Middle East Technical University
Department of Computer Engineering

CENG 495
Cloud Computing
Spring 2018-2019 Homework 1

Due Date: 21.03.2019, 23:55

This homework aims to get you familiar with the Platform as a Service (PaaS) systems. Microsoft Azure is the cloud computing platform offered by Microsoft that can use both Windows and Linux. Azure App Service is the PaaS solution of Microsoft Azure. You are going to develop and deploy a QR code generator and reader using Azure App Service.

Keywords: PaaS, Azure, Cloud Computing, QR Code

1. Microsoft Azure

- Join Microsoft Azure using your CENG account. If you use your CENG account only for your work on the course, the limits of a free account will be enough for sure. Use the following link to activate: https://azure.microsoft.com/free/students/
- Create and deploy your application on Azure App Service.
- You are free to use any language supported by Azure (Python, Java, Ruby, etc.).

2. QR Code Generator and Reader

- Your application will basically have two options: Generate a QR code, and read a QR code.
- For generating QR code, there will be 2 color options. Color of the QR code, and color of the background. Colors can be chosen from a dropdown box (at least 5 different options including black and white), or by typing the color codes depending on your choice (The case which the color of the QR code and the background are the same,

will not be tested). You will generate an image file (png, jpeg, etc.) The generated QR codes should work for all legit QR code readers that supports your image format.

- To read (or scan) a QR code, your application should support a way to upload a local image file (the same format that you choose for generating). It will show the contents of the uploaded QR code as a text.
- You can use free API's to read and generate QR codes.

  For example: http://goqr.me/api/doc/

3. Submission

- In this assignment, you are expected to both deploy your solution on Azure and submit your source code to ODTÜClass. For submission on ODTÜClass, a tar.gz archive file (named hw1.tar.gz) that contains all your source code files and a README file that includes the programming language you have chosen, the http address (yourprojectname.azurewebsites.net) of your work, and user's guide if you think your application is not easy to use.
- The work you submit should be implemented by only you and genuine. However, you can use external libraries for graphical user interface if any. If you do so, you need to state your references for these codes in your README file.
- We have zero tolerance policy for cheating. There is no teaming up! People involved in cheating will be punished according to the university regulations and will get 0. You can discuss design choices or language preferences, but sharing code between each other or submitting third party code as a whole is strictly forbidden. In case a match is found, this will be considered as cheating.