**

- Express
- Meteor
- Restify
- Sails.js
- Hapi.js, etc.

**Some choices for front end frameworks:**

- Angular 2
- React.js
- Vue.js

**Evaluation:**

**Functionality:**

MongoDB database 10%

Rest API 40%

Front End MVC 35%

**Friendliness:** 10%

**Innovation:** 5%

**Total:** 100%